

**Alaska Fisheries
Enhancement Program
1996 Annual Report**

**by
Marianne McNair**

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**Alaska Department of Fish and Game
Commercial Fisheries Management and Development Division
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TITLE/SUBTITLE Alaska Fisheries Enhancement Program 1996 Annual Report		<u>CONFIDENTIALITY</u> <input checked="" type="checkbox"/> AVAILABLE TO PUBLIC <input type="checkbox"/> AVAILABLE TO LEGISLATURE ONLY
ABSTRACT (100 words maximum) The Alaska Department of Fish and Game oversees and regulates all state and private sector salmon rehabilitation and enhancement projects. Protection of Alaska's natural salmon stocks requires biologically thorough permitting processes. Geneticists, pathologists, and biologists review all fishery projects prior to the issuance of a permit to operate a salmon ranching facility, transfer eggs or fish, or release any fish into Alaska waters. Limnology, pathology, genetic, and coded wire tag and otolith processing laboratories are maintained to provide both diagnostic information to department fishery managers inseason and technical expertise to the private sector. Over 1.7 billion salmon eggs were collected by Alaska hatchery operators in 1996. In addition, 1.6 billion fish were released and over 29 million fish were harvested in common property fisheries as a result of the ocean ranching program. This harvest represents 18.3% of the 1996 commercial harvest of 175 million fish. The ocean ranching program provides hundreds of Alaskans with seasonal and full-time jobs.		<u>SUBJECT CATEGORY</u> <input checked="" type="checkbox"/> NATURAL RESOURCES <input type="checkbox"/> EDUCATION <input type="checkbox"/> SOCIAL SERVICES <input type="checkbox"/> HEALTH <input type="checkbox"/> TRANSPORTATION <input type="checkbox"/> LAW ENFORCEMENT <input type="checkbox"/> COMMERCE & INDUSTRY <input type="checkbox"/> GENERAL GOVERNMENT <input type="checkbox"/> LOCAL GOVERNMENT <input type="checkbox"/> OTHER
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State Fishery Development Programs

In 1993 the Fisheries Rehabilitation, Enhancement and Development (FRED) Division merged with the Commercial Fisheries Division to form the Alaska Department of Fish and Game's (ADF&G) Commercial Fisheries Management and Development (CFMD) Division. The statutory responsibilities of the former FRED Division remain, and CFMD Division staff provide these same services and functions, although with a diminished role in hatchery production. Hatcheries that concentrated on production of sport fish have since been transferred to the department's Sport Fish Division.

Enhancement-related services the CFMD Division provides include working with the private sector on regionwide salmon planning; overseeing the statewide aquaculture industry; collecting and disseminating data; providing technical services through pathology, genetic, limnology, and coded wire tag/otolith processing laboratories; and issuing all permits required by statute to operate hatcheries, transport eggs or fish, or release fish into state waters. The Sport Fish Division operates 4 hatcheries (Crystal Lake, Ft. Richardson, Clear, and Elmendorf). In July 1995 the state-operated Snettisham Hatchery was transferred to Douglas Island Pink and Chum, Inc., a private nonprofit corporation in Juneau.

Salmon Enhancement

There are currently 40 hatcheries operating in Alaska (Figure 1). The private nonprofit (PNP) enhancement program consists of 33 hatcheries operated by PNP corporations, regional aquaculture associations, and other groups, such as the Prince of Wales Hatchery Association and the Ketchikan Indian Corporation. The state

enhancement program operates 4 hatcheries, and the federal enhancement program includes research facilities at Auke Creek and Little Port Walter. The Tamgas Creek Hatchery on Annette Island, which is operated by the Metlakatla Indian Community, is under the jurisdiction of the federal Bureau of Indian Affairs.

In 1996, Alaska hatcheries contributed 29.4 million fish to Alaska's commercial, sport, subsistence, and personal use fisheries. More than 360 thousand fish were donated to the public or to different charitable causes. There also are numerous other enhancement projects that range from lake enrichment sites and fish ladders to spawning channels and streamside incubators.

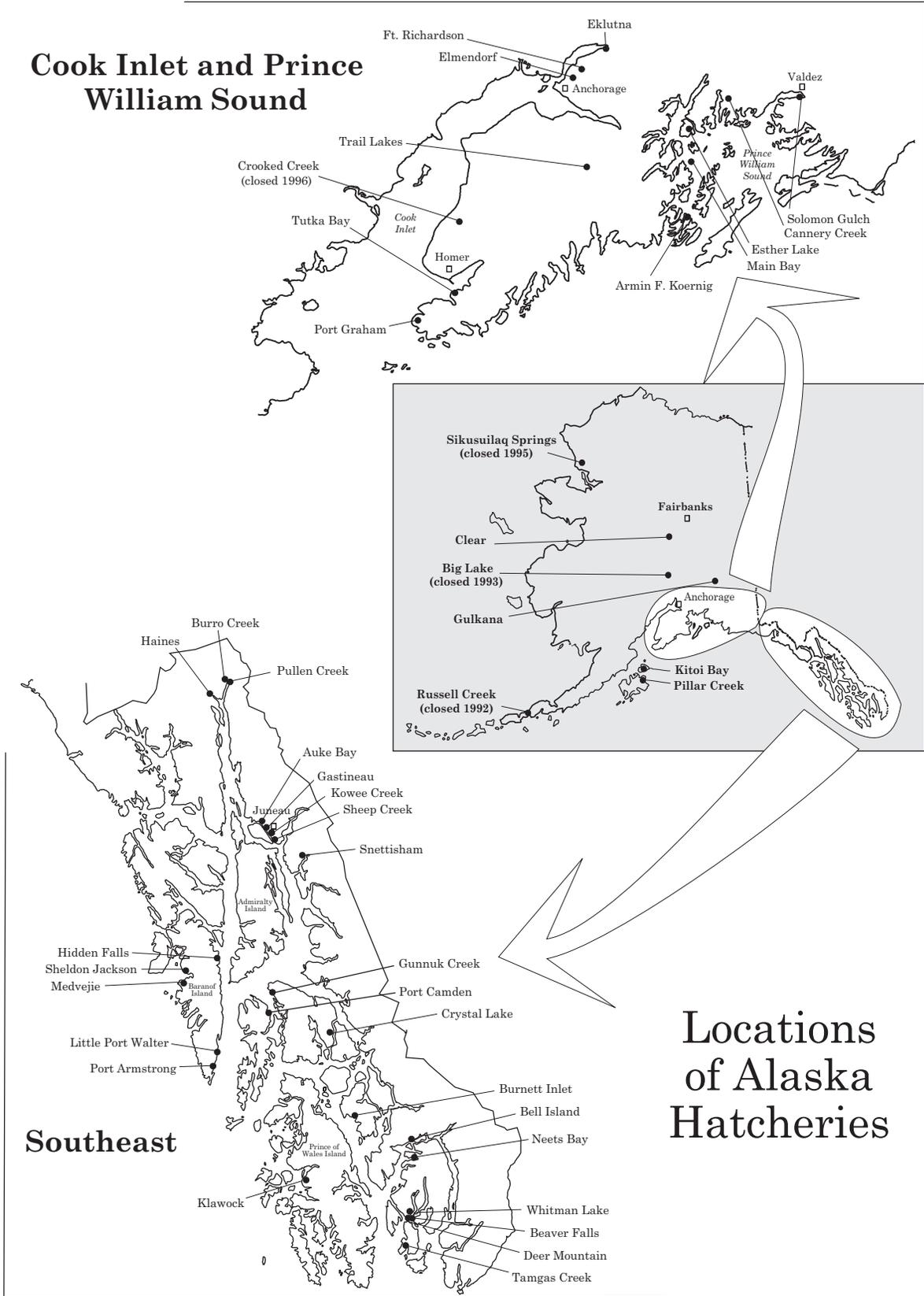
Alaska commercial fishermen caught 175 million salmon in 1996. Of this catch more than 18% was composed of enhanced fish. Of this, 19% of the pink and 57% of the chum salmon harvested in the 1996 commercial fisheries were contributed by enhancement projects. Figures 2 and 3 and Tables 1 and 2 show 1996 egg takes, releases, returns, and common property fishery contributions.

The following are a few enhancement program highlights, by area, that occurred in 1996:

Southeast

- Harvest of Northern Southeast Regional Aquaculture Association (NSRAA)-produced chinook salmon exceeded 36 thousand fish. Included in this total were 17 thousand chinook salmon caught in terminal troll fisheries in the vicinity of Hidden Falls Hatchery. NSRAA chinook salmon composed 21% of the *total* (wild + enhanced) seine, gillnet, and troll chinook catch in Southeast Alaska.
- The Southern Southeast Regional Aquaculture Association (SSRAA) released 610 thousand summer coho salmon presmolts into Neck Lake, a new project. An increased coho

Cook Inlet and Prince William Sound



Locations of Alaska Hatcheries

Figure 1. Locations of Alaska hatcheries.

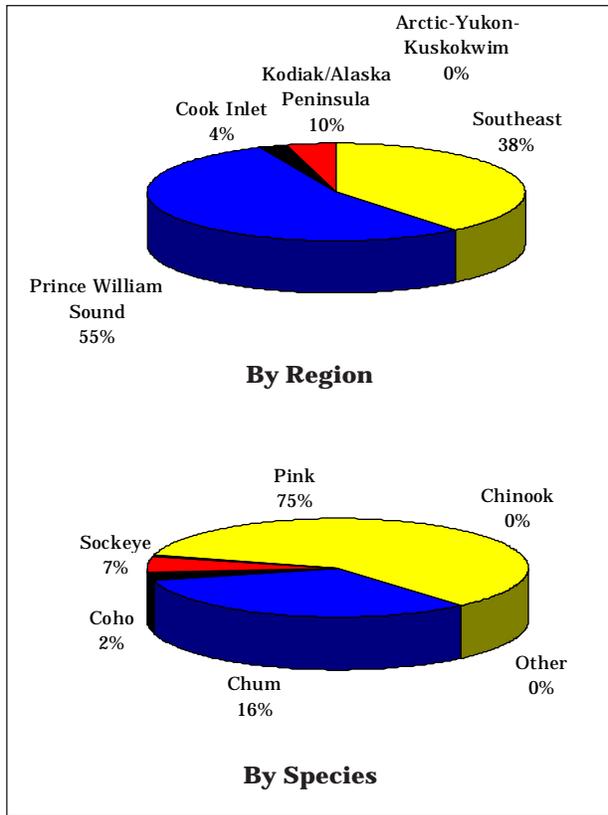


Figure 2. Total returns to enhancement projects in 1996.

salmon harvest beginning in 1998 is anticipated.

- Chum salmon produced by NSRAA and SSRAA accounted for 47.1% of the common property harvest of chum salmon in Southeast.
- Salmon produced by NSRAA and SSRAA provided 23% of the total value of the Southeast Region's commercial fisheries.
- A PNP hatchery permit was issued to the Prince of Wales Hatchery Association for the operation of Klawock River Hatchery. The facility will continue to produce sockeye and coho salmon and steelhead trout.
- A PNP hatchery permit was issued to Douglas Island Pink and Chum, Inc., (DIPAC) for the operation of ADF&G's Snettisham Hatchery. The facility will continue to produce sockeye salmon for northern Southeast and transboundary river fisheries, while

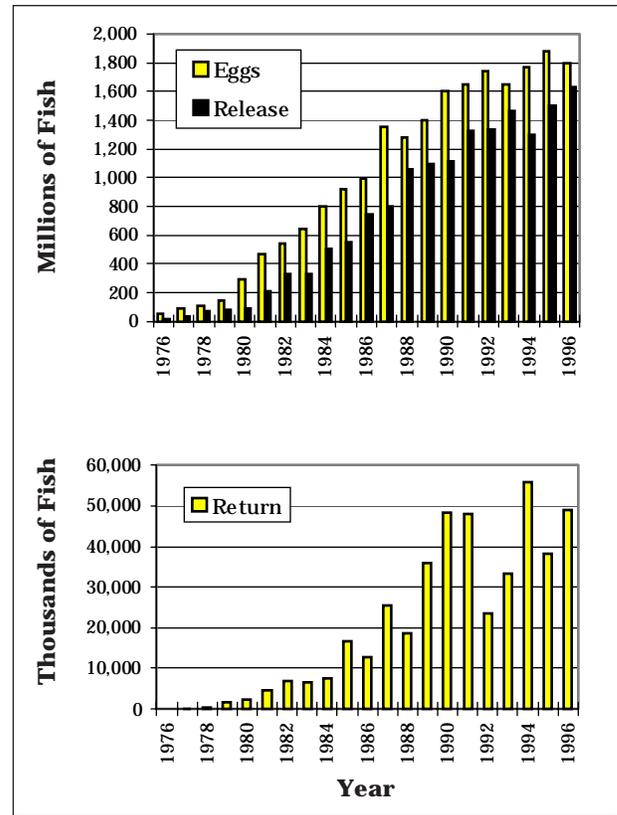


Figure 3. Total egg takes, releases, and returns to the enhancement program in 1996.

developing cost recovery strategies based on sockeye salmon returns to the hatchery.

- An overabundance of enhanced chum salmon in the commercial fisheries contributed to depressed commercial prices. Surplus returns to some hatchery terminal areas led to stock management problems and underutilization. Regional aquaculture associations are actively pursuing solutions to deal with future surpluses, though forecasted chum salmon returns for next year are lower in some areas.

Prince William Sound

- The Prince William Sound Aquaculture Corporation (PWSAC) board of directors appointed a new president at its October 1996 meeting.
- This is the second year of returns from experimental releases of large late pink salmon

Table 1. Total egg takes, releases, and returns to the Alaska salmon enhancement program in 1996.

Estimated egg takes from Alaska hatcheries, in millions, 1996.

Region	Pink	Chum	Coho	Chinook	Sockeye	Other	Total
Southeast	139.60	497.03	23.31	9.34	26.95	0.01	696.25
Prince William Sound	539.79	124.31	0.64	0.48	40.57	0.00	705.79
Cook Inlet	117.64	0.00	2.69	2.03	38.74	2.80	163.90
Kodiak/Alaska Peninsula	131.76	29.88	2.69	0.00	13.42	0.00	177.74
Arctic-Yukon-Kuskokwim	0.00	0.00	0.18	0.00	0.00	1.11	1.29
Totals	928.80	651.22	29.51	11.85	119.67	3.92	1,744.97

Estimated releases from Alaska hatcheries, in millions, 1996.

Region	Pink	Chum	Coho	Chinook	Sockeye	Other	Total
Southeast	101.90	412.79	15.93	5.06	13.23	0.02	548.93
Prince William Sound	641.68	102.31	2.15	0.09	33.69	0.00	779.92
Cook Inlet	111.47	0.00	1.54	1.84	20.40	1.86	137.11
Kodiak/Alaska Peninsula	144.05	20.14	1.10	0.00	7.96	0.00	173.24
Arctic-Yukon-Kuskokwim	0.00	0.19	0.24	0.00	0.00	0.70	1.13
Totals	999.10	535.43	20.96	6.99	75.27	2.58	1,640.33

Total returns attributed to Alaska hatcheries and enhancement projects, 1996.

Region	Pink	Chum	Coho	Chinook	Sockeye	Other	Total
Southeast	3,539,078	13,997,452	879,151	109,751	659,889	0	19,185,321
Prince William Sound	23,892,978	2,317,704	235,406	2,112	991,283	0	27,439,483
Cook Inlet	598,424	24,368	67,342	48,010	480,893	73,905	1,292,942
Kodiak/Alaska Peninsula	1,267,179	45,592	74,074	0	627,465	0	2,014,310
Arctic-Yukon-Kuskokwim	0	0	5,808	0	0	5,536	11,344
Totals	29,297,659	16,385,116	1,261,781	159,873	2,759,530	79,441	49,943,400

Detailed information is available in the Appendix.

fry at Armin F. Koernig and Wally Noerenberg¹ Hatcheries. Marine survivals of experimental and production fry were determined using coded wire tags. Adults were recovered in the broodstocks and common property fisheries and their marine survivals compared. A preliminary analysis of 1996 data indicates the marine survival from the experimental releases was nearly twice the overall pink salmon marine survival for both facilities. PWSAC is planning to continue its investigation of this release strategy.

Cook Inlet

- The conceptual design for a new water supply system at Ft. Richardson Hatchery reached the 95% design phase. This system has a potential to supply up to 8,000 gallons

per minute of new water to the hatchery, possibly doubling fish production. Construction is scheduled to begin in July 1997 at a cost of \$2.6 million.

- Over 77% of the statewide rainbow trout harvest in 1995 was from rainbow trout produced at Ft. Richardson Hatchery. This level of harvest is also anticipated in 1996.
- The Cook Inlet Aquaculture Association (CIAA) suspended its operation of the Crooked Creek Hatchery in the fall of 1996. The lower Cook Inlet lake stocking program is now supported by CIAA's Eklutna Hatchery, and the Tustumena Lake stocking project will now be conducted from the association's Trail Lakes Hatchery. Several lakes were dropped from the stocking project as a first step in a review process that is anticipated to increase the cost-effectiveness and efficiency of the association. The Crooked Creek facility will be returned to the state on July 1, 1997.

¹ These facilities were formerly known as Port San Juan and Esther Lake Hatcheries.

Table 2. Alaska enhancement/common property commercial harvest of enhanced fish, in thousands of fish, 1996.

Area	Harvest ^a	Chinook	Sockeye	Coho	Pink	Chum	Total
Southeast	Total Commercial Harvest	202	2,790	3,035	64,656	15,800	86,483
	Total Cost Recovery Harvest	32	11	197	727	3,653	4,620
	Common Property Harvest	170	2,779	2,838	63,929	12,147	81,863
	Enhanced Fish Harvested	51	495	595	1,613	8,376	11,131
	% Enhanced in Total Harvest	30.2%	17.8%	21.0%	2.5%	69.0%	13.6%
Prince William Sound	Total Commercial Harvest	59	2,990	423	26,021	2,389	31,882
	Total Cost Recovery Harvest		87	53	8,250	1,123	9,513
	Common Property Harvest	59	2,903	370	17,721	1,266	22,369
	Enhanced Fish Harvested		721	118	14,501	987	16,327
	% Enhanced in Total Harvest	0.0%	24.8%	32.0%	81.6%	77.9%	73.0%
Cook Inlet	Total Commercial Harvest	16	4,053	326	674	161	5,230
	Total Cost Recovery Harvest	1	76	1	423	7	508
	Common Property Harvest	15	3,976	325	251	154	4,722
	Enhanced Fish Harvested	1	349	18	20	16	404
	% Enhanced in Total Harvest	6.6%	8.8%	5.7%	7.8%	10.4%	8.6%
Kodiak	Total Commercial Harvest	13	4,838	169	3,648	510	9,178
	Total Cost Recovery Harvest						0
	Common Property Harvest	13	4,838	169	3,648	510	9,178
	Enhanced Fish Harvested		510	57	974	14	1,556
	% Enhanced in Total Harvest	0.0%	10.5%	33.6%	26.7%	2.8%	17.0%
Chignik/Aleutian Islands/ Alaska Peninsula	Total Commercial Harvest	13	5,307	555	2,373	931	9,179
	Enhanced Fish Harvested	0	0	0	0	0	0
	% Enhanced in Total Harvest	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Bristol Bay	Total Commercial Harvest	88	29,650	123	38	842	30,740
	Enhanced Fish Harvested	0	0	0	0	0	0
	% Enhanced in Total Harvest	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Arctic-Yukon-Kuskokwim	Total Commercial Harvest	118	122	1,213	488	608	2,549
	Enhanced Fish Harvested	0	0	0	0	0	0
	% Enhanced in Total Harvest	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	Total Commercial Harvest	509	49,749	5,844	97,898	21,241	175,241
	Total Cost Recovery Harvest	33	174	251	9,401	4,782	14,641
	Common Property Harvest	476	49,575	5,593	88,498	16,459	160,600
	Enhanced Fish Harvested	52	2,076	789	17,109	9,393	29,418
	% Enhanced in Total Harvest	11.0%	4.2%	14.1%	19.3%	57.1%	18.3%

^a Total commercial harvest includes fish caught by all commercial gear types, which includes cost recovery-harvested fish.

- The Nanwalek sockeye salmon project conducted a cost recovery harvest for the first time in 1996. A total of 5.7 thousand sockeye salmon were harvested from the English Bay River.

Arctic-Yukon-Kuskokwim

- The ADF&G, Sport Fish Division conducted a program review of Clear Hatchery in August. The review determined that all existing fish production at Clear Hatchery could be produced at Ft. Richardson Hatchery. In addition, the cost of the added fish production at Ft. Richardson Hatchery would be substantially less than that needed at Clear Hatchery. Consequently, Clear Hatchery will be closed on June 30, 1997, and all Clear

Hatchery fish production will be transferred to the Ft. Richardson Hatchery.

- The Norton Sound Regional Planning Team (RPT) finalized the *Norton Sound/Bering Strait Regional Comprehensive Salmon Plan 1996-2010* in June 1996.
- Comments were received on the first working draft of the *Yukon River Comprehensive Salmon Plan* and are being incorporated into a second draft that will be distributed in February 1997. The draft plan is scheduled for completion by June 30, 1997, and for approval by the Yukon River Drainage Fisheries Association Board of Directors and the Commissioner of ADF&G.
- A total of 33 Yukon River restoration and enhancement proposals were received by the

U.S. and Canadian Panel co-chairs during the 1996 application period. A subcommittee of the Joint Technical Committee was established to define and lead the proposal review process. A total of \$800,000 will be available for the U.S. and Canadian Panel to distribute for restoration and enhancement project proposals at its March 1997 meeting.

Kodiak/Chignik/Alaska Peninsula

- Nearly 6% of the total sockeye salmon commercial harvest in the Kodiak Management Area can be attributed to the 292 thousand sockeye salmon that returned to Spiridon Lake.
- Staff began field studies to test the feasibility of streamside incubation of coho salmon eggs as a technique to restore the subsistence harvest on the Kametlook River.
- The communities of Sand Point and Unalaska told the Area M RPT that they may construct PNP hatcheries to address local fishery restoration and enhancement.

Hatchery Policy Group

During 1996 the Salmon Industry Response Cabinet, created by Governor Tony Knowles, established the Hatchery Policy Group (HPG) to investigate salmon industry concerns on the possible effects salmon hatchery production may be having on salmon markets and to make recommendations to address problems identified during the course of the investigation. Areas of particular concern were the production of salmon and the financing of hatcheries. Those appointed to the HPG were Martin Richard, Director of the Division of Investments, Alaska Department of Commerce and Economic Development (DCED); Jim McMillan, Deputy Director of the Alaska Industrial Development and Export Authority, DCED; and Bob Clasby, Director of the CFMD Division, ADF&G.

The HPG determined that in order to accomplish its task it needed to identify the problems, develop solutions, and determine the effects of those solutions. To assist the group,

the services of the following individuals were contracted: (1) Dr. Gilbert Sylvia assisted and facilitated in the gathering and analysis of data and developed recommendations; (2) Dr. Jim Anderson conducted a peer review of published information on the effects of salmon hatchery production on salmon markets; and (3) Dr. Terry Stimson facilitated two Anchorage HPG forums to gather industry response on what the problems are and why they see them as problems, recommended solutions, and the potential impacts of those solutions.

Observations of the HPG

The salmon industry, on a global or Alaskan scale, is very complex. It includes the production of salmon, either wild or artificial, harvest, primary and secondary processing, and wholesale and retail marketing. These functions are affected by a large number of natural and human-induced factors, some of which can be controlled at some level and some that cannot. The conclusion reached by the HPG, after considering the advice it received from the industry and consultants, was that because of this complexity, as well as the rapid changes the industry is undergoing, it is very difficult, if not impossible, to gather data and perform the analyses needed to predict the effects the potential solutions might have on the industry and markets. The state, therefore, must take extreme care to ensure that any changes it makes do not negatively impact the industry.

Solutions to the industry's problems should be achieved with minimal intervention by the state. The HPG believes that solutions are best achieved through the cooperative efforts of all industry sectors. The state's role should be to encourage and facilitate those cooperative efforts and to establish policies that support the efficient operation of hatcheries.

When developing and implementing policies that affect the salmon industry, the state must keep the following in mind:

- Alaska's share of the world salmon market should be maintained, if at all possible.
- Any reductions in either hatchery or wild salmon production will most likely result in another producer filling the gap.

- The health and viability of wild stocks should continue to be protected.
- The flexibility of the industry to respond to changes should not be impaired.

Recommendations of the HPG

1. Maintain the RPT process for the planning and setting of hatchery production levels. These decisions are best made at the local level. Decisions on how to split hatchery harvest between the common property fishery and a hatchery's cost recovery harvest should also remain at the local level.
2. The RPTs should include marketing information when making decisions and recommendations.
3. ADF&G should compile all regional production and comprehensive planning data so that it can be viewed from a statewide perspective. The department should then convene annual statewide RPT meetings to facilitate discussions on regional and statewide production, market share, and common property contribution. These annual meetings will also encourage an exchange with industry experts on the latest marketing information.
4. All RPTs should conduct a self-analysis to determine if they are working effectively, and if not, take appropriate action. Once these analyses are complete, an analysis should again be done from a statewide perspective at an appropriate annual statewide RPT meeting.
5. Nonregional hatchery operators need to play a more active role in the RPT process. They should initially be included as nonvoting members of the RPTs. During an RPT's recommended self-analysis, the members should determine whether nonregional operators should become voting members.
6. A management audit of each regional aquaculture association should be conducted. These audits may include, but are not limited to, program efficiency, hatchery

survival rates and techniques, budget forecasting, socioeconomic benefits, marketing, cost recovery, self-sufficiency, and a benefit/cost analysis. DCED, Division of Investments will explore ways to accomplish this recommendation.

7. ADF&G should conduct a general review of salmon hatchery-related statutes and regulations to determine their present-day relevance and need. This review should involve the public and industry. Specific attention should be paid to the structure and function of the RPTs and to the flexibility of loan repayment modifications.
8. ADF&G should continue to develop management systems and technologies that will improve the quality of harvested hatchery fish and make their harvest more efficient.
9. DCED should maintain a flexible loan repayment policy that has been tailored to the needs of each hatchery operator. The agency should continue to take socioeconomic factors into consideration when making decisions. Greater flexibility in loan modifications should be a part of the statute and regulation review.

The HPG supports and encourages the following:

- Efforts of the Arctic-Yukon-Kuskokwim (AYK) Salmon Marketing Advisory Council and the AYK Salmon Targeted Marketing Project to improve market conditions for AYK salmon.
- Hatchery operator and processor research and development of products and markets for dark, terminally harvested salmon.
- Regional meetings between hatchery operators, processors, fishermen, and other industry representatives to discuss and seek solutions on issues of mutual concern.
- Development of quality standards for salmon donated to food banks as well as other efforts toward full utilization.

Technology and Development

Technology and development have been key elements in the success of Alaska's modern fisheries enhancement program. A great deal of the program's success, as well as a means for measuring its differences with programs of other states, has been the State of Alaska's adherence to strict guidelines developed by technology and development staff. These staff consist of fishery professionals working in four disciplines — genetics, pathology, limnology, and coded wire tag/otolith marking — at five laboratories and on numerous field projects around the state.

Genetics

The need for stock identification, wild stock protection, and information on the interaction between hatchery and wild stocks has led to an expansion of the genetics program within the CFMD Division. Major effort has been devoted to reviewing permits for the movement of fish and eggs around the state. Because of potential wild and hatchery stock interactions, genetic considerations are of paramount importance during permit reviews.

Pathology

The CFMD Division's pathology program consists of two diagnostic laboratories located in Anchorage and Juneau. Staff provide disease diagnostic services for all species of finfish and shellfish statewide. This required examining over 17,200 animals and performing over 23,000 tests during 1996. In addition, pathology staff conducted 16 annual hatchery inspections and made recommendations on over 300 transport and fishery resource permits that requested moving fish and shellfish around the state.

Pathology staff continued working extensively to determine the distribution and epizootiology of viral hemorrhagic septicemia virus in Pacific herring and the Bitter Crab Disease Syndrome in Southeast and Bering Sea Bairdi Tanner crabs. Juvenile sockeye salmon

losses due to the infectious hematopoietic necrosis virus were not exceptional in 1996.

Limnology

The CFMD Limnology Unit consists of field offices in Soldotna, Ketchikan, and Douglas, and a statewide laboratory in Soldotna. Limnology staff provide statewide technical support for sockeye salmon escapement assessment, nutrient enrichment, and fry stocking programs. They also participate in cooperative projects with state and federal agencies, PNP aquaculture associations, universities, and commercial fishing organizations. The limnology program has operated a water and zooplankton laboratory in Soldotna since 1979 and provides research and analytical services for statewide projects. Essential elements of this program are the assessment of sockeye salmon productivity based on rearing habitat, as well as numerous advancements to improve stock assessment and management through models that integrate limnological variables with fisheries information.

In 1996 Soldotna laboratory staff processed water and zooplankton samples from 70 lakes throughout the state, including nearly 1,000 zooplankton samples, 750 water samples, and 600 juvenile fish samples for stomach-content analysis. In addition, laboratory staff processed 1,000 juvenile sockeye salmon otoliths to determine whether analysis of natural banding patterns on otoliths collected from wild and hatchery sockeye salmon fry in lakes could be used for identification purposes. Use of otoliths as a tool for determining this difference will provide survival differences between stocked and wild fry and a method to investigate interactions between hatchery and wild fish.

Program highlights in 1996 included (1) limnological and fisheries research directed at assessing lake/stock productivity, water quality, and/or increasing sockeye salmon production for 25 lakes; (2) treatment of 13 lakes (12 sockeye and 1 coho salmon lake), including 3 in Southeast, 4 in Southcentral/Prince William Sound, and 6 in the Kodiak area, with nutrients to either restore or enhance salmon production (Figure 4); (3) a recommendation to

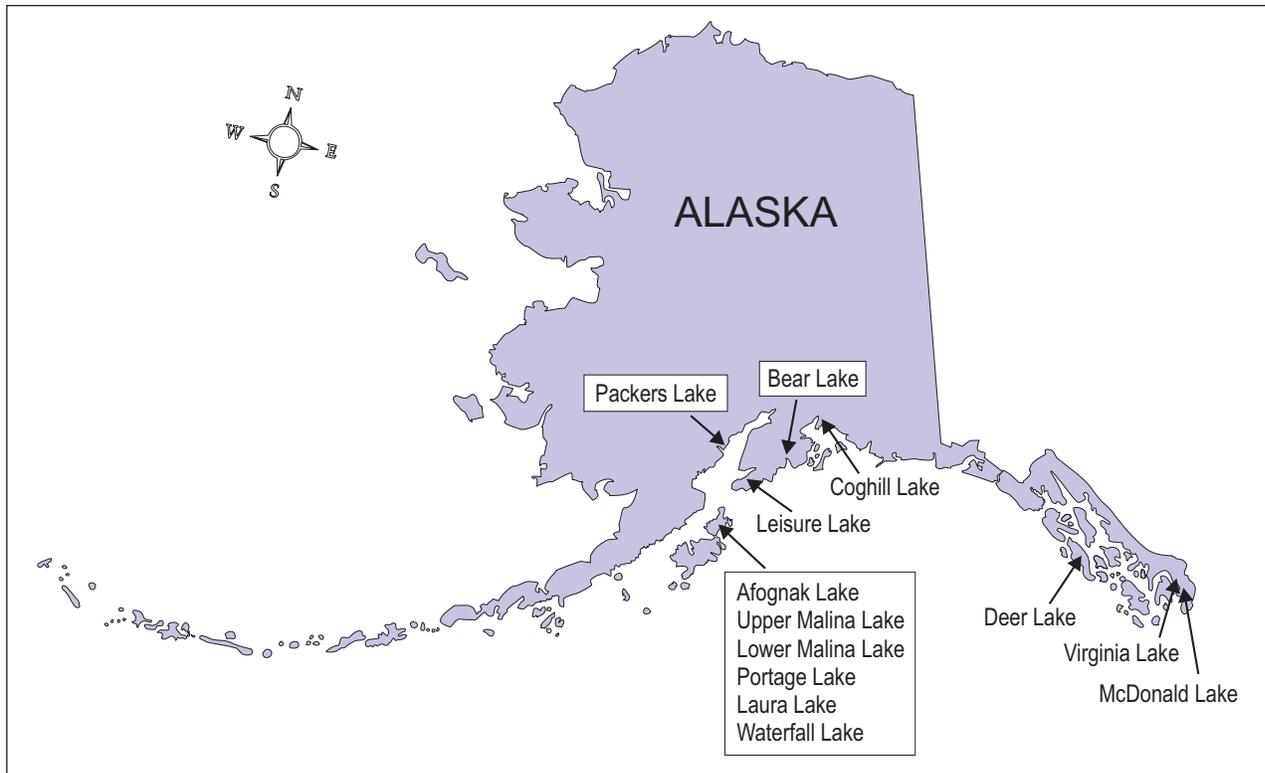


Figure 4. Location of 1996 lake fertilization projects.

modify escapement levels of the early and late sockeye salmon runs in Karluk Lake through the use of limnological data, stock-recruitment data, and assessment of marine nitrogen relative to sockeye salmon productivity; (4) work on a federal/borough-funded project in Kodiak to assess water quality as part of a clean lake program; (5) completion of the third (and final) year of study on 2 sockeye salmon lakes near Nome; (6) the restoration of Coghill Lake sockeye salmon through lake fertilization and attainment of the 1996 escapement goal; (7) the final year of oil spill studies conducted on lakes of Kodiak Island and within the Kenai River watershed; and (8) a record return of 453 thousand sockeye salmon to McDonald Lake, a fertilized lake in Southeast Alaska.

Coded Wire Tag and Otolith Processing Laboratory

In 1996 the department's unique stock-identification lab, the Coded Wire Tag and Otolith Processing Laboratory, processed nearly 50,000

coded wire tag samples. Southeast Alaska projects contributed the largest share of the samples processed, followed by projects in Prince William Sound and Cook Inlet. Laboratory staff continued to provide timely stock-contribution data that assisted fishery and hatchery managers with their inseason fishery management decisions.

The lab's otolith work is primarily funded by federal dollars to support U.S./Canada Treaty obligations. To determine the age of groundfish species that are under joint federal and state jurisdiction, additional federal funding is received from the National Marine Fisheries Service through the Pacific States Marine Fisheries Commission's Pacific Coast Fisheries Information Network. Smaller cooperative agreements, contracts, and projects also contributed funds to the lab's otolith work.

Following initial successes in estimating the enhanced proportion of several fisheries in Southeast Alaska, interest in thermally mass marking hatchery production is growing rapidly. In 1995 and 1996, 100% of Prince William Sound pink salmon hatchery production was

thermally marked; the first adults will be recovered in 1997. To meet this need, researchers and laboratory staff continue to develop new techniques to thermally mark otoliths, catalog the marks produced, provide efficient and rapid mark recovery, establish quality-control methods, apply innovative approaches to sampling and data analysis, and integrate the data into an effective management tool. State general funds partially support these statewide efforts. Thermal marks appear to be a good complement to the coded wire tag, particularly for those species released as fry. All fry from a given lot can be provided with a distinct thermal mark very inexpensively. Coded wire tagging these species and sampling the required large numbers of adults are both time consuming and expensive processes. Combined, these two technologies provide a wide range of alternatives in stock identification.

Contracting

Major hatchery contracting activities during 1996 included (1) the contracting of Snettisham Hatchery to DIPAC, along with a cooperative agreement for the state to fund the hatchery manager position; (2) returning the Klawock Hatchery to the state by the City of Craig and then contracting operations of the facility to the Prince of Wales Hatchery Association; (3) surplusing the Sikusuilaq Hatchery in Kotzebue, including the processing of a quit claim deed for the landowner and dealing with oil pollution concerns at the facility; (4) working with SSRAA staff to change the Beaver Falls Hatchery operation and contract, including major changes in the land lease and a potential move from the present hatchery site; and (5) notification from CIAA that it will be halting its operation of the Crooked Creek Hatchery on July 1, 1997.

PNP Permitting, Planning, and Development Program

The PNP program is administered by the CFMD Division. PNP program staff manage

statewide enhancement data and reporting; develop annual facility management plans for 33 facilities; administer the permitting process for hatchery, fish transport, and fishery resource permits; and coordinate the review of PNP hatchery applications. PNP program staff also organize and implement regional comprehensive salmon plans through RPTs. These RPTs are composed of members from ADF&G and regional aquaculture associations who represent commercial, sport, and subsistence fishermen, as well as members of local communities and other user groups. In regions where aquaculture associations have not formed, nondepartmental RPT representatives include members from fishery gear groups, municipalities, boroughs, and other interested parties.

In 1996 the regional comprehensive salmon planning process was actively conducted in nine regions of the state: (1) Southern Southeast, (2) Northern Southeast, (3) Prince William Sound, (4) Cook Inlet, (5) Kodiak, (6) Chignik, (7) Area M, (8) Norton Sound, and (9) Yukon River (Figure 5).

Southern and Northern Southeast

The southern and northern Southeast comprehensive salmon plans have been approved by the commissioner of ADF&G, and the respective RPTs are in plan maintenance and update processes. In 1994 the Joint Northern and Southern RPT was requested by the Board of Fisheries to assume responsibility for analyzing the allocation of enhanced fish in Southeast Alaska. In 1994 the Board of Fisheries adopted regulation 5 AAC 33.364 (*Southeastern Alaska Area Enhanced Salmon Allocation Management Plan*) to provide a fair and reasonable distribution of the harvest of salmon from enhancement projects among the seine, troll, and drift gillnet commercial fisheries and to reduce conflicts among these users in the Southeast Alaska management area. To assure compliance with allocation plans, in 1995 ADF&G adopted 5 AAC 40.345 (*Southeast Alaska*) that assigned oversight to the joint Northern and Southern Southeast RPTs (joint RPT). Because of this, the joint RPT meets annually to (1) evaluate the annual harvest of salmon produced by enhancement projects; (2) determine whether the distribution of the value

Table 3. Fishery enhancement program time line of events.

Year	Event	Number of State	Number of Private Nonprofit	Number of Federal
1934	Federal research station Little Port Walter constructed			1
1950	Federal hatchery at Auke Creek constructed			2
1953	1 territorial hatchery constructed (Kitoi Bay)	1		
1954	1 territorial hatchery constructed (Deer Mountain)	2		
1958	1 territorial hatchery constructed (Ft. Richardson)	3		
1965	1 state hatchery constructed (Fire Lake)	4		
1969	1 state hatchery constructed (Crystal Lake)	5		
1971	Fisheries Rehabilitation, Enhancement and Development (FRED) Division created by legislature			
1973	2 state hatcheries constructed (Crooked Creek and Gulkana) State enhancement projects at Starrigavan and Halibut Cove started	7		
1974	2 state hatcheries constructed (Beaver Falls and East Creek) Legislature authorizes permits for private nonprofit hatchery operators to salmon ranch	9		
1975	4 PNP permits issued (Sheldon Jackson (#3), Port San Juan (#2), Perry Island (#1), and Sandy Bay (#4)) 2 state hatcheries constructed (Big Lake and Tutka)	11	4	
1976	AS 16.10.375 passed, designating regions for regional planning teams and enhancing salmon 1 state hatchery constructed (Elmendorf) 2 PNP permits issued (Burnett Inlet (#5) and Kowee Creek (#6))	12	6	
1977	1 PNP permit issued (Gunnuk Creek (#7)) 2 state hatcheries constructed (Klawock and Russell Creek) State enhancement project at Karluk Lake started	14	7	
1978	1 PNP permit issued (Whitman Lake (#8)) 2 state hatcheries constructed (Cannery Creek and Hidden Falls)	16	8	
1979	3 PNP permits issued (Sheep Creek (#11), Meyers Chuck (#10), Salmon Creek (#9)) 1 state hatchery constructed (Snettisham) 1 state hatchery closed (Fire Lake)	17 16	11	
1980	1 PNP permit issued (Burro Creek (#12)) 2 state hatcheries constructed (Clear and Main Bay) 1 hatchery at Tamgas Creek constructed (Metlakatla Indian Community/BIA)	18	12	3
1981	1 state hatchery closed (East Creek) 2 state hatcheries constructed (Sikusuilak and Trail Lakes) 4 PNP permits issued (Medvejie (#16), Port Armstrong (#13), Solomon Gulch (#15), Salmon Creek (#14)) 1 PNP permit revoked (Salmon Creek (#9))	17 19	16 15	
1982	2 PNP permits issued (Eklutna (#17) and Favorite Bay (#18))		17	
1983	3 PNP permits issued (Neets Bay (#19), Crittenden Creek (#22), and Esther (#20)) 1 state hatchery completed (Broodstock Development Center)	20	20	
1984	1 PNP permit issued (Santa Anna (#21))		21	
1985	1 PNP permit issued (Port Camden (#23))		22	
1986	1 PNP permit issued (Beaver Falls (#24))		23	
1987	1 PNP permit issued (Gastineau (#25))		24	
1988	Aquatic Farm Act signed; statute passes allowing contracting of hatchery operations 4 state hatcheries contracted to private sector (Kitoi Bay, Trail Lakes, Cannery Creek, Hidden Falls) 4 PNP permits issued (Hidden Falls (#28), Cannery Creek (#26), Trail Lakes (#27), Kitoi Bay (#29)) 1 state hatchery constructed (Pillar Creek) 2 PNP permits revoked (Sandy Bay (#4) and Salmon Creek (#14))	16 17	28 26	
1990	CSHB432 becomes law prohibiting finfish farming in Alaska 1 PNP permit issued (Bell Island (#30))		27	
1991	5 state hatcheries contracted to private sector (Main Bay (#31), Tutka, Gulkana (#39), Pillar Creek (#38), and Beaver Falls (#24)) — Beaver Falls and Tutka tallied elsewhere Portions of 6 state hatcheries paid for by private or federal funds	12	30	
1992	1 state hatchery closed (Russell Creek) 2 PNP permits issued (Haines projects (#34) and Port Graham (#33)) 1 PNP permit revoked (Meyers Chuck (#10)) FRED Division merged with the Commercial Fisheries Division to form the Commercial Fisheries Management and Development (CFMD) Division	11	32 31	
1993	3 state hatcheries transferred from CFMD Division to Sport Fish Division (Broodstock Development Center, Elmendorf, and Ft. Richardson) 2 state hatcheries contracted to private sector (Crooked Creek and Klawock) 1 state hatchery closed (Big Lake)	9 8		
1994	4 PNP permits issued (Tutka (#32), Crooked Creek (#35), Klawock (#36), Deer Mountain (#37)) 1 state hatchery contracted (Deer Mountain) Ft. Richardson Hatchery merged with Broodstock Development Center	7 6	35	

— continued —

Table 3. Continued.

Year	Event	Number of State	Number of Private Nonprofit	Number of Federal
1995	1 state hatchery transferred from CFMD Division to Sport Fish Division (Crystal Lake) 1 state hatchery closed (Sikusuilaq) 1 PNP hatchery under new management (Klawock (#38))	5		
1996	1 state hatchery contracted (Snettisham (#39)) 1 state hatchery transferred from CFMD Division to Sport Fish Division (Clear) 3 PNP permits revoked (Crittenden Creek (#22), Santa Anna (#21), and Favorite Bay (#18))	4	36 33	

Note: Perry Island is not an active PNP site.

of these fish taken in the region's seine, troll, and drift gillnet fisheries is consistent with the allocation percentages established by the Board of Fisheries; and (3) make recommendations to the commissioner of ADF&G on any necessary production changes.

Yakutat

No formal enhancement or rehabilitation salmon planning activities have occurred in Yakutat since approval of the 20-year regional salmon plan in 1984. The *Yakutat Comprehensive Salmon Plan* has been accepted by the U.S. Forest Service and is the basis by which land management plans applicable to the region are developed.

Prince William Sound

The Prince William Sound/Copper River RPT completed development of a Phase III comprehensive salmon plan for the region in October 1994. The plan incorporates fisheries management, production of enhanced fish, and allocation of these fish into one overall plan for the region. The RPT continues to examine project proposals to implement the plan.

Cook Inlet

RPT efforts in Cook Inlet continue to be directed toward planning based on major watersheds in the region. The RPT's goal is to assess the capacity of each major watershed to sustain and maintain significant, naturally occurring salmon stocks and to identify opportunities and

techniques for enhancing existing runs and creating new runs.

Kodiak

The initial *Phase I Kodiak Regional Comprehensive Salmon Plan 1982-2002* was approved by the commissioner of ADF&G in 1984; in that plan the Kodiak RPT set harvest goals, objectives, and strategies by species. In 1987 a Phase II comprehensive salmon plan, which identifies short-term projects by species, individual strategy, and management district, was approved by the commissioner. During 1991 and 1992 the Kodiak RPT revised the Phase II plan to more accurately reflect production goals, project opportunities, and user group needs. This document was approved by the commissioner in 1992. The Kodiak RPT meets annually to maintain and amend the comprehensive plan and is considering developing a five-year revision to the Phase II plan in 1997.

Bristol Bay

The *Bristol Bay Comprehensive Salmon Plan* was approved by the commissioner of ADF&G in 1988. This plan was unique because it was the first to focus on enhancement strategies other than hatcheries. Instead, emphasis was placed on maintenance and restoration of fish habitat and effective management practices. When regional fishermen voted against supporting the Bristol Bay Salmon Enhancement Association through an enhancement tax on the exvessel value of their commercial salmon harvests, the comprehensive salmon planning

process was halted. At this time, no further planning efforts are envisioned for this region.

Chignik

At the request of the Chignik Regional Aquaculture Association, the commissioner of ADF&G appointed the Chignik RPT in 1990 to initiate development of a comprehensive salmon plan. In 1993 the *Chignik Regional Comprehensive Salmon Plan 1992-2001* was approved by the commissioner. The focus of the plan was directed toward comprehensive limnological surveys, hydraulic assessment investigations, beaver colonization studies, juvenile sockeye salmon studies, watershed assessments, instream incubation projects, and improving existing management strategies by reevaluating escapement goals, extending Chignik weir run enumerations, and conducting stock identification studies. The Chignik RPT met once in 1996 to maintain and amend the comprehensive plan. The RPT intends to revise the comprehensive plan in 1997 to reflect a shift in focus to regionwide juvenile

sockeye/smolt and stock identification/genetic baseline studies.

Alaska Peninsula/Aleutian Islands/ Area M

In response to interests expressed by the Aleutians East Borough and other regional interests, the Area M RPT, which is composed of representatives from the Aleutians East Borough, Atka, Dutch Harbor/Unalaska, and ADF&G, was appointed by the commissioner of ADF&G in 1991 to develop a regional comprehensive plan. In 1993 the comprehensive plan was approved by the commissioner. The focus of the plan was directed toward improving management of fisheries, advancing knowledge of salmon production, investigating rehabilitation and enhancement opportunities, and developing a central incubation facility through a reconfiguration of the Russell Creek Hatchery, which was transferred to the Aleutians East Borough in 1994. A comprehensive, regionwide limnological evaluation of regional lake systems (*Limnological and Fishery Assessment of*

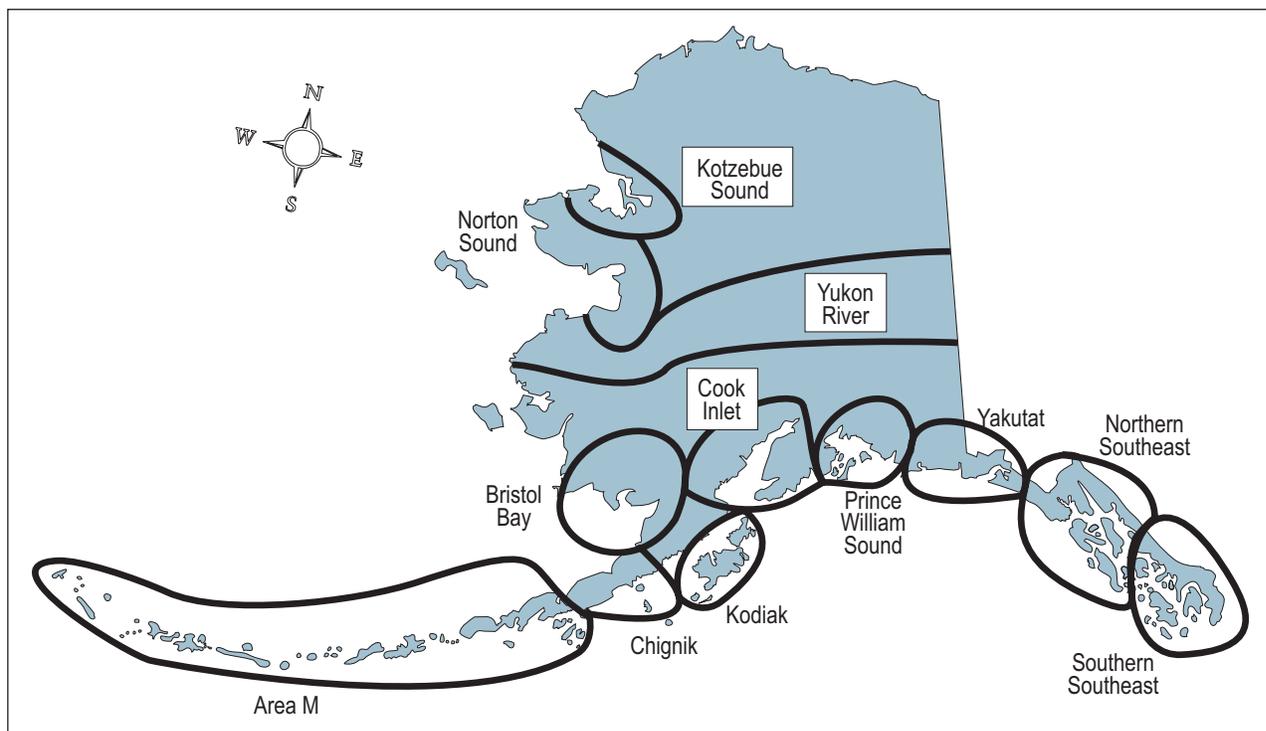


Figure 5. Comprehensive salmon planning regions in Alaska.

23 Alaska Peninsula and Aleutian Area Lakes, 1993-1995: An Evaluation of Potential Sockeye and Coho Salmon Production) was completed in 1996.

Norton Sound

During 1993 ADF&G and the Norton Sound Economic Development Corporation cooperatively worked together to initiate informational, educational, and stock status assessment programs as precursors to developing a comprehensive salmon plan for the region. The Norton Sound RPT, which is composed of Norton Sound Economic Development Corporation and ADF&G representatives, was established by the commissioner of ADF&G in December 1993. Community informational meetings and additional RPT meetings related to plan development occurred through May 1996. The comprehensive salmon plan was published and distributed in June 1996. The final draft of *Limnological and Sockeye Salmon Productivity Investigations in Salmon and Glacial Lakes: 1994-1995* is scheduled for publication in early 1997. Implementation of a series of enhancement and rehabilitation projects was temporarily suspended pending the formation of a regional aquaculture association.

Yukon River

The department has been working with the Yukon River Drainage Fisheries Association under a cooperative agreement that focuses on evaluating opportunities for conservation, restoration, and enhancement of salmon stocks in the Yukon River drainage. The initial focus was to develop a regional educational and informational program. In early 1994 the Yukon River RPT, which is composed of representatives from the Yukon River Drainage Fisheries Association and ADF&G, was formed by the commissioner of ADF&G to focus on the development of a long-range comprehensive salmon plan. The organizational RPT meeting occurred in late February 1994 in Huslia. Yukon River RPT members continued meeting throughout 1994, 1995, and 1996 as they developed the regional comprehensive salmon plan,

which is scheduled for publication and distribution in July 1997.

Other Salmon Enhancement Methods

Streamside Incubation

Many techniques that enhance Alaska's fisheries do not require the large amounts of capital as hatcheries do. One of the most successful techniques is streamside (or instream) incubation, which involves the use of large incubation boxes placed in or beside streams. Natural upwelling water from springs or flow of the stream provides the necessary movement of water through the boxes. These boxes are seeded with eggs in the fall, and the fry voluntarily emigrate in the spring. The advantage of streamside incubators over natural production is the eggs are protected from disruption and predation prior to hatching and emergence. Site selection for streamside incubators must be done carefully, because water must continue flowing through the incubation boxes during the winter to (1) provide eggs with sufficient oxygen and (2) prevent them from freezing. Surprisingly, streamside incubators are being used successfully as far north as Nome.

The largest complex of streamside incubators in Alaska is the Gulkana Hatchery near Glennallen. This facility was developed by the state; however, it is now operated by PWSAC. The Gulkana Hatchery produces as many as 26

Locations of Streamside Incubators

Kametolook River	Chignik
Gulkana River	Glennallen
Big Boulder Creek	Haines
Chilkat Lake	Haines
Klehini River tributaries	Haines
8 Mile Spring	Kaltag
Port Camden Creeks	Kake
Nome River	Nome
Sinuk River	Nome
Snake River	Nome
Solomon River	Nome
Harding River	Petersburg

million sockeye salmon fry each year. Egg-to-fry survival in streamside incubators is not normally as good as in hatcheries.

Restoration

Another method of fisheries enhancement involves restoring streams degraded by human-use activities. Habitat restoration work was accomplished at several sites around Alaska, including installing tree revetments to stabilize and rebuild streambanks, revegetating streambanks to inhibit erosion, reviewing construction plans that might affect streams, and conducting studies associated with analyzing the potential for and probable success of restoration efforts at specific sites.

Public Education/Classroom Incubators

Public education and involvement are critical to the success of enhancement projects, and ADF&G biologists work on environmental

Locations of Restoration Project Sites	
Campbell Creek	Anchorage
Big Boulder Creek	Haines
Sawmill Creek	Haines
Salmon River/Fish Creek	Hyder
Duck Creek	Juneau
Boulder Creek	Nome
Hobson Creek	Nome
Nome area mining sites	Nome
Harding River	Wrangell
Ophir Creek	Yakutat

education trails, make school presentations, and set up classroom incubators. Educating children and adults on the salmon life cycle is an important tool for ensuring responsible attitudes toward Alaska’s fishery resources. PNP program staff issue over 160 fishery resource (formerly scientific/educational) permits annually, including over 65 permits for classroom incubation projects (see Appendix). ADF&G staff also visit schools around the state to help educate students on the responsible use of Alaska’s fishery resources.

Appendix

Appendix Table 1. Eggs taken at Alaska hatcheries in 1996, in millions.

Region/Operator/Location		Pink	Chum	Coho	Chinook	Sockeye	Other	Total
Southeast								
SSRAA	Whitman Lake			5.32	2.16			7.48
	Neets Bay		124.76	0.54				125.30
	Beaver Falls					1.26		1.26
NSRAA	Hidden Falls		83.79	5.01	1.41			90.21
	Medveje Creek	0.32	41.60	3.05	1.45			46.42
	Port Camden		4.71					4.71
	Haines projects		0.24			0.62		0.85
AAI	Burnett Inlet	28.72	59.99					88.71
AKI	Port Armstrong	91.29		1.85				93.14
BCF	Burro Creek	0.46	0.14					0.59
DIPAC	Sheep Creek		27.07					27.07
	Gastineau	6.30	98.40		0.63			105.33
	Snettisham					23.75		23.75
KTHC	Deer Mountain			0.19	0.15		0.01	0.35
KNFC	Gunnuk Creek		51.74					51.74
POWHA	Klawock			2.27		1.33		3.60
SJC	Indian River	12.52	3.46	0.12	0.15			16.24
MIC	Tamgas Creek		1.14	4.76	0.85			6.75
Federal	Little Port Walter				0.63			0.63
ADF&G	Crystal Lake			0.20	1.91			2.11
Southeast Totals		139.60	497.03	23.31	9.34	26.95	0.01	696.24
Prince William Sound								
PWSAC	Armin F. Koernig	60.40	11.76					72.16
	Wally Noerenberg	115.82	110.34	0.64	0.48			227.28
	Cannery Creek	155.06						155.06
	Main Bay					3.22		3.22
	Gulkana					37.35		37.35
VFDA	Solomon Gulch	208.52	2.21					210.72
Prince William Sound Totals		539.80	124.31	0.64	0.48	40.57	0.00	705.80
Cook Inlet								
PGHC	Port Graham	1.64		0.21		1.59		3.44
CIAA	Eklutna			0.10		8.00		8.10
	Trail Lakes			0.95		14.48		15.43
	Tutka Bay	116.00						116.00
	Crooked Creek					14.67		14.67
ADF&G	Elmendorf			0.48	1.29			1.77
	Ft. Richardson			0.95	0.75		2.80	4.50
Cook Inlet Totals		117.64	0.00	2.69	2.03	38.74	2.80	163.90
Kodiak								
KRAA	Kitoy Bay	131.76	29.88	2.56		1.13		165.33
	Pillar Creek			0.13		12.29		12.42
Kodiak Totals		131.76	29.88	2.69	0.00	13.42	0.00	177.74
Arctic-Yukon-Kuskokwim								
ADF&G	Clear			0.18			1.11	1.29
Arctic-Yukon-Kuskokwim Totals		0.00	0.00	0.18	0.00	0.00	1.11	1.29
Statewide Totals		928.80	651.22	29.51	11.85	119.67	3.92	1,744.97

Note 1: If eggs were transferred, they are listed by the hatchery that received them.

Note 2: Individual hatchery egg takes may not add up to the regional or statewide totals because of rounding.

See Appendix Table 16 for list of acronyms used in this report.

Appendix Table 2. Alaska hatchery releases in 1996, in millions of fish.

Region/Operator/Location		Pink	Chum	Coho	Chinook	Sockeye	Other	Total	
Southeast									
SSRAA	Whitman Lake				0.24			0.24	
	Old Frank's Lake			0.14				0.14	
	Neck Lake			0.61				0.61	
	Herring Cove			0.28				0.28	
	Kendrick Bay		8.24					8.24	
	Nakat Inlet		16.31	0.20				16.51	
	Earl West Cove		7.74	0.21				7.95	
	Neets Bay		61.66	3.00	0.56			65.22	
	Beaver Falls							0.00	
	Virginia Lake					1.21		1.21	
	Salmon Lake					0.53		0.53	
	Hugh Smith Lake					0.36		0.36	
	NSRAA	Hidden Falls		49.72	1.55	0.89			52.16
		Takatz		26.96					26.96
Medveje Creek		0.19	4.84	2.62	1.00			8.66	
Deep Inlet			34.74					34.74	
Port Camden			4.83					4.83	
Haines projects			0.48			0.30		0.78	
AAC	Bell Island	no releases						0.00	
AAI	Burnett Inlet	12.18	41.00					53.18	
AKI	Port Armstrong	72.48		1.38				73.86	
BCF	Burro Creek	0.42	0.01	0.01	0.03			0.48	
DIPAC	Sheep Creek		24.61	0.01				24.61	
	Gastineau	8.74	11.47	0.35	0.07			20.64	
	Sheep Creek		19.57	0.51	0.04			20.12	
	Amalga Harbor		34.98					34.98	
	Boat Harbor		8.54					8.54	
	Limestone Inlet Fish/Auke Creek		15.42			0.21		0.21	
KTHC	Deer Mountain			0.13	0.08		0.02	0.22	
KNFC	Gunnuk Creek		7.70	0.03				7.73	
	Southeast Cove		28.90					28.90	
SJC	Sheldon Jackson	7.90	3.54	0.05	0.06			11.54	
MIC	Tamgas Creek		1.55	3.97	1.13			6.65	
POWHA	Klawock			0.75		0.32		1.07	
Federal	Little Port Walter	no releases						0.00	
	Auke Creek	no releases						0.00	
ADF&G	Crystal Lake			0.11	0.74			0.85	
	Snettisham					4.02		4.02	
	Canada lakes					6.49		6.49	
Southeast Totals		101.90	412.79	15.93	5.06	13.23	0.02	548.93	
Prince William Sound									
PWSAC	Armin F. Koernig	108.64						108.64	
	Wally Noerenberg	169.51	79.54	0.18	0.04			249.27	
	Port Chalmers		22.77					22.77	
	Whittier			0.05				0.05	
	Cordova			0.05				0.05	
	Chenega				0.05			0.05	
	Gulkana I and II					30.37		30.37	
	Cannery Creek	140.44						140.44	
VFDA	Main Bay					3.32		3.32	
	Solomon Gulch	223.09		1.88				224.96	
Prince William Sound Totals		641.68	102.31	2.15	0.09	33.69	0.00	779.92	
Cook Inlet									
PGHC	Port Graham	6.47				0.14		6.61	
CIAA	Crooked Creek					11.07		11.07	
	Eklutna			0.07		5.00		5.07	
	Trail Lakes							0.00	
	Chelatna Lake					1.04		1.04	
	Packers Lake					0.69		0.69	

— continued —

Appendix Table 2. Page 2 of 2.

Region/Operator/Location	Pink	Chum	Coho	Chinook	Sockeye	Other	Total
Cook Inlet (continued)							
CIAA (continued)							
Trail Lakes (continued)							0.00
Bear Lake/Creek			0.43		0.78		1.21
Hidden Lake					1.60		1.60
Tutka Bay	105.00				0.08		105.08
ADF&G							
Elmendorf			0.40	1.50			1.90
Ft. Richardson			0.64	0.34		1.86	2.84
Cook Inlet Totals	111.47	0.00	1.54	1.84	20.40	1.86	137.11
Kodiak							
KRAA							
Kitoi Bay	144.05	20.14	1.07		0.73		165.99
Pillar Creek			0.03		7.23		7.26
Kodiak Totals	144.05	20.14	1.10	0.00	7.96	0.00	173.24
Arctic-Yukon-Kuskokwim							
ADF&G							
Clear		0.19	0.24			0.70	1.13
Arctic-Yukon-Kuskokwim Totals	0.00	0.19	0.24	0.00	0.00	0.70	1.13
Statewide Totals	999.10	535.43	20.96	6.99	75.27	2.58	1,640.33

Note: Individual hatchery releases may not add up to the regional or statewide totals because of rounding.

See Appendix Table 16 for list of acronyms used in this report.

Appendix Table 3. Estimated adult returns, by species, to Alaska enhancement projects in 1996, including common property harvests, as reported by operators.

Region/Operator/Location		Pink	Chum	Coho	Chinook	Sockeye	Other	Total
Southeast								
SSRAA	Whitman Lake		1,407,138	50,277	3,233			1,460,648
	Neets Bay		2,374,583	182,156	695			2,557,434
	Beaver Falls					49,285		49,285
NSRAA	Hidden Falls		4,055,342	191,063	36,071			4,282,476
	Medvejie Creek		2,819,499	156,537	36,363			3,012,399
	Haines projects		5,856			7,515		13,371
AAI	Burnett Inlet	779,900	338,622					1,118,522
AKI	Port Armstrong	1,599,572		32,443				1,632,015
BCF	Burro Creek	1,666	232		55			1,953
DIPAC	Sheep Creek		493,083					493,083
	Gastineau	23,164	2,054,604	69,832	7,118			2,154,718
	Snettisham					156,627		156,627
KNFC	Gunnuk Creek		267,965					267,965
AAC	Bell Island	no returns						0
SJC	Indian River	390,384	73	1,246	1,392			393,095
POWHA	Klawock			15,438		7,228		22,666
MIC	Tamgas Creek		180,000	150,000	1,320			331,320
Federal	Auke Creek	3,000						3,000
	Little Port Walter				4,054			4,054
COOP	Earl West Cove				4,355			4,355
ADF&G	Crystal Lake			3,804	11,835			15,639
KTHC	Deer Mountain			18,350	3,260			21,610
	Fish Pass/Other	741,392	455	8,005		439,234		1,189,086
Southeast Totals		3,539,078	13,997,452	879,151	109,751	659,889	0	19,185,321
Prince William Sound								
PWSAC	Armin F. Koernig	1,763,000						1,763,000
	Wally Noerenberg	7,221,681	1,875,834	87,561	2,112			9,187,188
	Cannery Creek	7,432,352						7,432,352
	Main Bay					501,391		501,391
	Gulkana					489,892		489,892
VFDA	Solomon Gulch	7,475,945	441,870	147,845				8,065,660
Prince William Sound Totals		23,892,978	2,317,704	235,406	2,112	991,283	0	27,439,483
Cook Inlet								
PGHC	Port Graham	13,631				34,499		48,130
CIAA	Eklutna		24,368	746		4,124		29,238
	Trail Lakes			13,441		170,921		184,362
	Tutka	584,793						584,793
	Crooked Creek				2,274	271,349		273,623
ADF&G	Elmendorf			22,000	23,223			45,223
	Ft. Richardson			31,155	22,513		73,905	127,573
Cook Inlet Totals		598,424	24,368	67,342	48,010	480,893	73,905	1,326,205
Kodiak								
KRAA	Kitoi Bay	1,267,179	45,592	65,725		19,247		1,397,743
	Pillar Creek			8,349		608,218		616,567
Kodiak Totals		1,267,179	45,592	74,074	0	627,465	0	2,014,310
Arctic-Yukon-Kuskokwim								
ADF&G	Clear			5,808			5,536	11,344
Arctic-Yukon-Kuskokwim Totals		0	0	5,808	0	0	5,536	11,344
Statewide Totals		29,297,659	16,385,116	1,261,781	159,873	2,759,530	79,441	49,943,400

See Appendix Table 16 for list of acronyms used in this report.

Appendix Table 4. Projected adult returns, by species, to Alaska enhancement projects in 1997.

Region/Operator/Location		Pink	Chum	Coho	Chinook	Sockeye	Other	Total	
Southeast									
SSRAA	Whitman Lake			20,000	700			20,700	
	Earl West Cove		100,000	20,100	7,400			127,500	
	Nakat Inlet		540,800	18,900				559,700	
	Carroll Inlet				4,000			4,000	
	Kendrick Bay		332,900					332,900	
	Neets Bay		2,584,000	179,600	900			2,764,500	
	Beaver Falls							0	
	Shrimp Bay					17,000		17,000	
	Salmon					49,744		49,744	
	Virginia Lake					26,188		26,188	
	Badger/Bakewell					14,252		14,252	
	Hugh Smith Lake					50,261		50,261	
	McDonald Lake					382,464		382,464	
	NSRAA	Hidden Falls		1,300,000	186,000	22,500			1,508,500
		Takatz Bay		1,000,000					1,000,000
		Medvejie Creek		345,000	500	32,000			377,500
		Deep Inlet		1,955,000					1,955,000
Mist Cove				200,000				200,000	
Shamrock Bay				23,000				23,000	
Port Camden			23,700					23,700	
AAI	Haines projects		6,950			5,700		12,650	
	Burnett Inlet	120,000	100,000					220,000	
AKI	Anita Bay		190,000					190,000	
	Port Armstrong	2,899,200		110,721				3,009,921	
BCF	Burro Creek	4,711	546	632	341			6,230	
DIPAC	Sheep Creek		335,000	1,100				336,100	
	Gastineau	218,597	162,500		5,355			386,452	
	Auke/Fish Creek			34,751	7,760			42,511	
	Sheep Creek			51,146				51,146	
	Amalga Harbor		965,000					965,000	
	Boat Harbor		263,221					263,221	
	Limestone Inlet		255,348					255,348	
	Shettisham					99,354		99,354	
	Crescent Lake					200		200	
	Sweetheart Lake					15,530		15,530	
	Chilkat Lake					18,212		18,212	
	Auke Bay/Fish Creek				7,760			7,760	
KTHC	Taku River				20,156			20,156	
	Stikine River				88,276			88,276	
	Deer Mountain			4,595	811		79	5,406	
KNFC	Ward Creek			6,301				6,301	
	Gunnuk Creek		247,320					247,320	
AAC	Southeast Cove		284,279					284,279	
	Bell Island							0	
SJC	Indian River	158,000	1,820	929	1,156			161,905	
Federal	Auke Creek							0	
	Little Port Walter				3,500			3,500	
POWHA	Klawock			37,500		35,425	350	72,925	
ADF&G	Crystal Lake			10,456	9,600		200	20,256	
	Earl West Cove				6,715			6,715	
Southeast Totals		3,400,508	10,993,384	906,231	218,930	714,330	629	16,233,383	
Prince William Sound									
PWSAC	Armin F. Koernig	1,642,136						1,642,136	
	Wally Noerenberg	6,860,217	1,289,884	11,892	13,920			8,175,913	
	Cannery Creek	6,021,489						6,021,489	
	Main Bay							0	
	Coghill					289,000		289,000	
	Eshamy					233,500		233,500	
	Eyak					6,700		6,700	
VFDA	Gulkana					229,193		229,193	
	Solomon Gulch	9,590,000	108,000	150,066				9,848,066	
Prince William Sound Totals		24,113,842	1,397,884	161,958	13,920	758,393		26,445,997	
Cook Inlet									
PGHC	Port Graham	136,000				45,000		181,000	
CIAA	Eklutna			6,500		288,000		294,500	
	Trail Lakes							0	
	Packers Lake					80,000		80,000	
	Hidden Lake			12,000		105,000		117,000	

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Appendix Table 4. Page 2 of 2.

Region/Operator/Location	Pink	Chum	Coho	Chinook	Sockeye	Other	Total
Cook Inlet (continued)							
CIAA (continued)							
Trail Lakes (continued)							
Bear Lake					40,000		40,000
Chelatna Lake					118,000		118,000
Tutka Bay	2,300,000						2,300,000
Crooked Creek							0
Tustumena Lake					741,000		741,000
Kirschner Lake					25,000		25,000
ADF&G			22,000	22,725			44,725
Elmendorf			30,900	26,350			57,250
Ft. Richardson						80,000	80,000
Cook Inlet Totals	2,436,000	0	71,400	49,075	1,442,000	80,000	4,078,475
Kodiak							
KRAA							
Kitoi Bay	7,065,012	22,500	132,934		37,370		7,257,816
Pillar Creek					348,877		348,877
Kodiak Totals	7,065,012	22,500	132,934	0	386,247	0	7,606,693
Arctic-Yukon-Kuskokwim							
ADF&G							
Clear			6,000			6,100	12,100
Arctic-Yukon-Kuskokwim Totals	0	0	6,000	0	0	6,100	12,100
Statewide Totals	37,015,362	12,413,768	1,278,523	281,925	3,300,970	86,729	54,376,648

See Appendix Table 16 for list of acronyms used in this report.

Table updated 7/9/97

Appendix Table 5. Cumulative state loans and enhancement funds returned to associations (through December 31, 1996) and annual fish sales for private nonprofit hatcheries.

Region/Corporation (number of permits)	State Loans				Enhancement Funds Generated Through Assessments/Returned to Associations via Contract		1996 Operator Reported Revenues
	For Capital Construction		For Operations		FY 96	Cumulative	
	CY 96	Cumulative	CY 96	Cumulative			
Southern Southeast							
SSRAA (Southern Southeast Regional Aquaculture Association) — (3)		\$ 9,393,000	\$ 469,400	\$ 3,778,778	\$1,623,310	\$25,335,733 note 1	\$ 2,123,291
AAI (Alaska Aquaculture, Inc.) — (1)		\$ 3,469,418	\$ 285,908	\$ 4,678,794		NA	\$ 142,700
MCAA (Meyers Chuck Aquaculture Association) — (0)		\$ 10,000				NA	NA
POWHA (Prince of Wales Hatchery Association) — (1)	\$400,000	\$ 400,000	\$ 400,000	\$ 400,000			\$ 2,450
Northern Southeast							
NSRAA (Northern Southeast Regional Aquaculture Association) — (4)		\$ 2,724,265		\$ 1,816,496	\$1,319,722	\$16,857,581 note 1	\$ 3,198,801
AKI (Armstrong-Keta, Inc.) — (1)		\$ 3,065,142	\$ 379,745	\$ 3,086,398		NA	\$ 157,019
BCF (Burro Creek Farms, Inc.) — (1)		\$ 143,500		\$ 240,875		NA	\$ 10,497
DIPAC (Douglas Island Pink and Chum, Inc.) — (4)		\$ 9,139,000	\$ 650,000	\$12,764,000		NA	\$ 2,793,050
KNFC (Kake Nonprofit Fisheries Corporation) — (1)		\$ 1,500,724	\$ 929,000	\$ 4,406,060		NA	\$ 434,346
SJC (Sheldon Jackson College) — (1)		\$ 423,624		\$ 61,370		NA	\$ 31,941
THFDC (Tlingit and Haida Fisheries Development Corporation) — (0)		\$ 1,464,000		\$ 89,860		NA	NA
Prince William Sound							
PWSAC (Prince William Sound Aquaculture Corporation) — (3)		\$24,467,209		\$ 5,585,500	\$ 564,218	\$10,111,560 note 2	\$ 5,385,942
VFDA (Valdez Fisheries Development Association) — (1)		\$ 3,193,830		\$ 5,986,043		NA	\$ 2,204,757
Cook Inlet							
PGHC (Port Graham Hatchery Corporation) — (1)							\$ 30,825
CIAA (Cook Inlet Aquaculture Association) — (4)		\$ 1,438,881		\$ 1,583,369	\$ 528,418	\$17,589,327 note 2	\$ 367,946
Kodiak							
KRAA (Kodiak Regional Aquaculture Association) — (2)					\$1,041,185	\$ 8,356,342 note 2	\$ 0
Chignik							
CRAA (Chignik Regional Aquaculture Association) — (0)					\$ 272,556	\$ 1,133,620 note 2	NA
Statewide Totals	\$400,000	\$60,832,593	\$3,114,053	\$44,477,543	\$5,349,409	\$79,384,163	\$16,883,565

Sources: Becky Fredrick and Dave Massey, Department of Commerce and Economic Development — Fisheries Enhancement Revolving Loan Fund Program Overview; PNP annual reports.

Note 1. A 3% mandatory assessment tax was collected from commercial fishermen.

Note 2. A 2% mandatory assessment tax was collected from commercial fishermen.

Appendix Table 6(a). Summary of salmon production from Alaska hatcheries and enhancement projects.

Year	Egg Takes	Fry Releases	Total Returns	Year	Egg Takes	Fry Releases	Total Returns
1965				1981	471,521,000	213,610,000	4,535,820
1966	NA	676,000	0	1982	545,509,000	326,024,000	6,940,109
1967	NA	1,468,000	0	1983	647,905,000	333,651,000	6,579,528
1968	NA	928,400	0	1984	798,845,000	506,431,000	7,696,292
1969	NA	923,900	0	1985	920,352,000	551,175,000	16,652,790
1970	NA	659,700	0	1986	992,334,000	746,393,000	12,827,937
1971	NA	659,000	0	1987	1,349,423,000	801,298,000	25,609,232
1972	NA	1,808,000	0	1988	1,275,603,000	1,056,531,000	18,626,764
1973	2,106,000	192,000	0	1989	1,400,625,000	1,091,804,000	35,793,036
1974	8,095,000	1,514,780	0	1990	1,601,780,000	1,116,526,000	48,361,688
1975	28,890,000	3,548,000	17,550	1991	1,651,865,000	1,328,257,000	48,146,000
1976	55,711,000	14,436,780	38,200	1992	1,738,632,000	1,335,537,000	23,372,246
1977	92,407,000	37,687,000	175,318	1993	1,650,710,000	1,463,320,000	33,313,166
1978	105,594,000	71,949,000	322,682	1994	1,763,890,000	1,301,116,922	55,818,000
1979	144,557,000	80,716,000	1,653,570	1995	1,882,271,257	1,499,272,020	38,087,860
1980	293,418,000	91,183,000	2,428,170	1996	1,741,005,000	1,637,756,000	49,863,959
				Total	21,163,048,257	15,609,928,502	436,859,917

Table does not include nonanadromous species.
NA = not available

Appendix Table 6(b). Summary of chum salmon production from Alaska hatcheries and enhancement projects.

Year	Egg Takes	Fry Releases	Total Returns	Year	Egg Takes	Fry Releases	Total Returns
1974	1,424,000	7,780		1985	242,906,000	198,997,000	1,404,000
1975	4,966,000	967,000		1986	345,567,000	181,850,000	1,938,000
1976	7,163,000	2,370,000		1987	343,065,000	276,477,000	2,005,000
1977	7,036,000	2,590,000	800	1988	388,463,000	235,231,000	2,650,000
1978	9,554,000	3,917,000	2,810	1989	281,078,000	318,116,000	1,347,000
1979	18,466,000	6,095,000	5,730	1990	450,327,000	208,000,000	2,039,000
1980	75,789,000	8,658,000	16,100	1991	490,173,000	373,892,000	2,260,000
1981	81,684,000	47,315,000	33,100	1992	519,425,000	434,198,000	3,192,708
1982	123,386,000	58,924,000	153,000	1993	468,890,000	460,120,000	6,563,000
1983	155,995,000	93,457,000	301,000	1994	528,818,000	410,972,922	8,715,000
1984	256,584,000	105,827,000	1,809,000	1995	592,285,857	473,215,079	9,828,503
				1996	651,220,591	535,426,789	16,385,116

Appendix Table 6(c). Summary of sockeye salmon production from Alaska hatcheries and enhancement projects.

Year	Egg Takes	Fry Releases	Total Returns	Year	Egg Takes	Fry Releases	Total Returns
1972	NA	17,000		1984	82,622,000	51,778,000	389,000
1973	1,548,000	192,000		1985	108,039,000	72,407,000	757,000
1974	1,567,000	506,000		1986	101,251,000	77,086,000	1,146,000
1975	7,934,000	997,000		1987	106,584,000	60,726,000	1,099,000
1976	23,889,000	2,172,000		1988	107,237,000	67,707,000	1,780,000
1977	18,299,000	13,801,000	318	1989	107,524,000	75,552,000	2,111,000
1978	34,977,000	15,997,000	1,640	1990	99,265,000	73,190,000	4,120,000
1979	31,892,000	17,104,000	9,990	1991	112,683,000	68,984,000	6,374,000
1980	37,342,000	15,236,000	74,290	1992	105,043,000	75,125,000	3,899,000
1981	50,812,000	27,560,000	71,640	1993	120,860,000	57,680,000	5,018,000
1982	58,792,000	45,292,000	57,540	1994	114,078,000	75,640,000	4,187,000
1983	67,880,000	52,513,000	230,000	1995	111,136,000	81,390,800	1,390,038
				1996	119,679,273	75,278,069	2,759,116

NA = not available

Appendix Table 6(d). Summary of pink salmon production from Alaska hatcheries and enhancement projects.

Year	Egg Takes	Fry Releases	Total Returns	Year	Egg Takes	Fry Releases	Total Returns
1973	558,000			1985	536,349,000	261,434,000	14,158,000
1974	4,949,000	448,000		1986	511,330,000	468,734,000	9,044,000
1975	15,460,000	1,429,000	17,550	1987	857,901,000	442,647,000	21,960,000
1976	23,441,000	10,200,000	16,200	1988	735,699,000	728,907,000	13,838,000
1977	64,281,000	18,433,000	175,000	1989	974,893,000	674,870,000	31,754,000
1978	60,085,000	49,658,000	321,000	1990	1,013,590,000	808,955,000	41,207,000
1979	90,060,000	54,885,000	1,591,000	1991	1,008,890,000	861,978,000	38,132,000
1980	173,940,000	64,285,000	2,310,000	1992	1,079,763,000	801,770,000	14,879,000
1981	327,599,000	134,652,000	4,371,000	1993	1,028,760,000	919,680,000	20,693,000
1982	343,955,000	217,604,000	6,610,000	1994	1,076,306,000	787,438,000	41,489,000
1983	406,393,000	178,220,000	5,939,000	1995	1,135,729,924	920,517,130	25,414,701
1984	433,384,000	336,738,000	5,298,000	1996	928,795,092	999,097,900	29,297,659

Appendix Table 6(e). Summary of coho salmon production from Alaska hatcheries and enhancement projects.

Year	Egg Takes	Fry Releases	Total Returns	Year	Egg Takes	Fry Releases	Total Returns
1966	NA	506,000		1981	9,782,000	3,350,000	54,960
1967	NA	930,000		1982	16,100,000	3,266,000	107,609
1968	NA	846,000		1983	11,553,000	7,917,000	96,278
1969	NA	828,000		1984	17,688,000	8,811,000	179,462
1970	NA	614,000		1985	19,426,000	14,273,000	307,580
1971	NA	442,000		1986	23,715,000	12,665,000	659,587
1972	NA	1,657,000		1987	25,456,000	13,718,000	453,332
1973	NA	1,909,000		1988	26,951,000	15,579,000	284,461
1974	NA	1,824,000		1989	22,629,000	15,277,000	501,756
1975	NA	3,470,000	100	1990	21,051,000	16,446,000	885,308
1976	NA	3,120,000	22,000	1991	21,521,000	16,119,000	1,258,000
1977	NA	4,922,000		1992	21,364,000	14,625,000	1,280,000
1978	NA	3,191,000		1993	22,670,000	14,620,000	928,000
1979	2,347,000	2,483,000	48,560	1994	31,514,000	17,335,000	1,306,000
1980	3,839,000	2,211,000	21,210	1995	28,197,876	17,426,563	1,295,807
				1996	29,508,645	20,960,030	1,261,781

NA = not available

Appendix Table 6(f). Summary of chinook salmon production from Alaska hatcheries and enhancement projects.

Year	Egg Takes	Fry Releases	Total Returns	Year	Egg Takes	Fry Releases	Total Returns
1966	NA	170,000		1981	1,644,000	733,000	5,120
1967	NA	538,000		1982	3,276,000	938,000	11,960
1968	NA	82,400		1983	6,084,000	1,544,000	13,250
1969	NA	95,900		1984	8,567,000	3,277,000	20,830
1970	NA	45,700		1985	13,632,000	4,064,000	26,210
1971	NA	217,000		1986	10,471,000	6,058,000	40,350
1972	NA	151,000		1987	16,417,000	7,730,000	91,900
1973	NA	328,000		1988	17,253,000	9,107,000	74,303
1974	155,000	553,000		1989	14,501,000	7,989,000	79,280
1975	530,000	155,000		1990	17,547,000	9,935,000	110,380
1976	1,218,000	233,000		1991	18,598,000	7,284,000	122,000
1977	2,791,000	1,016,000		1992	13,037,000	9,819,000	121,538
1978	978,000	804,000	42	1993	9,530,000	11,220,000	111,166
1979	1,792,000	1,215,000	3,220	1994	13,174,000	9,731,000	121,000
1980	2,508,000	793,000	6,570	1995	14,921,600	6,722,448	158,811
				1996	11,851,404	6,993,930	159,873

Appendix Table 7(a). Summary of statewide salmon production (all species) from private nonprofit hatcheries in Alaska, as reported by operators.

Year	Egg Take	Fry Release	Total Return	Special Harvest	Hatchery Revenue
1975	8,091,395				
1976	16,622,881	3,719,741			
1977	37,008,186	12,360,354	160,147	108,718	\$ 130,726
1978	37,346,167	26,796,238	160,967	114,188	\$ 141,799
1979	54,295,879	29,131,774	356,501	244,555	\$ 309,612
1980	125,740,500	35,587,200	1,506,466	346,168	\$ 436,171
1981	223,600,000	101,600,000	2,563,913	850,293	\$ 1,274,640
1982	234,390,000	126,990,000	5,340,720	1,370,110	\$ 1,165,608
1983	261,310,000	170,375,000	4,285,989	744,767	\$ 669,838
1984	372,880,000	217,730,000	4,764,144	1,048,701	\$ 1,668,788
1985	469,960,000	302,320,000	8,106,485	1,853,483	\$ 1,878,348
1986	522,200,000	380,890,000	7,903,526	1,211,620	\$ 1,867,054
1987	868,250,000	461,170,000	19,096,871	4,172,700	\$ 6,557,877
1988	1,045,620,000	819,800,000	14,343,654	2,499,557	\$ 9,266,780
1989	1,108,700,000	860,190,000	24,044,699	14,849,608	\$ 28,985,391
1990	1,249,160,000	925,210,000	42,405,072	10,387,754	\$ 13,644,041
1991	1,325,990,000	1,087,070,000	40,264,749	12,377,204	\$ 6,396,187
1992	1,427,710,000	1,075,180,000	18,174,631	7,277,620	\$ 10,424,579
1993	1,613,220,000	1,426,480,000	27,781,066	4,827,710	\$ 7,917,685
1994	1,725,820,000	1,267,520,000	52,022,989	14,812,269	\$ 15,625,954
1995	1,849,333,100	1,472,954,300	36,942,907	9,360,581	\$ 12,276,938
1996	1,734,940,000	1,632,050,000	48,201,545	14,641,144	\$ 18,421,517
Cumulative Hatchery Revenues from Special Harvests:					\$139,059,534

Appendix Table 7(b). Summary of chum salmon production from private nonprofit hatcheries in Alaska.

Year	Egg Take	Fry Release	Total Return	Special Harvest	Hatchery Revenue
1975	77,000				
1976	347,275	66,075			
1977	1,614,574	264,068			
1978	1,684,930	1,064,000	543		
1979	6,782,864	924,400	3		
1980	26,850,000	3,340,000	1,588		
1981	32,400,000	21,900,000	20,518	6,115	\$ 24,640
1982	46,130,000	23,590,000	22,133	378	\$ 302
1983	68,790,000	41,770,000	126,783	35,099	\$ 37,120
1984	122,170,000	54,780,000	1,001,449	436,617	\$ 690,393
1985	119,450,000	97,880,000	525,088	123,215	\$ 209,208
1986	181,450,000	100,490,000	779,637	188,754	\$ 303,080
1987	234,500,000	149,790,000	955,294	487,605	\$1,162,579
1988	369,610,000	186,050,000	1,835,164	469,754	\$2,180,685
1989	267,030,000	286,770,000	1,102,191	183,340	\$ 754,806
1990	425,410,000	216,860,000	1,632,539	369,985	\$1,411,640
1991	441,530,000	359,270,000	1,958,538	403,603	\$1,269,087
1992	495,360,000	394,260,000	3,078,557	741,276	\$2,449,107
1993	457,690,000	451,720,000	6,386,907	1,781,764	\$4,864,415
1994	520,120,000	402,220,000	8,783,080	2,049,000	\$5,088,624
1995	590,160,000	463,440,000	9,799,995	1,983,924	\$4,223,472
1996	651,220,000	533,690,000	16,204,661	4,782,038	\$10,459,811

Appendix Table 7(c). Summary of sockeye salmon production from private nonprofit hatcheries in Alaska.

Year	Egg Take	Fry Release	Total Return	Special Harvest	Hatchery Revenue
1985	310,000				
1986	1,295,700	102,000			
1987	1,570,000	750,000			
1988	10,590,000	1,000,000	66,499		
1989	14,740,000	8,030,000	39,832	39,831	\$ 254,215
1990	11,780,000	8,140,000	101,216	8,513	\$ 35,506
1991	27,480,000	8,070,000	153,606	5,023	\$ 21,167
1992	25,530,000	15,960,000	783,508	170,629	\$1,653,004
1993	102,720,000	37,060,000	838,805	156,159	\$ 433,147
1994	100,080,000	59,710,000	1,053,800	133,280	\$ 580,055
1995	96,647,500	72,306,000	1,313,393	142,354	\$ 720,349
1996	119,320,000	75,280,000	2,305,680	174,191	\$ 900,017

Appendix Table 7(d). Summary of pink salmon production from private nonprofit hatcheries in Alaska.

Year	Egg Take	Fry Release	Total Return	Special Harvest	Hatchery Revenue
1975	8,002,395				
1976	16,251,456	3,653,666			
1977	35,383,112	12,093,184	160,147	108,718	\$ 130,726
1978	34,851,807	25,732,238	160,397	114,188	\$ 141,799
1979	46,582,015	28,204,674	356,498	244,555	\$ 309,612
1980	98,030,000	31,690,000	1,504,878	346,168	\$ 436,171
1981	188,000,000	78,800,000	2,491,345	838,037	\$ 1,200,000
1982	185,170,000	102,550,000	5,253,378	1,354,732	\$ 1,084,806
1983	185,520,000	126,890,000	4,086,552	701,399	\$ 613,618
1984	241,760,000	159,340,000	3,637,927	583,185	\$ 741,673
1985	339,910,000	199,490,000	7,404,789	1,698,732	\$ 1,320,320
1986	324,570,000	271,960,000	6,767,984	948,624	\$ 1,012,420
1987	618,350,000	299,260,000	17,963,785	3,624,586	\$ 4,711,068
1988	645,100,000	625,820,000	12,257,959	2,007,720	\$ 6,715,887
1989	805,870,000	553,090,000	22,561,056	14,519,987	\$27,380,703
1990	788,710,000	684,790,000	39,919,911	9,846,364	\$10,846,114
1991	830,860,000	704,330,000	37,081,341	11,574,828	\$ 2,890,652
1992	882,920,000	648,470,000	13,200,079	6,009,343	\$ 3,917,463
1993	1,028,760,000	919,680,000	19,844,303	2,736,262	\$ 1,733,572
1994	1,075,310,000	787,440,000	40,939,000	12,398,000	\$ 8,587,514
1995	1,134,730,000	919,740,000	24,765,273	6,817,549	\$ 5,579,764
1996	928,800,000	999,100,000	28,553,267	9,400,936	\$ 5,986,199

Appendix Table 7(e). Summary of coho salmon production from private nonprofit hatcheries in Alaska.

Year	Egg Take	Fry Release	Total Return	Special Harvest	Hatchery Revenue
1975	12,000				
1976	24,150				
1977	10,500	3,102			
1978	809,430	0	27		
1979	931,000	2,700	0		
1980	666,500	557,200	0		
1981	2,800,000	900,000	52,050	6,141	\$ 50,000
1982	2,870,000	700,000	61,709	11,500	\$ 80,500
1983	6,200,000	1,570,000	71,781	7,396	\$ 19,100
1984	6,300,000	3,230,000	121,112	27,310	\$ 233,466
1985	4,100,000	4,220,000	168,427	29,530	\$ 293,820
1986	8,300,000	4,280,000	344,749	72,960	\$ 535,203
1987	9,280,000	5,440,000	169,149	58,333	\$ 625,547
1988	13,310,000	4,720,000	122,186	13,383	\$ 178,771
1989	13,740,000	9,040,000	305,048	88,702	\$ 271,181
1990	14,470,000	10,730,000	691,680	140,728	\$ 939,671
1991	16,120,000	11,500,000	1,001,338	372,612	\$1,873,709
1992	16,510,000	10,280,000	1,070,086	338,725	\$2,051,466
1993	19,150,000	11,100,000	657,208	128,771	\$ 503,420
1994	24,280,000	12,640,000	1,189,140	221,291	\$1,248,600
1995	21,535,600	13,868,300	966,222	318,730	\$1,393,072
1996	27,700,000	19,570,000	1,041,009	251,005	\$ 717,386

Appendix Table 7(f). Summary of chinook salmon production from private nonprofit hatcheries in Alaska.

Year	Egg Take	Fry Release	Total Return	Special Harvest	Hatchery Revenue
1980	194,000				
1981	400,000				
1982	220,000	150,000	3,500	3,500	NA
1983	800,000	140,000	872	872	NA
1984	2,730,000	380,000	3,656	1,589	\$ 3,256
1985	6,180,000	720,000	8,181	2,006	\$ 55,000
1986	6,580,000	4,050,000	11,156	1,282	\$ 16,351
1987	4,550,000	5,940,000	8,643	2,176	\$ 58,684
1988	7,010,000	2,210,000	23,246	8,700	\$191,436
1989	7,330,000	3,270,000	36,572	17,748	\$324,487
1990	8,790,000	4,700,000	59,726	22,164	\$411,109
1991	10,000,000	3,900,000	69,926	21,138	\$333,572
1992	7,400,000	6,210,000	42,401	17,647	\$353,539
1993	4,900,000	6,920,000	53,843	24,754	\$383,131
1994	6,030,000	5,510,000	57,969	10,698	\$121,161
1995	6,260,000	3,600,000	98,024	28,236	\$360,281
1996	7,900,000	4,410,000	96,928	32,974	\$358,104

Note: Includes only data from private nonprofit hatcheries; does not include federal, Bureau of Indian Affairs, or state hatchery data.

NA = not available

Appendix Table 8. Alaska commercial salmon fishery harvest weights and prices, 1996.

Area/Species	Average Harvest	
	Weight (lb)	Price/lb.
Arctic-Yukon-Kuskokwim		
Chum (Kotzebue)	8.0	0.10
Cook Inlet		
Chinook	22.0	1.15
Sockeye	6.2	1.15
Coho	6.5	0.50
Pink	2.8	0.07
Chum	10.0	0.12
Kodiak		
Chinook	13.7	0.50
Sockeye	5.7	0.80
Coho	7.5	0.25
Pink	3.5	0.05
Chum	8.2	0.15
Prince William Sound		
Chinook	24.7	1.60
Sockeye	6.4	1.30
Coho	8.1	0.50
Pink	3.6	0.08
Chum	8.7	0.18
Southeast		
Chinook	17.0	1.75
Sockeye	6.5	1.25
Coho	8.0	0.50
Pink	3.2	0.11
Chum	11.0	0.18

Source: Herman Savikko, Alaska Department of Fish and Game, as of December 4, 1996, based on total commercial fishery.

Appendix Table 9. Alaska state hatchery FY 96 operating budgets, in thousands of dollars.

Hatchery	FY 96	FY 96
	Authorized Total	Actual Total
Elmendorf Hatchery	\$ 581.90	\$ 565.90
Ft. Richardson Hatchery	\$1,064.10	\$1,006.00
Clear Hatchery	\$ 440.30	\$ 390.68
Crystal Lake Hatchery	\$ 610.80	\$ 625.90

Appendix Table 10(a). Estimated chum salmon returns to Alaska hatcheries in 1996, including common property harvests, as reported by operators.

Region/Operator/Location		Common Property Harvest					Cost Recovery				Total	Cost Recovery Revenue	Comment	
		Seine	Gillnet	Troll	Sport	Personal Use/ Subsistence	Other	Brood	Harvest	Escapement				
Southeast														
SSRAA	Whitman Lake/Nakat – fall	282,402	110,053									392,455	\$2,123,291	5
	Nakat Inlet – summer	311,518	181,480					78,064				571,062		5
	Earl West Cove – summer	8,633	61,816	1			12,273	29,428				112,151		5
	Kendrick Bay – summer	304,262	18,038					9,170				331,470		5
	Neets Bay – summer	276,593	59,934	498				1,099,992	151,000			1,711,324		5
	Neets Bay – fall	72,973	24,989	1,356				498,514	47,300			663,259		5
NSRAA	Medvejje Creek	1,834,025	188,586	321,331	6,164		75,646	23,711	366,836	3,200		2,819,499	\$1,075,132	4
	Hidden Falls	3,370,728					227,619	72,636	371,942	12,417		4,055,342	\$1,239,317	4
	Haines projects		2,196					189		3,471		5,856		
AAI	Burnett Inlet	7,800	86,208				30,000	24,718	17,666			166,392	\$ 16,700	5
	Anita Bay		156,500					15,000	730			172,230	\$ 126,000	
BCF	Burro Creek	20	20	20	10		32	120				232		
DIPAC	Sheep Creek				2,000		230,625	35,965	189,493	35,000		493,083	\$ 437,465	5
	Gastineau		211,000		2,273		90,830	53,295	92,676			450,074	\$ 405,738	5
	Amalga		249,749	7,985			427,683		540,765			1,226,182	\$1,371,544	
	Limestone Inlet		118,600				73,648		73,649			265,897	\$ 291,187	5
	Boat Harbor						50,789		61,662			112,451	\$ 213,688	5
KNFC	Gunnuk Creek	4,820	1,520	350		450		20,000	51,845	9,132	22,200	110,317	\$ 35,127	5
	Southeast Cove	6,920	2,180	500			25,000				123,048	157,648	\$ 399,219	5
SJC	Indian River							15			58	73		
MIC	Tamgas Creek	90,000							90,000			180,000		
ADF&G	Marx Creek Spawning Channel	62	221								152	435		
	Margaret Lake										22	22		
Southeast Totals		6,570,756	1,473,090	332,041	10,447	460	1,264,145	418,928	3,652,767	274,820		13,997,454	\$7,734,408	
Prince William Sound														
PWSAC	Wally Noerenberg		646,200				68,051	94,386	1,061,366			1,875,834	\$2,717,353	
	Solomon Gulch	340,370			1,000		45,054		55,446			441,870		
Prince William Sound Totals		340,370	646,200	0	1,000	0	113,105	94,386	1,116,812	0		2,317,704	\$2,717,353	
Cook Inlet														
CIAA	Eklutna		16,083		1,657				6,628			24,368	\$ 8,049	
Cook Inlet Totals		0	16,083	0	1,657	0	0	0	6,628	0		24,368	\$ 8,049	
Kodiak														
KRAA	Kitoi Bay	14,200					9,120	22,022		250		45,592		
Kodiak Totals		14,200	0	0	0	0	9,120	22,022	0	250		45,592	\$ 0	
Statewide Totals		6,925,326	2,135,373	332,041	13,104	460	1,386,370	535,336	4,776,207	275,070		16,385,118	\$10,459,811	

See Appendix Table 16 for list of acronyms used in this report.

See page 37 for list of comments.

Appendix Table 10(b). Estimated sockeye salmon returns to Alaska hatcheries in 1996, including common property harvests, as reported by operators.

Region/Operator/Location		Common Property Harvest						Cost Recovery			Total	Cost Recovery Revenue	Comment	
		Seine	Gillnet	Troll	Sport	Personal Use/ Subsistence	Other	Brood	Harvest	Escapement				
Southeast														
SSRAA	Beaver Falls – Shrimp Bay	13,860	2,071						844		16,775			
	Hugh Smith Lake	3,458	4,875							7,123	15,456			
	Virginia Lake	1,788	4,901			424				9,941	17,054			
ADF&G	McDonald Lake	320,473	51,493		200	5,000				61,719	438,885			
	Dog Salmon River									349	349			
POWHA	Klawock Hatchery	1,100			100	3,000	1,138	1,890			7,228			
NSRAA	Haines Project – Chilkat		4,346					83	314		7,515			
DIPAC	Snettisham – Sweetheart		337			3,367				2,772	3,704			
	Crescent		930								930			
	Snettisham		19,735				17,467	4,062	10,153		51,417	\$ 16,607		
	Stikine		59,979					1,021		18,916	79,916			
	Taku		5,796							14,864	20,660			
Southeast Totals		340,679	154,463	0	300	11,791	18,688	7,287	10,997	115,684	659,889	\$ 16,607		
Prince William Sound														
PWSAC	Main Bay	10,800	395,300				2,672	5,697	86,922		501,391	\$583,313		
	Gulkana I and II		315,000			23,065	27,759	16,908		107,160	489,892			
Prince William Sound Totals		10,800	710,300	0	0	23,065	30,431	22,605	86,922	107,160	991,283	\$583,313		
Cook Inlet														
PGHC	Port Graham		13,394			3,000		1,489	5,734	10,882	34,499	\$ 30,825		
	CIAA		2,723		280		591		530		4,124	\$ 1,790		
	Trail Lakes – Bear Creek	35,994			1,500			1,813	7,954	6,198	53,459	\$ 32,808		
	Packer's Creek		64,604				411	2,144	33,352	16,951	117,462	\$133,601		
	Crooked Creek		3,093				75		956		4,124	\$ 4,124		
	China Poot/Hazel	210,945			1,000	9,000	441		14,235		235,621	\$ 61,349		
	Kirschner Lake	18,093							13,511		31,604	\$ 39,723		
Cook Inlet Totals		265,032	83,814	0	2,780	12,000	1,518	5,446	76,272	34,031	480,893	\$300,097		
Kodiak														
KRAA	Kitoi Bay	16,379					372	1,106		1,390	19,247			
	Pillar Creek										0			
	Afognak	108,000	12,000		500	5,000		1,351		100,367	227,218			
	Foul Bay	28,000									28,000			
	Spiridon Lake	214,000	78,000								292,000			
	Settler's Cove	9,000	4,000			7,000					20,000			
	Waterfall Lake	41,000									41,000			
Kodiak Totals		416,379	94,000	0	500	12,000	372	2,457	0	101,757	627,465	\$ 0		
Statewide Totals		1,032,890	1,042,577	0	3,580	58,856	51,009	37,795	174,191	358,632	2,759,530	\$900,017		

See Appendix Table 16 for list of acronyms used in this report.

See page 37 for list of comments.

Table updated 7/9/97

Appendix Table 10(c). Estimated coho salmon returns to Alaska hatcheries in 1996, including common property harvests, as reported by operators.

Region/Operator/Location	Common Property Harvest				Personal Use/ Subsistence	Other	Brood	Cost Recovery		Total	Cost Recovery Revenue	Comment	
	Seine	Gillnet	Troll	Sport				Harvest	Escapement				
Southeast													
SSRAA	Whitman Lake	2,956	1,963	7,486	1,232		2,517			16,154		5	
	Earl West Cove	176	6,349	7,067						13,592		5	
	Nakat Inlet	4,383	5,463	10,405	280					20,531		5	
	Neets Bay	6,294	26,922	95,693	9,658		657	42,932		182,156		5	
NSRAA	Medvejite Creek	17		308	13		78	17		433		5	
	Deer Lake	30,703		67,051	1,940	260		43,915		143,869	\$229,306	5	
	Deep Inlet	602		2,034	488	35	61			3,220		5	
	Shamrock Bay	26		8,090	395	59		445		9,015		5	
	Hidden Falls	13,752	157	98,321	3,609	6,920	2,606	65,698		191,063	\$304,012	5	
AKI	Port Armstrong	2,109		20,180		5,000	3,000	2,154		32,443	\$ 6,729	5	
DIPAC	Gastineau	871	9,588	23,431	5,776	12,768	1,267	16,131		69,832	\$ 39,971	5	
	Sheep Creek									0			
KTHC	Deer Mountain	942	1,921	712	626	417	1,780		1,111	7,509		5	
	Ward Lake	969	2,206	1,046	1,875	245	300		4,200	10,841		5	
SJC	Indian River			666	230		76		256	1,246		5	
POWHA	Klawock Hatchery	2,048		6,243	1,153	50	2,652	640	2,652	15,438	\$ 2,450	5	
MIC	Tangas Creek	16,000	40,000	66,000			3,000	25,000		150,000		5	
ADF&G	Lower Salmon River	17	5	73					465	560		5	
	Old Frank's Lake	540	699	667					5,132	7,038		5	
	Margaret Lake								407	407		5	
	Crystal Lake Hatchery	216	765	1,222	49	1,092	160		300	3,804		5	
Southeast Totals		82,621	96,038	416,695	27,324	18	26,846	18,154	196,932	14,523	879,151	\$582,468	
Prince William Sound													
PWSAC	Wally Noerenberg		30,900		13,074		3,759	322	39,506		\$132,046		
	Solomon Gulch	87,360			25,000		21,130	639	13,713		\$ 2,533	7	
Prince William Sound Totals		87,360	30,900	0	38,074	0	24,889	961	53,219	3	235,406	\$134,579	
Cook Inlet													
CIAA	Eklutna		492		51		72	131		746	\$ 339		
	Trail Lakes				1,500		10,230	608	723	13,441			
ADF&G	Elmendorf				21,000			200	380	21,200			
	Landlocked lakes				800					800		1	
	Ft. Richardson/Little Susitna		18,000		10,000	2,794	361			31,155		1, 5	
Cook Inlet Totals		0	18,492	0	33,351	2,794	10,230	1,241	854	380	67,342	\$ 339	
Kodiak													
KRAA	Kitoi Bay	56,850			800	400	5,817	1,483		65,725			
	Pillar Creek							61	375	8,349			
Kodiak Totals		56,850	0	0	800	400	5,817	1,544	0	8,663	74,074	\$ 0	
Arctic-Yukon-Kuskokwim													
ADF&G	Clear/Interior lakes				5,739			69		5,808			
Arctic-Yukon-Kuskokwim Totals													
Statewide Totals		226,831	145,430	416,695	105,288	3,212	67,782	21,969	251,005	23,569	1,261,781	\$717,386	

See Appendix Table 16 for list of acronyms used in this report.

See page 37 for list of comments.

Appendix Table 10(d). Estimated pink salmon returns to Alaska hatcheries in 1996, including common property harvests, as reported by operators.

Region/Operator/Location	Common Property Harvest					Other	Brood	Cost Recovery Harvest	Escapement	Total	Cost Recovery Revenue	Comment
	Seine	Gillnet	Troll	Sport	Personal Use/ Subsistence							
Southeast												
AAI Burnett Inlet	435,000	142,500				35,000	66,041	101,359		779,900		
AKI Port Armstrong	533,191					279,821	184,799	601,761		1,599,372	\$ 150,290	
BCF Burro Creek	200	200	200	100	100	198	668			1,666	\$ 5,020	
DIPAC Gastineau				1,038		11,443	5,879	4,804		23,164	\$ 9,811	
SJC Indian River	171,000			175		22,492	9,205	19,512	168,000	390,384	\$ 51,941	6
Federal Auke Creek							160		2,840	3,000		
ADF&G Ketchikan Creek	137,180	36,100	7,220						180,500	361,000		
Dog Salmon Creek									55,500	55,500		
Margaret Lake									23,892	23,892		
Sunny Creek	150,500								150,500	301,000		
Southeast Totals	1,427,071	178,800	7,420	1,313	100	348,954	266,752	727,436	581,232	3,539,078	\$ 217,062	
Prince William Sound												
PWSAC Armin F. Koernig	1,763,000									1,763,000		4
Wally Noerenberg	2,659,000					178,080	188,531	4,196,070		7,221,681	\$1,306,084	
Cannery Creek	5,252,000					161,263	176,680	1,842,409		7,432,352	\$ 647,115	
VFDA Solomon Gulch	4,827,400			100,000		121,627	183,308	2,211,715	31,895	7,475,945	\$2,352,124	4
Prince William Sound Totals	14,501,400	0	0	100,000	0	460,970	548,519	8,250,194	31,895	23,892,978	\$4,305,323	
Cook Inlet												
PGHC Port Graham		2,500		1,000	1,000		2,131		7,000	13,631		
CIAA Tutka	10,260	6,750		3,000			138,021	423,306	3,456	584,793	\$ 90,286	
Cook Inlet Totals	10,260	9,250	0	4,000	1,000	0	140,152	423,306	10,456	598,424	\$ 90,286	
Kodiak												
KRAA Kitoi Bay	974,400					172,545	120,009		225	1,267,179	\$1,368,051	
Kodiak Totals	974,400	0	0	0	0	172,545	120,009	0	225	1,267,179	\$1,368,051	
Statewide Totals	16,913,131	188,050	7,420	105,313	1,100	982,469	1,075,432	9,400,936	623,808	29,297,659	\$5,980,722	

See Appendix Table 16 for list of acronyms used in this report.

See page 37 for list of comments.

Table updated 7/9/97

Appendix Table 10(e). Estimated chinook salmon returns to Alaska hatcheries in 1996, including common property harvests, as reported by operators.

Region/Operator/Location	Common Property Harvest				Personal Use/ Subsistence	Other	Brood	Cost Recovery Harvest	Escapement	Total	Cost Recovery Revenue	Comment	
	Seine	Gillnet	Troll	Sport									
Southeast													
SSRAA	Whitman Lake		25	169	270		790			1,254		5	
	Carroll Inlet		94	534	895		456			1,979		5	
COOP	Earl West Cove	831	3,047	227	250	0				4,355		5	
	Neets Bay		64	268	226			137		695		5	
NSRAA	Medvejie Creek	775	26	7,243	1,704	207	152	26,256		36,363	\$325,265	5	
	Hidden Falls	11,037	409	16,729	92	1,700	1,436	3,668	1,000	36,071	\$ 25,769	5	
BCF	Burro Creek	5	5	5	10	10	20			55			
DIPAC	Gastineau		774	416	1,759	1,788	269	817		5,823	\$ 7,039	5	
	Auke/Fish Creek		445	147	703					1,295			
KTHC	Deer Mountain Hatchery		20	41	89	110	70		260	3,260		5	
SJC	Indian River	209		887	137	83	76			1,392		5	
MIC	Tamgas Creek	81	40	109	40			1,050		1,320		5	
Federal	Little Port Walter	436	122	1,733	225	138	1,400			4,054		5	
ADF&G	Crystal Lake Hatchery	1	212	4,244	2,839	3,700	774		65	11,835		5	
Southeast Totals		13,375	5,283	32,752	9,239	110	10,296	5,443	31,928	1,325	109,751	\$358,073	
Prince William Sound													
PWSAC	Wally Noerenberg		576		1,115		253	154	4	10	2,112	\$ 31	5
Prince William Sound Totals		0	576	0	1,115	0	253	154	4	10	2,112	\$ 31	
Cook Inlet													
CIAA	Crooked Creek					468		1,042	764	2,274			
ADF&G	Elmendorf				4,000	703	171			4,874		5	
	Homer Spit		500		17,500		349			18,349		1	
	Ft. Richardson									0			
	Willow Creek		500		1,500		153			2,153		1, 2	
	Ninilchik River				2,700		201			2,901		1, 2	
	Statewide LL Lakes				17,459					17,459		1	
Cook Inlet Totals		0	1,000	0	43,159	703	468	874	1,042	764	48,010	\$ 0	
Statewide Totals		13,375	6,859	32,752	53,513	813	11,017	6,471	32,974	2,099	159,873	\$358,104	

See Appendix Table 16 for list of acronyms used in this report.

See page 37 for list of comments.

Appendix Table 10(f). Estimated “other” enhanced fish returns to Alaska hatcheries in 1996.

Region/Operator/Location	Species	Commercial	Sport Catch	Subsistence	Personal Use/ Other	Brood	Cost Recovery Harvest	Escapement	Total	Comment
Cook Inlet										
ADF&G Ft. Richardson/Statewide lakes	rainbow trout		73,905						73,905	1
Cook Inlet Totals		0	73,905	0	0	0	0	0	73,905	
Arctic-Yukon-Kuskokwim										
ADF&G Clear	grayling arctic char lake trout		1,478 3,086 546			195 231			1,673 3,317 546	1 1
Arctic-Yukon-Kuskokwim Totals		0	5,110	0	0	426	0	0	5,536	
Statewide Totals		0	79,015	0	0	426	0	0	79,441	

See Appendix Table 16 for list of acronyms used in this report.

Comments:

1. Based on 1995 Sport Fish Statewide Harvest Surveys.
3. Catches for commercial gear groups not broken apart.
4. Commercial numbers based on fish ticket returns.
5. Commercial numbers based on coded wire tag data.
6. Commercial data based on estimated survivals.

Appendix Table 11. Summary of fishery resource-permitted salmon production in Alaska for 1996.

Region/Permittee	Project Type	Species	Maximum Number to be Released
Southeast			
Craig Elementary	Classroom incubation	coho	100
Haines Borough School District	Classroom incubation	chum	2,500
Hoonah City Schools	Classroom incubation	coho	500
Hydaburg School	Classroom incubation	coho	500
Juneau-Douglas High School	Classroom incubation	coho	3,000
Klawock Schools	Classroom incubation	coho	250
Northern Southeast Regional Aquaculture Assn	Site suitability	chum	50,000
Petersburg High School	School incubation project	pink	50,000
Sitka High School	Classroom incubation	coho	500
Skagway City Schools	School incubation project	pink, coho, and chinook	62,000
Stikine Middle School (Wrangell)	School incubation project	pink	50,000
Thorne Bay School	Classroom incubation	coho	500
Valley Park Elementary	Classroom incubation	coho	250
White Cliff Elementary (Ketchikan)	Classroom incubation	coho	250
NMFS, Auke Bay Lab	Research	pink	1,000,000
NMFS, Auke Bay Lab	Research	pink	350,000
USDA, Forest Service (Juneau)	Bioenhancement	cutthroat trout	160
USDA, Forest Service (Sitka)	Bioenhancement	coho	15,000
Southcentral			
Abbott Loop Elementary (Anchorage)	Classroom incubation	coho	250
Alpenglow Elementary (Anchorage)	Classroom incubation	coho	250
Anchorage Montessori School	Classroom incubation	coho	250
Aurora Elementary (Elmendorf AFB)	Classroom incubation	coho	250
Bay Shore Elementary (Anchorage)	Classroom incubation	coho	250
Bear Valley Elementary (Anchorage)	Classroom incubation	coho	250
Bowman School (Anchorage)	Classroom incubation	coho	250
Butte Elementary (Palmer)	Classroom incubation	coho	250
Central School of Science (Anchorage)	Classroom incubation	coho	600
Chester Valley School (Anchorage)	Classroom incubation	coho	250
Chinook School (Anchorage)	Classroom incubation	coho	250
Chugach Optional School (Anchorage)	Classroom incubation	coho	250
Chugiak Elementary (Chugiak)	Classroom incubation	coho	250
Chugiak High School (Eagle River)	Classroom incubation	coho	250
Colony Middle School (Palmer)	Classroom incubation	coho	750
Denali Elementary (Anchorage)	Classroom incubation	coho	250
Eagle River Elementary	Classroom incubation	coho	250
English, Susan B. School (Seldovia)	Classroom incubation	coho	250
Fairview Elementary (Anchorage)	Classroom incubation	coho	250
Finger Lake Elementary (Palmer)	Classroom incubation	coho	250
Girdwood Junior High	Classroom incubation	coho	250
Gladys Wood Elementary (Anchorage)	Classroom incubation	coho	250
Goose Bay Elementary (Palmer)	Classroom incubation	coho	250
Government Hill Elementary (Anchorage)	Classroom incubation	coho	250
Gruening Middle School (Eagle River)	Classroom incubation	coho	250
Homer High School	Classroom incubation	coho	500
Homer Intermediate School	Classroom incubation	pink	500
Homestead Elementary (Eagle River)	Classroom incubation	coho	250
Houston Junior/Senior High (Big Lake)	Classroom incubation	coho	250
Huffman Elementary (Anchorage)	Classroom incubation	coho	250
Inlet View Elementary (Anchorage)	Classroom incubation	coho	250
Kasuun Elementary (Anchorage)	Classroom incubation	coho	250
Kincaid School (Anchorage)	Classroom incubation	coho	250
Mountain View Elementary (Anchorage)	Classroom incubation	coho	250
Nunaka Valley (Anchorage)	Classroom incubation	coho	250
Ocean View Elementary (Anchorage)	Classroom incubation	coho	250
O'Malley Elementary (Anchorage)	Classroom incubation	coho	250
Orion Elementary (Elmendorf AFB)	Classroom incubation	coho	250
Pacific Northern Academy (Anchorage)	Classroom incubation	coho	250
Palmer High School	Classroom incubation	coho	250
Palmer Middle School	Classroom incubation	coho	250
Polaris K-12 (Anchorage)	Classroom incubation	coho	250
Rabbit Creek Elementary (Anchorage)	Classroom incubation	coho	250
Rogers Park Elementary (Anchorage)	Classroom incubation	coho	250
St. Elizabeth Ann Seton School (Anchorage)	Classroom incubation	coho	250

— continued —

Appendix Table 11. Page 2 of 2.

Region/Permittee	Project Type	Species	Maximum Number to be Released
Southcentral (continued)			
Scenic Park Elementary (Anchorage)	Classroom incubation	coho	250
Service High School (Anchorage)	Classroom incubation	coho	250
Sherrod Elementary (Palmer)	Classroom incubation	coho	250
Snowshoe Elementary (Palmer)	Classroom incubation	coho	250
Steller Alternative Secondary School (Anchorage)	Classroom incubation	coho	250
Susitna Elementary (Anchorage)	Classroom incubation	coho	250
Taku Elementary (Anchorage)	Classroom incubation	coho	250
Tudor School (Anchorage)	Classroom incubation	coho	250
Turnagain Elementary (Anchorage)	Classroom incubation	coho	250
Ursa Major Elementary (Ft. Richardson)	Classroom incubation	coho	250
Wasilla High School (Wasilla)	Classroom incubation	coho	250
Wasilla Middle School (Wasilla)	Classroom incubation	coho	500
Prince William Sound			
Prince William Sound A.A. (Cordova)	Classroom incubation	coho	250
Interior			
Anderson School (Anderson)	Classroom incubation	coho	250
Delta/Greely School	Classroom incubation	coho	1,500
Nenana City Public School	Classroom incubation	coho	250
Tri Valley School (Healy)	Classroom incubation	coho	250
Western			
Dillingham High School	Classroom incubation	coho	250
East Elementary (Kodiak)	Classroom incubation	coho	500
Kodiak National Wildlife Refuge	Classroom incubation	coho	1,500
Main Elementary (Kodiak)	Classroom incubation	coho	50
Perryville School (Perryville)	Classroom incubation	coho	
Peterson Elementary (Kodiak)	Classroom incubation	coho	150
Togiak School (Togiak)	Classroom incubation	coho	500
Arctic-Yukon-Kuskokwim			
Aniak High School	Classroom incubation	coho	250
Demoski, A.K., School (Nulato)	Classroom incubation	coho	250
Egnaty, Jack Sr. School (Sleetmute)	Classroom incubation	coho	250
Gregory, O.J. Elem (Kalskag)	Classroom incubation	coho	500
Holy Cross School	Classroom incubation	coho	250
Kaltag City Schools	Classroom incubation	coho	250
Kangas, M. A. School (Ruby)	Classroom incubation	coho	250
Kotzebue Alternative Learning Center	Classroom incubation	chum	250
Levi, Zackar Elementary (Kalskag)	Classroom incubation	coho	500
McGrath School	Classroom incubation	coho	500
Mountain Village High School	Classroom incubation	coho	250
Nome-Beltz School	School incubation project	coho	10,000
Quinhagak School	Classroom incubation	coho	500
Unalakleet Schools	Classroom incubation	coho	300
UAF Cooperative Extension Service (Kaltag)	Instream incubation	chum	20,000
Vernetti, Ella B School (Koyukuk)	Classroom incubation	coho	500
Willis, George Sr. School (Red Devil)	Classroom incubation	coho	250
Alaska Peninsula			
Akutan School	School incubation project	pink and chum	26,400
Cold Bay School	Classroom incubation	pink or chum	2,200
King Cove School	Classroom incubation	chum	500
Nelson Lagoon School	Classroom incubation	pink or chum	6,600
Sand Point School	School incubation project	pink and chum	49,200
Unalaska City School District	School incubation project	pink and coho	50,000

Appendix Table 12. Charitable fish donations made by Alaska hatchery operators in 1996, in numbers of fish.

Region	Chinook	Sockeye	Coho	Pink	Chum	Total
Southeast	3,156	65	8,733	3,349	6,013	21,316
Prince William Sound			35,751	214,080	84,735	334,566
Cook Inlet	1,510	1,039	1,331		73	3,953
Kodiak/Westward			1,000			1,000
Arctic-Yukon-Kuskokwim						0
Statewide Total	4,666	1,104	46,815	217,429	90,821	360,835

Appendix Table 13. Permitted carcass disposals made in accordance with 5 AAC 93.320 in 1996.

Operator	Species	Number of Fish Disposed
Burnett Inlet	chum	2,531
DIPAC	chum	1,587,184
Gunnuk Creek	chum	47,378
NSRAA	chum	414,742
SSRAA	chum	405,623
Total Chum Carcass Disposals		2,457,458
Port Armstrong	pink	399,184
Sheldon Jackson	pink	52,291
Total Pink Carcass Disposals		451,475
Total Carcass Disposals		2,908,933

See Appendix Table 16 for list of acronyms used in this report.

Appendix Table 14. Hatchery cost recovery roe harvest, in pounds of roe harvested, and value in 1996.

Operator	Species	Pounds of Roe Harvested	Net Roe Revenue
Burnett Inlet	chum	3,037	\$ 16,700
DIPAC	chum	779,985	\$2,270,410
Gunnuk Creek	chum	16,384	\$ 3,838**
NSRAA	chum	280,781	\$ 555,184
SSRAA	chum	974,416	\$1,422,605*
PWSAC	chum	18,985	\$ 85,470
VFDA	chum	52,545	\$ 0
Total Chum Roe Harvested		2,126,133	\$2,927,764
DIPAC	pink	2,889	\$ 9,802
Port Armstrong	pink	81,892	\$ 76,847
SJC	pink	12,675	\$ 31,941
PWSAC	pink	77,078	\$ 204,363
VFDA	pink	66,694	\$ 0
Total Pink Roe Harvested		241,228	\$ 322,953
SSRAA	coho	19,284	***
NSRAA	coho	155	\$ 404
DIPAC	coho	4,442	\$ 14,152
PWSAC	coho	197	\$ 478
VFDA	coho	18,521	\$ 0
Total Coho Roe Harvested		42,599	\$ 15,034
SSRAA	chinook	111	***
NSRAA	chinook	3,767	\$ 10,971
DIPAC	chinook	2,349	\$ 7,023
PWSAC	chinook	4	\$ 30
Total Chinook Roe Harvested		6,231	\$ 18,024
SSRAA	sockeye	412	***
Total Roe Harvested, All Species		2,416,603	\$3,283,775

See Appendix Table 16 for list of acronyms used in this report.

* Revenue figure calculated by the Alaska Department of Fish and Game (60% of total net revenue).

** No revenue provided for 15,000 lbs.

*** Revenue combined with chum salmon revenue.

Appendix Table 15(a). Estimated chum salmon returns to Alaska hatcheries in 1995, including common property harvests, as reported by operators.

Region/Operator/Location		Common Property Harvest					Other	Brood	Cost Recovery Harvest	Other Escapement	Total	Cost Recovery Revenue
		Seine	Gillnet	Troll	Sport	Personal Use/ Subsistence						
Southeast												
SSRAA	Whitman Lake – Nakat/fall	112,029	184,843								296,872	
	Nakat Inlet – summer	44,655	146,179								190,834	
	Earl West Cove – summer	42,733	56,568								99,301	
	Kendrick Bay – summer	252,218	12,242								264,460	
	Neets Bay – summer	80,602	40,841	3,475			52,285	43,394	822,405		1,043,002	
	Neets Bay – fall	16,149	14,757	2,799				18,645	128,075		180,425	\$ 14,000
NSRAA	Medvejie Creek	523,373	408,643	190,790			17,870	30,190	114,305	1,640	1,286,811	\$ 580,269
	Hidden Falls	3,210,040		6,815			25,708	83,777	227,463	3,950	3,557,753	\$1,283,811
	Haines projects		2,583					412		3,900	6,895	
AAI	Burnett Inlet	21,422	59,478				21,220	21,640	48,129	43,790	215,679	\$ 235,213
BCF	Burro Creek	4	6	6	4			20		6	46	
DIPAC	Sheep Creek				2,000		26,326	53,826	7,841	15,000	104,993	
	Gastineau				2,052		25,880	44,211	277,753		349,896	\$ 50,834
	Limestone Inlet		154,302								154,302	\$ 756,090
	Boat Harbor		169,876								169,876	
	Amalga Harbor		419,081								419,081	
KNFC	Gumnuk Creek	1,000				200	9,856	65,650		5,854	82,560	
	Southeast Cove	400					1,000		31,749		33,149	\$ 73,003
SJC	Indian River							69		60	129	
MIC	Tamgas Creek	25,000						1,000	25,000		51,000	
ADF&G	Marx Creek Spawning Channel	418	1,500							1,033	2,951	
	Dog Salmon River									127	127	
	Sunny Creek									595	595	
	Margaret Lake									42	42	
	Snettisham Hatchery		98								98	
	Limestone Inlet		24,495								24,495	
Southeast Totals		4,330,043	1,695,492	203,885	4,056	200	180,145	362,834	1,682,720	75,997	8,535,372	\$2,993,220
Prince William Sound												
PWSAC	Wally Noerenberg		392,675				57,082	83,627	262,132		795,516	\$1,125,549
VFDA	Solomon Gulch		10,884		200		9,277		7,440		27,801	\$ 30,765
Prince William Sound Totals		0	403,559	0	200	0	66,359	83,627	269,572	0	823,317	\$1,156,314
Cook Inlet												
CIAA	Eklutna		79,330	7,933			100		31,632		118,995	\$ 73,937
Cook Inlet Totals		0	79,330	7,933	0	0	100	0	31,632	0	118,995	\$ 73,937
Kodiak												
KRAA	Kitoi Bay	215,311					15,091	23,389		9,500	263,291	
Kodiak Totals		215,311	0	0	0	0	15,091	23,389	0	9,500	263,291	\$ 0
Arctic-Yukon-Kuskokwim												
ADF&G	Clear							200			200	
	Sikusuilag		57,328							30,000	87,328	
Arctic-Yukon-Kuskokwim Totals		0	57,328	0	0	0	0	200	0	30,000	87,528	\$ 0
Statewide Totals		4,545,354	2,235,709	211,818	4,256	200	261,695	470,050	1,983,924	115,497	9,828,503	\$4,223,471

1995 Update

█ indicates updated data

See Appendix Table 16 for list of acronyms used in this report.

Appendix Table 15(b). Estimated sockeye salmon returns to Alaska hatcheries in 1995, including common property harvests, as reported by operators.

Region/Operator/Location		Common Property Harvest						Brood	Cost Recovery Harvest	Other Escapement	Total	Cost Recovery Revenue
		Seine	Gillnet	Troll	Sport	Personal Use/ Subsistence	Other					
Southeast												
SSRAA	Beaver Falls – Salmon Lake	189	269		200	1,000		420		21,225	23,303	
	Shrimp Bay	5,953	6,343						7,258		19,554	
	Margaret Lake	193								138	331	
	Hugh Smith Lake	1,020	1,947							3,422	6,389	
	Virginia Lake	957	1,454							1,456	3,867	
ADF&G	McDonald Lake	45,353	53,240		200	6,172		840		44,095	149,900	
KRHI	Klawock Hatchery	458						821		14,690	15,969	
NSRAA	Haines project – Chilkat		1,504					137		1,370	3,355	
	Haines project – Gilbert Bay		2,239			1,203	1,000		712		5,154	\$ 5,125
ADF&G	Snettisham – Sweetheart (see Haines project – Gilbert Bay)											
	Snettisham – Stikine		31,337							15,961	73,841	
	Snettisham – Taku	2	392	10						2,400	2,804	
Southeast Totals		54,125	98,725	10	400	8,375	27,680	2,425	7,970	104,757	304,467	\$ 5,125
Prince William Sound												
PWSAC	Main Bay	22,766	112,012				5,755	6,351		64,420	211,304	\$409,709
	Gulkana I and II		170,000			6,000	15,087	18,586		6,560	221,733	
Prince William Sound Totals		22,766	282,012	0	0	6,000	20,842	24,937	70,980	5,500	433,037	\$409,709
Cook Inlet												
PGHC	Port Graham		2,200			2,600	240	1,750		17,000	23,790	
	CIAA		6,310		631				2,524		9,465	\$ 3,034
	Trail Lakes – Packers Creek		60,555				108	2,452	19,964	27,021	110,100	\$107,313
	Bear Lake	23,716			3,000			1,808	20,869	6,526	55,919	\$101,782
	Crooked Creek		6,900				100		2,200		9,200	
	China Poot/Hazel	132,895			1,000	7,000	450		12,497		153,842	\$ 63,683
	Kirschner Lake	28,268					5,550		5,350		39,168	\$ 29,703
Cook Inlet Totals		184,879	75,965	0	4,631	9,600	6,448	6,010	63,404	50,547	401,484	\$305,515
Kodiak												
KRAA	Kitoi Bay	12,286				32	226	170		794	13,508	
	Pillar Creek	65,842	2,000		200	3,800					71,842	
	Afognak	66,702	6,670		200	5,000		1,440		98,691	178,703	
	Little Kitoi	18,000								236	18,236	
Kodiak Totals		162,830	8,670	0	400	8,832	226	1,610	0	99,721	282,289	\$ 0
Statewide Totals		424,600	465,372	0	5,431	32,807	55,196	34,982	142,354	260,525	1,421,277	\$720,349

1995 Update

█ indicates updated data

See Appendix Table 16 for list of acronyms used in this report.

Appendix Table 15(c). Estimated coho salmon returns to Alaska hatcheries in 1995, including common property harvests, as reported by operators.

Region/Operator/Location		Common Property Harvest					Personal Use/ Subsistence	Other	Brood	Cost Recovery Harvest	Other Escapement	Total	Cost Recovery Revenue
		Seine	Gillnet	Troll	Sport								
Southeast													
SSRAA	Whitman Lake	1,532	2,525	4,916	887			2,743			12,603		
	Earl West Cove	249	7,216	5,317							12,782		
	Nakat Inlet	1,959	4,605	3,350	108						10,022		
	Neets Bay	7,507	23,339	67,666	6,703			1,998	23,080		130,293	\$ 61,520	
	Bell Island	44	10	106							160		
NSRAA	Medvejie Creek	5	36	180	72		516	302	368		1,479	\$ 2,685	
	Deer Lake	41,497		48,733	1,253	20	3,973		47,955		143,431	\$ 296,169	
	Deep Inlet	1,477	1,418	3,463	985		661				8,004		
	Shamrock Bay	206	59	15,369	454		121		5,626		21,835	\$ 9,420	
	Hidden Falls	21,863	131	67,297	1,500		6,782	5,266	133,097	60	235,996	\$ 785,447	
AKI	Port Armstrong	4,738	6	30,681			5,120	1,056	19,458	25,200	86,259	\$ 27,122	
BCF	Burro Creek	50	100	100	4		174	40		150	618		
DIPAC	Gastineau	102	17,020	13,842	3,619		12,279	1,568	14,539		62,969	\$ 65,754	
	Sheep Creek						3				3		
KTHC	Deer Mountain	237	849	181	285	684		956		400	3,592		
	Ward Lake	237	1,470	213	1,258		42	507		685	4,412		
SJC	Indian River	236	20	563	370		1,214	110	180	401	3,094	\$ 513	
KRHI	Klawock Hatchery	123		707	92		524	449		9,800	11,695		
MIC	Tamgas Creek	31,488	79,866	63,640		2,000	22,331		46,500		245,825		
ADF&G	Reflection Lake (DM)									43	43		
	Cable Creek (KL)									171	171		
	Rio Roberts (KL)		11	5						111	127		
	Dog Salmon River									100	100		
	Crystal Lake Hatchery	130	220	630	120	113		1,244		50	2,507		
Southeast Totals		113,680	138,901	326,959	17,710	2,817	53,740	16,239	290,803	37,171	998,020	\$1,248,630	
Prince William Sound													
PWSAC	Wally Noerenberg						4,617	347	5,152		10,116	\$ 16,394	
VFDA	Solomon Gulch	78,006			25,000	1,000	15,177	818	21,592	50	141,643	\$ 127,053	
Prince William Sound Totals		78,006	0	0	25,000	1,000	19,794	1,165	26,744	50	151,759	\$ 143,447	
Cook Inlet													
CIAA	Eklutna		286		29			56	58		429	\$ 32	
	Trail Lakes				1,500			1,726	1,125	444	4,795	\$ 962	
ADF&G	Ft. Rich/Elm - Little Susitna		14,531		9,391		1,395	404			25,721		
	Landlocked lakes				12,630						12,630		
	Elmendorf - Ship Creek		2,655		3,222		858	66			6,801		
	Bear Lake				21,900			365			22,265		
	Landlocked lakes				7,547						7,547		
Cook Inlet Totals		0	17,472	0	56,219	0	2,253	2,617	1,183	444	80,188	\$ 994	
Kodiak													
KRAA	Kitoi Bay	48,235	1,000		950	600	130	713		517	52,145		
	Pillar Creek	1,000			500	500		30		5,817	7,847		
Kodiak Totals		49,235	1,000	0	1,450	1,100	130	743	0	6,334	59,992	\$ 0	
Arctic-Yukon-Kuskokwim													
ADF&G	Clear				5,739			109			5,848		
Arctic-Yukon-Kuskokwim Totals		0	0	0	5,739	0	0	109	0	0	5,848	\$ 0	
Statewide Totals		240,921	157,373	326,959	106,118	4,917	75,917	20,873	318,730	43,999	1,295,807	\$1,393,071	

1995 Update

█ indicates updated data

See Appendix Table 16 for list of acronyms used in this report.

Appendix Table 15(d). Estimated pink salmon returns to Alaska hatcheries in 1995, including common property harvests, as reported by operators.

Region/Operator/Location		Common Property Harvest						Brood	Cost Recovery Harvest	Other Escapement	Total	Cost Recovery Revenue
		Seine	Gillnet	Troll	Sport	Personal Use/ Subsistence	Other					
Southeast												
AAI	Burnett Inlet	230,000	55,000				21,220	14,319	3,629	52,000	376,168	\$ 1,947
AKI	Port Armstrong	792,600					7,090	108,046	399,618	36,600	1,343,954	\$ 230,180
BCF	Burro Creek	300	300		100		399	320		250	1,669	
DIPAC	Gastineau			300	3,367		41,968	10,002	26,810		82,447	\$ 51,468
KNFC	Gunnuk Creek	16,900					3,800	13,100			33,800	
SJC	Indian River	3,197	422		25		7,795	8,284		4,200	23,923	
Federal	Auke Creek							381			381	
ADF&G	Ketchikan Creek	66,300	24,725	7,900						24,725	123,650	
	Dog Salmon Creek									3,647	3,647	
	Margaret Lake									27,131	27,131	
	Sunny Creek	396,000								99,000	495,000	
Southeast Totals		1,505,297	80,447	8,200	3,492	0	82,272	154,452	430,057	247,553	2,511,770	\$ 283,595
Prince William Sound												
PWSAC	Armin F. Koernig	208,931					53,105	174,098	545,622		981,756	\$ 477,791
	Wally Noerenberg	1,163,166					104,412	196,676	985,047		2,449,301	\$ 811,330
	Cannery Creek	3,908,063					123,311	176,028	1,036,606		5,244,008	\$ 799,632
VFDA	Solomon Gulch	3,792,309			60,000		132,056	232,567	2,606,895	2,888	6,826,715	\$2,713,629
Prince William Sound Totals		9,072,469	0	0	60,000	0	412,884	779,369	5,174,170	2,888	15,501,780	\$4,802,382
Cook Inlet												
PGHC	Port Graham					900	4,428	11,796		3,000	20,124	
CIAA	Tutka	1,190,517	20,055		3,000			170,552	1,213,322	15,899	2,613,345	\$ 493,788
Cook Inlet Totals		1,190,517	20,055	0	3,000	900	4,428	182,348	1,213,322	18,899	2,633,469	\$ 493,788
Kodiak												
KRAA	Kitoi Bay	4,513,653				350	57,351	176,328		20,000	4,767,682	
Kodiak Totals		4,513,653	0	0	0	350	57,351	176,328	0	20,000	4,767,682	\$ 0
Statewide Totals		16,281,936	100,502	8,200	66,492	1,250	556,935	1,292,497	6,817,549	289,340	25,414,701	\$5,579,765

1995 Update

 indicates updated data

See Appendix Table 16 for list of acronyms used in this report.

Appendix Table 15(e). Estimated chinook salmon returns to Alaska hatcheries in 1995, including common property harvests, as reported by operators.

Region/Operator/Location		Common Property Harvest					Other	Brood	Cost Recovery Harvest	Other Escapement	Total	Cost Recovery Revenue
		Seine	Gillnet	Troll	Sport	Personal Use/ Subsistence						
Southeast												
SSRAA	Neets Bay	2	89	860	187			1,109		2,247		
	Whitman Lake	8	21	115	77		326			547		
	Carroll Inlet	152	279	1,087	493			632		2,643		
COOP	Earl West Cove	1,007	3,967	369	250	22				5,615		
NSRAA	Medvejie Creek	2,202	125	12,595	5,170		6,323	20,197		46,612	\$306,171	
	Hidden Falls	11,334	1,207	5,658	1,546		5,149	1,776	1,500	31,036	\$ 37,519	
	Tahini	21		12				7	11	51		
AKI	Port Armstrong			653				304		957	\$ 2,873	
BCF	Burro Creek	2	2	2	6		4	5		21		
	Burnett Inlet		19	19	14		17			69		
DIPAC	Gastineau	122	545	248	439		1,535	733		4,164		
KTHC	Deer Mountain Hatchery	57	16	72	189	182	34	76	100	726		
	Thorne Bay			7						7		
SJC	Indian River	46		660	168		200	52	68	1,194		
MIC	Tamgas Creek	5	59	84	8		338	203		1,000		
Federal	Little Port Walter	484	198	1,639	241		1,577	1,061		5,200		
ADF&G	Crystal Lake Hatchery	97	413	2,226	1,176		3,700	631		8,243		
	Snettisham Hatchery		90	31	92				15	228		
	Tahini River		13		5				10	28		
Southeast Totals		15,529	6,933	25,362	9,797	204	18,877	4,537	24,851	1,704	107,794	\$346,563
Prince William Sound												
PWSAC	Wally Noerenberg						306	77	891		1,274	\$ 12,167
Prince William Sound Totals		0	0	0	0	0	306	77	891	0	1,274	\$ 12,167
Cook Inlet												
CIAA	Crooked Creek							1,385	750	2,135	\$ 1,551	
ADF&G	Elmendorf - Ship Creek				3,583		852	54		4,489		
	Homer Spit		785		17,395			201		18,381		
	Landlocked lakes				2,000					2,000		
	Ft. Richardson									0		
	Willow Creek		20	24	1,111			170		1,325		
	Ninilchik River				2,700			193		2,893		
	Statewide landlocked lakes				15,726					15,726		
Cook Inlet Totals		0	805	24	42,515	0	852	618	1,385	750	46,949	\$ 1,551
Statewide Totals		15,529	7,738	25,386	52,312	204	20,035	5,232	27,127	2,454	156,017	\$360,281

1995 Update

█ indicates updated data

See Appendix Table 16 for list of acronyms used in this report.

Appendix Table 15(f). Estimated “other” enhanced fish returns to Alaska hatcheries in 1995.

Region/Operator/Location	Species	Commercial	Sport Catch	Subsistence	Personal Use/ Other	Brood	Cost Recovery Harvest	Other Escapement	Total
Cook Inlet									
ADF&G Ft. Richardson Statewide lakes	rainbow		87,310						87,310
Cook Inlet Totals		0	87,310	0	0	0	0	0	87,310
Arctic-Yukon-Kuskokwim									
ADF&G Clear - Statewide	grayling		1,478			136			1,614
	arctic char		3,086			258			3,344
	lake trout		546			144			690
Arctic-Yukon-Kuskokwim Totals		0	5,110	0	0	538	0	0	5,648
Statewide Totals		0	92,420	0	0	538	0	0	92,958

indicates updated data

See Appendix Table 16 for list of acronyms used in this report.

Appendix Table 16. List of acronyms and abbreviations.

Acronym	
AAC	American Aquaculture Corporation
AAI	Alaska Aquaculture, Inc.
ADF&G	Alaska Department of Fish and Game
AKI	Armstrong-Keta, Inc.
AYK	Arctic-Yukon-Kuskokwim
BCF	Burro Creek Farms, Inc.
CFMD	Commercial Fisheries Management and Development Division
CIAA	Cook Inlet Aquaculture Association
COOP	Cooperative projects between state and PNP operators
CRAA	Chignik Regional Aquaculture Association
DCED	Department of Commerce and Economic Development
DIPAC	Douglas Island Pink and Chum, Inc.
FRED	Fisheries Rehabilitation, Enhancement and Development Division
HPG	Hatchery Policy Group
KNFC	Kake Nonprofit Fisheries Corporation
KRAA	Kodiak Regional Aquaculture Association
KRHI	Klawock River Hatchery, Inc.
KTHC	Ketchikan Tribal Hatchery Corporation
MCAA	Meyers Chuck Aquaculture Association
MIC	Metlakatla Indian Community
NMFS	National Marine Fisheries Service
NSRAA	Northern Southeast Regional Aquaculture Association
PGHC	Port Graham Hatchery Corporation
PNP	Private nonprofit
POWHA	Prince of Wales Hatchery Association
PWSAC	Prince William Sound Aquaculture Corporation
RPT	Regional Planning Team
SJC	Sheldon Jackson College
SSRAA	Southern Southeast Regional Aquaculture Association
UAF	University of Alaska Fairbanks
USDA	U.S. Department of Agriculture
VFDA	Valdez Fisheries Development Association

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