

SCOMM

74:38

April 24, 1992

We would like to thank you for the time and effort you have invested in responding to the survey of intensively modeled enhancement projects sent to you as part of the Legislative Enhancement Program Review Project. The contractor for the salmon population modeling research is using the survey data to complete that aspect of the study.

Enclosed is the last survey portion of the project; we would again like your assistance by completing two additional forms (enclosed). The first form is the **Salmon Enhancement Project production survey** for the less intensively modeled projects. This pink survey form is shorter and simpler than the survey form for more intensively modeled enhanced fisheries which you have already completed.

There are three primary reasons for modeling some of the enhancement projects less intensively--1) enhanced production is a relatively small portion of a particular fishery's commercial harvest, 2) Alaska Department of Fish and Game (ADF&G) data are insufficient for more extensive modeling efforts, and 3) the scope of the review project does not allow intensive population modeling of all enhanced fisheries.

As with the more intensively modeled production survey, a separate survey form is included for each "project," which has the same definition as in the first survey. The first page of each production survey has been partially completed based on ADF&G, FRED Division staff identification of salmon enhancement projects. If you have any corrections to the project name or other identifying data, or if there are additional projects not included in the surveys provided, please make the appropriate corrections or additions. Blank forms are attached.

The second (blue) form is a cost-of-production survey for each facility identified under FACILITY NAME in the SALMON ENHANCEMENT PRODUCTION SURVEY. The blue cost-of-production form, called the **FACILITY OPERATING, CONSTRUCTION, AND MANAGEMENT COST SURVEY**, is designed to be similar to budget forecasting that your facility probably does for any upcoming fiscal year. Only one of these production cost survey forms is to be completed for all of a facility's intensively and non-intensively modeled projects collectively.

It is important to note that in completing the one production cost survey form for your facility that "years" in this form refers to fiscal years while the production surveys refer to calendar years. However, this should be consistent with your facility's operations and budgeting.

There are some special hypothetical production cost cases that will require you to project costs for production levels that may not be likely or feasible for your facility's operations, e.g. question four asks you to estimate how your production costs would change if a portion of your production was excluded. These hypothetical cases are necessary to create a mathematical model of operating and construction costs for the statewide enhancement program, which allows the computation of costs of production levels not included in the survey. These cases will only be analyzed in aggregate and will not be used to determine benefits and costs of individual hatchery outputs.

Operating and construction costs for some increased production scenarios are also requested in the survey form. These production increases are aggregated by species while production survey forms have been completed on a project basis. Since some facilities will have more than one project and release location for a given species, this may cause some confusion in determining how to apportion these costs between projects. In these cases, the total incremental production costs (for the 15 percent increase scenario) should be estimated for the most likely and efficient combination of production from each project that would result in the increased production. **For all of the hypothetical cases in questions 4 and 5, the total annual costs should be entered on the survey form rather than the estimated change in annual costs.** For example:

Two sockeye projects are carried out at Facility Z. Together they produce 20,000 sockeye harvests in 1996 and are projected to produce 30,000 harvests in 1999 to 2021.

Increased production of Project 1 for sockeye salmon (producing harvests of 10,000 fish in 1996 from smolt releases in previous years) would be difficult to increase by 15 percent without some radical changes in operation or new construction.

On the other hand, Project 2 also produces 10,000 harvested fish in 1996 but fry releases could easily be increased to 15 percent of the total sockeye production of 20,000 harvested fish ($20,000 \times 1.15 = 23,000$ fish from Project 2). Thus, costs

for the increase production should be estimated for Project 2,
the most likely source of increased production.

For the 15 percent incremental increased production scenario, it may not be practical to increase production for a particular species in your facility. If there is simply no way to do this without adding a new project, leave the associated 15 percent production case blank for that species but note why you could not carry it out on the form.

Finally, the cost projections for the 15 percent production level increase should be based upon obtaining the increased harvests in one single salmon life cycle or as nearly as possible to that time interval.

The completed survey forms need to be sent to Steve McGee at the ADF&G, FRED Division Headquarters Office by June 15, 1992. There will undoubtedly be questions about how to fill out the survey. Please address these to Jeff Hartman or Steve McGee, ADF&G, 465-4160.

Again, thank you for your time and cooperation.

Sincerely,

Senator Dick Eliason
Senate President

Jeff Koenings, Director
Division of FRED

STATE OF ALASKA

DEPARTMENT OF FISH AND GAME

DIVISION OF FISHERIES REHABILITATION
ENHANCEMENT & DEVELOPMENT (FRED)

WALTER J. HICKEL GOVERNOR

P.O. BOX 3-2000
JUNEAU ALASKA 99802-2000
PHONE (907) 465-4160
FAX (907) 465-4160

RAPIFAX TRANSMITTAL SHEET

To: Ginny Fay
Lee Latour Sen. Sam Cottler
From: Jeff Hartman
FRED Division

Date: 4-27-92
No. Pages 3
(following this page)

Message: Comments you requested are attached from
Jeff H. + Steve M. Hope all is going well
with you.

April 24, 1992

We would like to thank you for the time and effort you have invested in responding to the survey of intensively modeled enhancement projects sent to you as part of the Legislative Enhancement Program Review Project. The contractor for the salmon population modeling research is using the survey data to complete that aspect of the study.

Enclosed is the last survey portion of the project; we would again like your assistance by completing two additional forms (enclosed). The first form is the Salmon Enhancement Project production survey for the (less) intensively modeled projects. This pink survey form is shorter and simpler than the survey form for more intensively modeled enhanced fisheries which you have already completed.

There are three primary reasons for modeling some of the enhancement projects less intensively—1) enhanced production is a relatively small portion of a particular fishery's commercial harvest, 2) Alaska Department of Fish and Game (ADF&G) data are insufficient for more extensive modeling efforts, and 3) the scope of the review project does not allow intensive population modeling of all enhanced fisheries.

As with the more intensively modeled production survey, a separate survey form is included for each "project" which has the same definition as in the first survey. The first page of each production survey has been partially completed based on ADF&G, FRED Division staff identification of salmon enhancement projects. If you have any corrections to the project name or other identifying data, or if there are additional projects not included in the surveys provided, please make the appropriate corrections or additions. Blank forms are attached.

The second (blue) form is a cost-of-production survey for each facility identified under FACILITY NAME in the SALMON ENHANCEMENT PRODUCTION SURVEY. The blue cost-of-production form, called the FACILITY OPERATING, CONSTRUCTION, AND MANAGEMENT COST SURVEY, is designed to be similar to budget forecasting that your facility probably does for any upcoming fiscal year. Only one of these production cost survey forms is to be completed for each facility, intensively and non-intensively modeled projects collectively.

This paragraph may not be essential in for motion to operators.

all capitals

all capitals

originally these were referred to as:
non-intensive

probably redundant

not necessary

If a fiscal year does not begin on July 1, please indicate the starting date on the survey form. *or federal fiscal year or state fiscal year? (July 1)*

It is important to note that in completing the ~~the~~ production cost survey form for your facility that "years" in this form refers to fiscal years while the production surveys refer to calendar years. However, ~~this should be consistent with your facility's operations and budgeting.~~ *asked you in the survey*

You also, should not adjust any future costs or inflation.

There are some special, hypothetical production cost cases that will require you to project costs for production levels that may not be likely or feasible for your facility's operations. *for example,* question four asked you to estimate how your production costs would change if a portion of your production was excluded. These hypothetical cases are necessary to create a mathematical model of operating and construction costs for the statewide enhancement program, which allows the computation of costs of production levels not included in the survey. These cases will only be analyzed in aggregate and will not be used to determine benefits and costs of individual hatchery outputs.

combined together

Operating and construction costs for some increased production scenarios are also requested in the survey form. These production increases are aggregated by species, while production survey forms have been completed on a project basis. Since some facilities will have more than one project and release location for a given species, this may cause some confusion in determining how to apportion ~~these~~ costs between projects. In these cases, the total incremental production costs (for the 15 percent increase scenario) should be estimated for the most likely and efficient combination of production from each project that would result in the increased production. For all of the hypothetical cases in questions 4 and 5, the total annual costs should be entered on the survey form rather than the estimated change in annual costs.

for a facility (Project 1 and Project 2)

For example, two sockeye projects are carried out at Facility Z. Together they produce 20,000 sockeye harvests in 1996 and are projected to produce 20,000 harvests in 1997 to 2001.

(A) From
Increased production of Project 1 for sockeye salmon (producing harvests of 10,000 fish in 1996 from smolt releases in previous years) would be difficult to increase by 15 percent without some radical changes in operation or new construction.

On the other hand, Project 2 also produces 10,000 harvested fish in 1996 but fry releases could easily be increased to 15 percent of the total sockeye production of 20,000 harvested fish ($20,000 \times 1.15 = 23,000$ fish from Project 2). Thus, costs for the increase production should be estimated for Project 2, the most likely source of increased production, *in this*

example.

possible For the 15 percent incremental increased production scenario, it may not be practical to increase production for a particular species in your facility. If there is simply no way to do this without adding a new project, leave the associated 15 percent production case blank for that species but note why you could not carry it out on the form.

practical scenario
Finally, the cost projections for the 15 percent production level increase should be based upon obtaining the increased harvests in one single salmon life cycle or as nearly as possible to that time interval.

The completed survey forms need to be sent to Steve McGee at the ADF&G, FRED Division Headquarters Office by June 15, 1992. There will undoubtedly be questions about how to fill out the survey. Please address these to Jeff Hartman or Steve McGee, ADF&G, 463-4160.

STATE OF ALASKA

DEPARTMENT OF FISH AND GAME

*DIVISION OF FISHERIES REHABILITATION,
ENHANCEMENT & DEVELOPMENT (FRED)*

WALTER J. HICKEL, GOVERNOR

P.O. BOX 25526
JUNEAU, ALASKA 99802-5526
PHONE: (907) 465-4160
FAX: (907) 465-4168

May 21, 1992

The Honorable Sam Cotten
Alaska State Legislature
P.O. Box V
Juneau, AK 99801

Attn: Ms. Ginny Fay

Re: Surveys on the Economic Study for the Senate Special Committee on Domestic and International Fisheries.

Dear Ms. Fay:

I am responding to your request for (1) a review of the cost survey, including comments to make it applicable to state enhancement facilities; and (2) verification of a final list of private nonprofit hatchery operators to mail surveys to. I also have included a progress report on the missing survey forms that Jeremy Collie refers to in his May 4 letter to you.

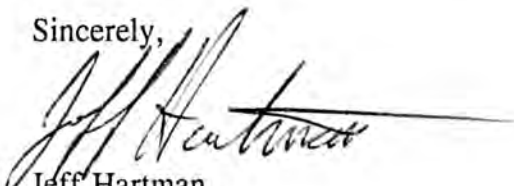
1. I have reviewed the PNP cost survey and have enclosed a marked-up copy that our facility operators should be able to follow. When the surveys are distributed, they should probably be accompanied by a list (or copy of) the actual survey forms from the original project survey. I am assuming that you want Director Jeffery Koenings to distribute the final version of the survey to Fisheries Rehabilitation, Enhancement and Development Division staff.
2. Steve McGee and I have discussed the option of distributing the production and cost survey forms to the Kodiak Regional Aquaculture Association. He believes this would be redundant and confusing for the regional association staff. Currently, the planning and budgeting for Kitoi Bay Hatchery are the responsibility of FRED Division staff; they have a better handle on the future plans for the hatchery.
3. The state production surveys for the intensively modeled sites are currently being reviewed by the Division of Commercial Fisheries. I am expecting to see them any day and will forward them to Jeremy as soon as they arrive.

Of the 68 surveys for the nonintensively modeled state projects, I have received 62. The 6 missing projects are for some rehabilitation/fish pass projects that don't quite fit into our traditional production survey format. Of the 62 completed forms, only half have a completed final addendum page on harvest numbers. Over half of the 62 have some type of other response error, or I have a question about the response that will have to be cleared up before the data can be entered on any kind of database. This is to be expected in a survey with a few hundred fields (variables).

I believe the most efficient way to clear up the numerous response errors is to send out the previously completed production survey forms with the cost survey and a list of my questions to each of the original surveyed parties. We might get confused responses on the cost survey if the production numbers are not cleared up concurrently with initiating the cost survey. I have been tediously going through a 2-inch-thick pile of surveys, one facility at a time, and believe that I can have a list constructed for each facility by May 27.

Please, contact me if you have additional questions, or if you get an urge to error-check some of these green survey forms.

Sincerely,



Jeff Hartman
Economist

Enclosures

cc: Johnny Holland
Jeff Koenings

to: Ginny from: Jeff Hartman , Some additional things on the project

I don't know if you have replied to Jeremy Collie's letter of May 4th yet. I think that he is misinformed on the data collected in the cost survey, and on the economics of the demand models that Herrmann is constructing.

1. Collie is incorrect in his first assertion that there is no input for management costs in the survey form. There is a specific space in the cost survey form for management costs, to be filled out by the Division of Commercial Fisheries. Since there is no review of this field by the PNP and State operators, and no way to verify what has historically been spent to manage enhancement activities, I am more concerned that program costs might be overstated than understated, but see no more better way to get the data.

2. Collie is partially correct in his second point that Mark Herrmann's demand models will not produce different prices and for each species in terminal vs outside fisheries. Herrmann reported in his project summary to the legislature that he will produce different projections of prices by region. These regional prices will capture some of the differences in prices (some regions will have a higher portion of terminally harvested fish than others). It is important to remember that the mean price for all Alaska salmon, as computed in the CFEC fish ticket files, and used for Herrmann's models is a weighted mean price of all salmon, harvested in terminal and outer statistical areas. It isn't as though he is biasing the projections by using only prices from the stat areas with the highest historical prices.

For the previously mentioned reasons, and others, I do not share Collie's assertion that this will grossly overstate benefits of the statewide enhancement program. I have observed, from a Fish Ticket summary report on Special Harvest Area prices, that Elaine Denniford of CFEC sent to me (it is one of those confidential summaries containing fewer than 3 records for some aggregated fields) that many terminal fisheries do not vary significantly from prices in outer fisheries and in some years fish tickets from special harvest areas (SHA) receive higher prices. I think that an objective review of the priced fish tickets in special harvest areas and other stat areas would allow the Legislature to determine when and where prices are significantly different, and when/where they are only imagined to be different. This analysis should be carried out by economists. It would be fairly easy for you or me to write a little SAS program that compared the priced fish ticket files between special harvest areas and non special harvest areas, and determined where they were statistically different over the last 5 years.

If they are found to be statistically different in some regions, then perhaps economists should be asked to build an appropriate economic model to detect those differences.

3. I also got a copy of Marks preliminary draft of the demand model. It is a bit depressing to see estimated point elasticities for the high and low priced salmon in the unitary range for a record year like 1990 year. This is especially surprising results to see with a double log model (a functional form with constant elasticities over the entire demand curve). If double log functional forms end up working better than linear or log linear, it may make wild and hatchery production numbers that are chosen for the sensitivity testing less critical.

4. Did you know that NOAA is rewriting the NRDA regs? I have attached my comments for you to see. They probably won't end up in final ADF&G comments. Economics is still a black box to everyone here, they don't really understand how the portion of the regs that deal with quantitative economics favor the polluter.

RECEIVED

MAY 11 1992

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4 May, 1992

Ms. Ginny Fay
Legislative Analyst
c/o Senator Sam Cotten
Alaska State Legislature
P.O. Box V
Juneau, AK 99811

Dear Ginny,

Thank you for sending me a copy of the Legislative Review of Alaska's Fisheries Enhancement Program. It is comprehensive and well written. I am writing to you to provide a status report on my production and exploitation modeling. First of all, I decided not to attempt to intensively model SE coho salmon or PWS chum. I'll reiterate the reasons in case someone asks. The main reason is the dearth of data for the wild stocks of these species.

I talked to Leon Shaul (ADFG) about SE coho salmon. They have population data from a few indicator coho stocks, but there is no comprehensive escapement monitoring. The troll fishery is managed with an exploitation rate strategy, not knowing what the total run size is. Therefore it isn't possible to project the catch of wild coho in the future; using a recent average catch will do as well as trying to construct a model.

I talked with Samuel Sharr about the Prince William Sound chum database. He has reservations about trying to model PWS pink salmon, and the chum data are much worse. Again the main problem is escapement data. Not much effort has been put into chum escapement counts. Chum salmon are greatly outnumbered by pinks and the two can be mistaken in aerial surveys. Coded wire tagging was not started until 1989 and these tagged fish have not yet returned. The lack of tagging data makes it very hard to calculate representative survival rates for hatchery fry. I think it would be possible to build a chum model but it would take more time than we now have. I decided to devote my effort to pink salmon in PWS.

Ginny Fay
4 May, 1992
page 2

I now have preliminary simulation models for the other five species/region combinations. Up to now I have been concentrating on model development which can be done independently of data availability. I am now at a point where I need the historical data to calibrate the model parameters. Bits and pieces of data continue to trickle in, but we are still a long way from filling the comprehensive data request submitted in the fall. I'll continue working with the individual area biologists; if this approach is too slow, some pressure may need to be applied to speed up the process. I am enclosing a copy of the data request, annotated with what I have and have not received.

There are two important factors that I see are missing from the economic analyses as proposed by my UAF colleagues. One is the inclusion of management costs in the benefit-cost analysis. Are you surveying the area managers for what the management costs would be under different production scenarios? Including management costs is very important, not only because the costs are real, but because recognition of these costs will gain the cooperation of the Commercial Fisheries Division in the review of Alaska's Enhancement Program.

The second problem is the inability to estimate salmon prices on a local scale. Mark Herrmann's demand model operates at a global scale. My production models distinguish between mixed-fishery and terminal catch of hatchery fish. If all the terminal catch could be marketed there would be no economic problem, but we know this isn't true: when there is an oversupply of salmon, processors may not buy terminally caught salmon. The bioeconomic model must be able to assign a different value to terminally caught fish. Otherwise we will be overlooking a key element of the bioeconomics and may grossly overestimate the benefits.

I shall be in Fairbanks teaching fisheries management from 20-27 Feb. I can be contacted through SFOS at 474-7824. While in Fairbanks I shall try to meet with the economists to coordinate our research projects.

Sincerely yours,

Jeremy Collie
Assistant Professor

Enclosure

MEMORANDUM

STATE OF ALASKA Department of Fish and Game

TO: Hal Geiger
Statewide Salmon Biometrician
Division of Commercial Fish

DATE: May 12, 1992

FILE NO:

THRU:

TELEPHONE NO: 465-4160

SUBJECT: Review of Survey from
Legislature

FROM: Jeff Hartman 
Economist
Division of FRED
Department of Fish and Game

Bob Clasby suggested that I directly contact you in the field to get a projected completion date for your review of the survey data sent to the Division of Commercial Fisheries on March 9, 1992 (see attached cover letter from Jeffrey P. Koenings). The survey, created by the Senate Special Committee on Domestic Fisheries, projects future enhancement production for the state enhancement program.

The responses in the "SALMON ENHANCEMENT PROJECT SURVEY" are being used by Jeremy Collie, (Juneau Center for Fisheries and Ocean Sciences) to develop a predictive model of salmon population growth and harvesting for certain fisheries in Alaska. Collie's letter of May 4, 1992 (attached), notes that he needs the data as soon as possible to complete his modeling contract with the Alaska State Legislature.

cc:
Holland
Koenings

MEMORANDUM

STATE OF ALASKA
Department of Fish and Game

TO: Chris Swenson
Habitat Biologist
Habitat Division
Department of Fish and Game

DATE: May 21, 1992

FILE NO:

THRU:

TELEPHONE NO: 465-4160

FROM: Jeff Hartman
Economist
Division of FRED
Department of Fish and Game

SUBJECT: Comments on NOAA's
Proposed Damage
Assessment Regs.

Thank you for the opportunity to critique the NOAA discussion document, covering language for The Oil Pollution Act of 1990 (OPA), Natural Resource Damage Assessment, and draft ADF&G comments.

Only one ADF&G comment on economic valuation methods appears in the draft memo to Alex Swiderski from Carl Rosier. While I believe that this is an appropriate one, it only addresses one of many obstacles, now existing in NRDA law, to computing the social costs of oil spills to Alaskans and other citizens of the U.S.

While NOAA has not yet determined its initial position on the various economic issues related to proposed NRDA regulations, I think ADF&G should at least identify the major obstacles in the NRDA law that handicapped the state's economic studies in preparation for EVOS litigation. These legal obstacles to competent analysis of the social costs of oil spills, are so well summarized in the economic literature on damage assessment, that they can be simply listed with little or no exposure to (and certainly no mention of) details of the states economic studies.

Within the spirit of the NRDA is an attempt to apply economic reasoning to computing costs of oil spills to society. The law, however, in NRDA itself places serious restraints on applying accepted or "good" economics. My comments are aimed at obtaining a more objective and technically correct measurement of social costs from oil spills. These corrections to the law would be particularly important for regions with highly valued natural resources at stake or where oil spills might be large or numerous.

These criticisms of NRDA are not new, and I did not invent any of them. In fact, most of these issues date back to problems in CERCLA, identified by one of the very economists hired by the A.G.'s office to critique damage assessment methods.

These following comments briefly summarize a few of the most serious economic issues embodied in the discussions on the rules which was recently reviewed by NOAA.

1. Unworkable definition of pathway to injury

The rule provides a pathway to injury that is fundamentally inconsistent with how economists value resources. It defines injury as a demonstratable change to physical natural resources. In economics, values are determined by changes in the preferences of people. The resources, of course, have no value system. The drafters of the rules wrongly left the definition of injury to the natural and physical scientists, thus, excluding demonstratable economic losses, arising from people who perceived that they have been injured. As an example, if recreationists avoid clamming in areas that they believe to contain contaminated clams, and later physical scientists cannot prove that the area was contaminated, the value of the lost opportunities to the recreationists is not counted.

2. Confusing definition of Public/Private in the rule

The line demarcating private and public use in the rule is unworkable. Damage assessment is limited to "public" resources because there are other well defined legal procedures for remedying losses arising from injury to private resources. This is an unnatural distinction for economists and economic models. In economics, the "unit" used to measure all benefits and costs is usually a household or "private" individual. Major areas of consumer surplus for market goods are excluded under this restrictive dictum.

3. Inappropriate interest rate

If damage to resources from an oil spill event is expected to occur in the future, the rule imposes an unrealistic 10% real discount rate, which is perhaps twice the real rate of interest. Even economists who prefer high interest rates oppose the 10 percent rate which understates future damages.

4. Contingent Valuation

Much of the debate that has centered on the technical problems of CV, detracts from a major problem in the rules that existence, option and bequest values are an accepted part of peoples value systems. While economists do disagree over how to design a CV study to capture these values, they do not disagree that social costs may arise from peoples perceptions about the existence, option and bequest value associated with an altered resource, or ecosystem.

In the rule, damages for option and existence values, obtained through the application of contingent valuation methods, can only be used if no use values can be determined. CV represents the only workable valuation method to treat these important values. The law should not create an ad-hoc restriction in the use of any economic methods that are imperfect or in the process of being developed. If this restrictive ideal was applied to other areas of the physical sciences, many biological population models would need to be exempted from NRDA on the basis of a history of serious measurement problems, and errors as identified in the literature.

5. Restrictive with and without Case for future damages

Traditional cost benefit analysis of any action, requires the construction of a "with the action" and "without the action" case. This requirement is reflected in the current NRDA laws.

The rule implies that future damages are estimated as the difference between the value of baseline economic activities without the spill or discharge and the estimated value of economic activities with the injury to natural resources. The regulations provide an unusual guide for future activities limiting them to committed uses. This is irrationally implies that all economic opportunities that the resources might provide in the future must be assumed to have zero value. This is again in contrast to economic theory and models which demonstrate that preferences and values change in the future with such variables as income, population, and substitutes.

cc:

Jeff Koenings
Johnny Holland
Peg Kerher

**SALMON ENHANCEMENT FACILITY
OPERATING, CONSTRUCTION, AND MANAGEMENT COSTS**

Please describe the annual operating and construction costs for your facility. Your cost estimates should correspond to a specific fiscal year and should be for all salmon produced by your facility rather than on a project basis. (This is different from the production survey.) For each fiscal year or series of years, provide your estimated total annual costs, as well as how costs can be allocated between commercial and sport/personal use fisheries. The percentage of total annual costs allocated to these fisheries should account for the "TOTAL ANNUAL COSTS." The "management costs" column is to be completed by Alaska Department of Fish and Game fisheries managers.

1. This question refers to the annual operating and construction costs of your facility's *current production*. This production level should correspond to the current production levels reported in the project surveys. For each fiscal year or series of fiscal years, please include the costs of all salmon production by your facility, and how these costs are allocated between commercial and sport/personal use fisheries production.

Fiscal Year		Costs		Percentage of Total Annual Costs			Management Costs (ADF&G Use Only)
From	To	Operating	Construction	Comm.	Sport/ Personal	Cost- Recovery	
1992							
	2021						

2. This question refers to the annual costs of your facility's *planned production*. These costs must correspond to the planned production levels reported in the production survey for all projects. For each fiscal year or series of years, please include the expected operating and construction costs of all salmon production by your facility, and how you expect these costs to be allocated between commercial and sport/personal use fisheries.

<u>Fiscal Year</u>		<u>Costs</u>		<u>Percentage of Total Annual Costs</u>			<u>Management Costs</u>
<u>From</u>	<u>To</u>	<u>Operating</u>	<u>Construction</u>	<u>Comm.</u>	<u>Sport/ Personal</u>	<u>Cost- Recovery</u>	<u>(ADF&G Use Only)</u>
1992							
2021							

The next series of questions are intended to provide information to determine the potential change in costs of the salmon enhancement program as a result of increases or decreases in production. These scenarios are required for creating a mathematical model of enhancement costs. Each scenario is completely hypothetical and are not being proposed by either the Legislature or the Alaska Department of Fish and Game.

Question 3 contains five parts, each of which hypothetically eliminates the enhancement of one species while holding the production of all other species at their currently permitted level in a facility. The results of question 4, together with the results of questions 1 and 3, will be used to calculate the "zero" point on the "production cost curves" for each species. If your facility does not produce the specific species, mark "NA" as appropriate.

- 3a. The *pink* salmon portion of the salmon enhancement in a facility is eliminated while all other components of the program remain at their current capacity. Please estimate how this would change the total annual costs (fiscal year) at your facility and the allocation of those costs between commercial and sport/personal use fisheries.

Fiscal Year		Costs		Percentage of Total Annual Costs		Management Costs (ADF&G Use Only)
From	To	Operating	Construction	Commercial	Sport/ Personal	
1992						
	2021					

- 3b. The *chum* salmon portion of the salmon enhancement in a facility is eliminated while all other components of the program remain at their current capacity. Please estimate how this would change the total annual costs (fiscal year) at your facility and the allocation of those costs between commercial and sport/personal use fisheries.

Fiscal Year		Costs		Percentage of Total Annual Costs		Management Costs (ADF&G Use Only)
From	To	Operating	Construction	Commercial	Sport/ Personal	
1992						
	2021					

- 3c. The *sockeye* salmon portion of the salmon enhancement in a facility is eliminated while all other components of the program remain at their current capacity. Please estimate how this would change the total annual costs (fiscal year) at your facility and the allocation of those costs between commercial and sport/personal use fisheries.

Fiscal Year		Costs		Percentage of Total Annual Costs		Management Costs
From	To	Operating	Construction	Commercial	Sport/ Personal	(ADF&G Use Only)
1992						
	2021					

- 3d. The *coho* salmon portion of the salmon enhancement in a facility is eliminated while all other components of the program remain at their current capacity. Please estimate how this would change the total annual costs (fiscal year) at your facility and the allocation of those costs between commercial and sport/personal use fisheries.

Fiscal Year		Costs		Percentage of Total Annual Costs		Management Costs
From	To	Operating	Construction	Commercial	Sport/ Personal	(ADF&G Use Only)
1992						
	2021					

- 3e. The *chinook* salmon portion of the salmon enhancement in a facility is eliminated while all other components of the program remain at their current capacity. Please estimate how this would change the total annual costs (fiscal year) at your facility and the allocation of those costs between commercial and sport/personal use fisheries.

Fiscal Year		Costs		Percentage of Total Annual Costs		Management Costs
From	To	Operating	Construction	Commercial	Sport/Personal	(ADF&G Use Only)
1992						
	2021					

Question 4 also contains five parts. In this question, however, each part hypothetically *increases* by 15 percent the production level of one species while holding the production of all other species at their currently permitted levels. The results of question 5, together with the results of questions 1, 3, and 4, will be used to finish calculating the "production cost curves" for each species. If your facility does not produce the specific species, mark "NA" as appropriate.

- 4a. The *pink* salmon portion of the salmon enhancement program is increased by 15 percent while all other components of the program remain at their current capacities. Please estimate how this would change the annual costs (fiscal year) at your facility and the allocation of those costs between commercial sport/personal use fisheries.

Fiscal Year		Costs		Percentage of Total Annual Costs		Management Costs
From	To	Operating	Construction	Commercial	Sport/Personal	(ADF&G Use Only)
1992						
	2021					

- 4c. The *sockeye* salmon portion of the salmon enhancement program is increased by 15 percent while all other components of the program remain at their current capacities. Please estimate how this would change the annual costs (fiscal year) at your facility and the allocation of those costs between commercial and sport/personal use fisheries.

<u>Fiscal Year</u>		<u>Costs</u>		<u>Percentage of Total Annual Costs</u>		<u>Management Costs</u>
<u>From</u>	<u>To</u>	<u>Operating</u>	<u>Construction</u>	<u>Commercial</u>	<u>Sport/ Personal</u>	(ADF&G Use Only)
1992						
2021						

- 4d. The *coho* salmon portion of the salmon enhancement program is increased by 15 percent while all other components of the program remain at their current capacities. Please estimate how this would change the annual costs (fiscal year) at your facility and the allocation of those costs between commercial and sport/personal use fisheries.

Fiscal Year		Costs		Percentage of Total Annual Costs		Management Costs (ADF&G Use Only)
From	To	Operating	Construction	Commercial	Sport/ Personal	
1992						
2021						

- 4e. The *chinook* salmon portion of the salmon enhancement program is increased by 15 percent while all other components of the program remain at their current capacities. Please estimate how this would change the annual costs (fiscal year) at your facility and the allocation of those costs between commercial and sport/personal use fisheries.

Fiscal Year		Costs		Percentage of Total Annual Costs		Management Costs (ADF&G Use Only)
From	To	Operating	Construction	Commercial	Sport/ Personal	
1992						
2021						

SALMON ENHANCEMENT FACILITY
OPERATING, CONSTRUCTION, AND MANAGEMENT COSTS

Please describe the annual operating and construction costs for your facility. Your cost estimates should correspond to a specific fiscal year and should be for all salmon produced by your facility rather than on a project basis. (This is different from the production survey.) For each fiscal year or series of years, provide your *and* estimated total annual costs, as well as how costs can be allocated between commercial, sport/personal use, and cost-recovery fisheries. The percentage of total annual costs allocated to these fisheries should account for the "TOTAL ANNUAL COSTS." The "management costs" column is to be completed by Alaska Department of Fish and Game fisheries managers.

1. This question refers to the annual operating and construction costs of your facility's *current production*. This production level should correspond to the current production levels reported in the project surveys. For each fiscal year or series of fiscal years, please include the costs of all salmon production by your facility, and how these costs are allocated between commercial and sport/personal use fisheries production.

Fiscal Year		Costs		Percentage of Total Annual Costs		Management Costs
From	To	Operating	Construction	Comm.	Sport/Personal	(ADF&G Use Only)
1992						
2021						

- 3a. The *pink* salmon portion of the salmon enhancement in a facility is eliminated while all other components of the program remain at their current capacity. Please estimate how this would change the total annual costs (fiscal year) at your facility and the allocation of those costs between commercial and sport/personal use fisheries.

Fiscal Year		Costs		Percentage of Total Annual Costs		Management Costs
From	To	Operating	Construction	Commercial	Sport/Personal	(ADF&G Use Only)
1992						
	2021					

- 3b. The *chum* salmon portion of the salmon enhancement in a facility is eliminated while all other components of the program remain at their current capacity. Please estimate how this would change the total annual costs (fiscal year) at your facility and the allocation of those costs between commercial and sport/personal use fisheries.

Fiscal Year		Costs		Percentage of Total Annual Costs		Management Costs
From	To	Operating	Construction	Commercial	Sport/Personal	(ADF&G Use Only)
1992						
	2021					

- 3c. The *sockeye* salmon portion of the salmon enhancement in a facility is eliminated while all other components of the program remain at their current capacity. Please estimate how this would change the total annual costs (fiscal year) at your facility and the allocation of those costs between commercial and sport/personal use fisheries.

Fiscal Year		Costs		Percentage of Total Annual Costs		Management Costs
From	To	Operating	Construction	Commercial	Sport/Personal	(ADF&G Use Only)
1992						
2021						

- 3d. The *coho* salmon portion of the salmon enhancement in a facility is eliminated while all other components of the program remain at their current capacity. Please estimate how this would change the total annual costs (fiscal year) at your facility and the allocation of those costs between commercial and sport/personal use fisheries.

Fiscal Year		Costs		Percentage of Total Annual Costs		Management Costs
From	To	Operating	Construction	Commercial	Sport/Personal	(ADF&G Use Only)
1992						
2021						

- 3a. The *chinook* salmon portion of the salmon enhancement in a facility is eliminated while all other components of the program remain at their current capacity. Please estimate how this would change the total annual costs (fiscal year) at your facility and the allocation of those costs between commercial and sport/personal use fisheries.

Fiscal Year		Costs		Percentage of Total Annual Costs		Management Costs (ADF&G Use Only)
From	To	Operating	Construction	Commercial	Sport/ Personal	
1992						
2021						

Question 4 also contains five parts. In this question, however, each part hypothetically *increases* by 15 percent the production level of one species while holding the production of all other species at their currently permitted levels. The results of question 5, together with the results of questions 1, 3, and 4, will be used to finish calculating the "production cost curves" for each species. If your facility does not produce the specific species, mark "NA" as appropriate.

- 4a. The *pink* salmon portion of the salmon enhancement program is increased by 15 percent while all other components of the program remain at their current capacities. Please estimate how this would change the annual costs (fiscal year) at your facility and the allocation of those costs between commercial sport/personal use fisheries.

Fiscal Year		Costs		Percentage of Total Annual Costs		Management Costs (ADF&G Use Only)
From	To	Operating	Construction	Commercial	Sport/ Personal	
1992						
2021						

- 4b. The *chum* salmon portion of the salmon enhancement program is increased by 15 percent while all other components of the program remain at their current capacities. Please estimate how this would change the annual costs (fiscal year) at your facility and the allocation of those costs between commercial and sport/personal use fisheries.

Fiscal Year		Costs		Percentage of Total Annual Costs		Management Costs (ADF&G Use Only)
From	To	Operating	Construction	Commercial	Sport/ Personal	
1992						
	2021					

- 4c. The *sockeye* salmon portion of the salmon enhancement program is increased by 15 percent while all other components of the program remain at their current capacities. Please estimate how this would change the annual costs (fiscal year) at your facility and the allocation of those costs between commercial and sport/personal use fisheries.

Fiscal Year		Costs		Percentage of Total Annual Costs		Management Costs (ADF&G Use Only)
From	To	Operating	Construction	Commercial	Sport/ Personal	
1992						
	2021					

- 4d. The *coho* salmon portion of the salmon enhancement program is increased by 15 percent while all other components of the program remain at their current capacities. Please estimate how this would change the annual costs (fiscal year) at your facility and the allocation of those costs between commercial and sport/personal use fisheries.

[illegible]

- 4e. The chinook salmon portion of the salmon enhancement program is increased by 15 percent while all other components of the program remain at their current capacities. Please estimate how this would change the annual costs (fiscal year) at your facility and the allocation of those costs between commercial and sport/personal use fisheries.

<u>Fiscal Year</u>		<u>Costs</u>		<u>Percentage of Total Annual Costs</u>		<u>Management Costs</u>
<u>From</u>	<u>To</u>	<u>Operating</u>	<u>Construction</u>	<u>Commercial</u>	<u>Sport/ Personnel</u>	(ADF&G Use Only)
1992						
2021						

SALMON ENHANCEMENT FACILITY OPERATING, CONSTRUCTION, AND MANAGEMENT COSTS

Please describe the annual operating and construction costs for your facility. Your cost estimates should correspond to a specific fiscal year and should be for all salmon produced by your facility rather than on a project basis. (This is different from the production survey.) For each fiscal year or series of years, provide your estimated total annual costs, as well as how costs can be allocated between commercial, sport/personal use, and cost-recovery fisheries. The percentage of total annual costs allocated to these fisheries should account for the "TOTAL ANNUAL COSTS." The "management costs" column is to be completed by Alaska Department of Fish and Game fisheries managers.

The results of the survey will be strictly confidential. No results will be reported on an individual facility basis. Instead the results will be used collectively to calculate an average incremental or "marginal" cost of increases or decreases in enhanced salmon production.

1. This question refers to the annual operating and construction costs of your facility's currently permitted production. For each fiscal year or series of fiscal years, please include the costs of all salmon production by your facility, and how these costs are allocated between commercial and sport/personal use fisheries production.

Fiscal Year		Costs		Percentage of Total Annual Costs			Management Costs
From	To	Operating	Construction	Comm.	Sport/Personal	Cost-Recovery	(ADF&G Use Only)
1992							
2021							

2. Please provide information on the source of funds for your facility production costs listed in question one. The information should be reported in percentages that add up to 100 percent for fiscal year 1992.

Fiscal Year	Source of Funds (Percentages)						
	Loans	Enhancement Tax	Cost Recovery	Federal Grants	US/Canada Treaty	Interest	Other
1992							

Fiscal Year		Costs		Percentage of Total Annual Costs			Management Costs (ADF&G Use Only)
From	To	Operating	Construction	Comm.	Sport/ Personal	Cost- Recovery	
1992							
	2021						

Question 4 contains five parts, each of which hypothetically eliminates the enhancement of one species while holding the production of all other species at their currently permitted level in a facility. The results of question 4, together with the results of questions 1 and 3, will be used to calculate the "zero" point on the "production cost curves" for each species. If your facility does not produce the specific species, mark "NA" as appropriate.

- 3Aa. The *pink* salmon portion of the salmon enhancement in a facility is eliminated while all other components of the program remain at their currently permitted capacity. Please estimate how this would change the total annual costs (fiscal year) at your facility and the allocation of those costs between commercial, sport/personal use, and ~~cost-recovery~~ fisheries. ^{Bold}

Fiscal Year		Costs		Percentage of Total Annual Costs			Management Costs (ADF&G Use Only)
From	To	Operating	Construction	Comm.	Sport/ Personal	Cost- Recovery	
1992							
2021							

- 3Ab. The *chum* salmon portion of the salmon enhancement in a facility is eliminated while all other components of the program remain at their currently permitted capacity. Please estimate how this would change the total annual costs (fiscal year) at your facility and the allocation of those costs between commercial, sport/personal use, and ~~cost-recovery~~ fisheries. ^{Bold}

Fiscal Year		Costs		Percentage of Total Annual Costs			Management Costs (ADF&G Use Only)
From	To	Operating	Construction	Comm.	Sport/ Personal	Cost- Recovery	
1992							
2021							

- 3/c. The *sockeye* salmon portion of the salmon enhancement in a facility is eliminated while all other components of the program remain at their currently ~~permitted~~ capacity. Please estimate how this would change the total annual costs (fiscal year) at your facility and the allocation of those costs between commercial, sport/personal use, and ~~cost recovery~~ fisheries.

Fiscal Year		Costs		Percentage of Total Annual Costs			Management Costs (ADF&G Use Only)
From	To	Operating	Construction	Comm.	Sport/ Personal	Cost- Recovery	
1992							
2021							

- 3/d. The *coho* salmon portion of the salmon enhancement in a facility is eliminated while all other components of the program remain at their currently ~~permitted~~ capacity. Please estimate how this would change the total annual costs (fiscal year) at your facility and the allocation of those costs between commercial, sport/personal use, and ~~cost recovery~~ fisheries.

Fiscal Year		Costs		Percentage of Total Annual Costs			Management Costs (ADF&G Use Only)
From	To	Operating	Construction	Comm.	Sport/ Personal	Cost- Recovery	
1992							
2021							

- 3Ae. The *chinook* salmon portion of the salmon enhancement in a facility is eliminated while all other components of the program remain at their currently ~~permitted~~ capacity. Please estimate how this would change the total annual costs (fiscal year) at your facility and the allocation of those costs between commercial, ~~sport/personal use, and cost-recovery~~ fisheries.

Fiscal Year		Costs		Percentage of Total Annual Costs			Management Costs (ADF&G Use Only)
From	To	Operating	Construction	Comm.	Sport/ Personal	Cost- Recovery	
1992							
	2021						

Question 5 also contains five parts. In this question, however, each part hypothetically *increases* by 15 percent the production level of one species while holding the production of all other species at their currently permitted levels. The results of question 5, together with the results of questions 1, 3, and 4, will be used to finish calculating the "production cost curves" for each species. If your facility does not produce the specific species, mark "NA" as appropriate.

- 4Aa. The *pink* salmon portion of the salmon enhancement program is increased by 15 percent while all other components of the program remain at their currently ~~permitted~~ capacities. Please estimate how this would change the annual costs (fiscal year) at your facility and the allocation of those costs between commercial, ~~sport/personal use, and cost-recovery~~ fisheries.

Fiscal Year		Costs		Percentage of Total Annual Costs			Management Costs (ADF&G Use Only)
From	To	Operating	Construction	Comm.	Sport/ Personal	Cost- Recovery	
1992							
	2021						

- 4/b. The *chum* salmon portion of the salmon enhancement program is increased by 15 percent while all other components of the program remain at their currently permitted capacities. Please estimate how this would change the annual costs (fiscal year) at your facility and the allocation of those costs between commercial, sport/personal use, and cost-recovery fisheries.

Fiscal Year		Costs		Percentage of Total Annual Costs			Management Costs (ADF&G Use Only)
From	To	Operating	Construction	Comm.	Sport/ Personal	Cost- Recovery	
1992							
	2021						

Same as previous

- 4/bc. The *sockeye* salmon portion of the salmon enhancement program is increased by 15 percent while all other components of the program remain at their currently permitted capacities. Please estimate how this would change the annual costs (fiscal year) at your facility and the allocation of those costs between commercial, sport/personal use, and cost-recovery fisheries.

Fiscal Year		Costs		Percentage of Total Annual Costs			Management Costs (ADF&G Use Only)
From	To	Operating	Construction	Comm.	Sport/ Personal	Cost- Recovery	
1992							
	2021						

- 4 d. The *coho* salmon portion of the salmon enhancement program is increased by 15 percent while all other components of the program remain at their currently permitted capacities. Please estimate how this would change the annual costs (fiscal year) at your facility and the allocation of those costs between commercial, sport/personal use, and cost-recovery fisheries.

Fiscal Year		Costs		Percentage of Total Annual Costs			Management Costs (ADF&G Use Only)
From	To	Operating	Construction	Comm.	Sport/ Personal	Cost- Recovery	
1992							
2021							

- 4 e. The *chinook* salmon portion of the salmon enhancement program is increased by 15 percent while all other components of the program remain at their currently permitted capacities. Please estimate how this would change the annual costs (fiscal year) at your facility and the allocation of those costs between commercial, sport/personal use, and cost-recovery fisheries.

Fiscal Year		Costs		Percentage of Total Annual Costs			Management Costs (ADF&G Use Only)
From	To	Operating	Construction	Comm.	Sport/ Personal	Cost- Recovery	
1992							
2021							

SALMON ENHANCEMENT PROJECT SURVEY

Please provide information on salmon production at your facility; we would like this information on a "project" basis. In this survey, a project is defined as one species and life stage of salmon released at one location. All fish released in one project should have approximately the same assumed survival rate, migration, and exploitation through major fishing districts. For example, if you release chum and pink salmon fry directly from your hatchery, then you have two different projects. Alternatively, if you release coho and chinook smolts from your hatchery and coho smolts to two different unrelated lake and river drainages, then you have four projects. We are requesting that you complete one survey for each project. Thank you!!!!!!

1. Please provide information about your project such as the location and when the project was initiated.

PROJECT DESCRIPTION: _____

2. What is the name of the hatchery involved with this particular project.

FACILITY NAME: _____

3. Please enter the project species--pink, chum, sockeye, coho, or chinook.

SPECIES: _____

4. LIFE STAGE OF RELEASE (e.g., emergent fry, fed fry, fingerling, age-0 smolt, age-1 smolt):

5. Please provide your estimated survival rate from the green-egg life stage to release. We are looking for your estimation of the most likely survival rate over the 30-year projected time period, 1992-2022.

HATCHERY SURVIVAL:

Green Egg to Release _____ percent

[illegible]

8. Please provide information on your PROJECT'S currently permitted and planned operating capacity and the years in which each of these will be in effect. If the current capacity is less than permitted capacity, provide your actual capacity. Planned capacity refers to possible future increases in permitted capacity that you think will be approved. If your permitted capacity is the same as planned operating capacity, indicate "same" in the planned capacity response space. Please remember that a different form is used for each species and lifestage release. Under the "number released" column, enter the number of fish to be released. The number of fish to be released should be based on the survival percentage listed in question number 5.

PROJECT CAPACITY:

<u>CURRENT/PERMITTED</u>			<u>PLANNED/FUTURE PERMITTED</u>		
<u>Years</u>	<u># Eggs</u>	<u># Releases</u>	<u>Years</u>	<u># Eggs</u>	<u># Releases</u>
1992 to _____	_____	_____	1992 to _____	_____	_____
_____ to _____	_____	_____	_____ to _____	_____	_____
_____ to _____	_____	_____	_____ to _____	_____	_____
_____ to _____	_____	_____	_____ to _____	_____	_____
_____ to _____	_____	_____	_____ to _____	_____	_____
_____ to _____	_____	_____	_____ to _____	_____	_____
_____ to _____	_____	_____	_____ to _____	_____	_____
_____ to _____	_____	_____	_____ to _____	_____	_____
_____ to 2021 _____	_____	_____	_____ to 2021 _____	_____	_____

9. Please provide information on the number of returning adults to your enhancement project for both your current/permitted production capacity and your planned production. As in question 7, planned production refers to the production levels identified in your regional plan.

ADULT RETURNS:

<u>CURRENT/PERMITTED</u>		<u>PLANNED/FUTURE PERMITTED</u>	
<u>Years</u>	<u>Number of Fish</u>	<u>Years</u>	<u>Number of Fish</u>
1992 to _____	_____	1992 to _____	_____
_____ to _____	_____	_____ to _____	_____
_____ to _____	_____	_____ to _____	_____
_____ to _____	_____	_____ to _____	_____
_____ to _____	_____	_____ to _____	_____
_____ to 2021 _____	_____	_____ to 2021 _____	_____

10. MEAN WEIGHT OF RETURNING ADULT MALES: _____ pounds

11. MEAN WEIGHT OF RETURNING ADULT FEMALES: _____ pounds

12. Please provide information on the expected number of fish harvested in the commercial fishery by district(s) number and month for both your current/permitted capacity (10a) and your future permitted capacity. Check the months or months in which 95 percent of the commercial harvest occurs. For example, if you estimate that 3 percent of the commercial harvest occurs in August, 2 percent in October, and 95 percent in September, one check should be made in the September column. Alternatively, if the harvest is equally divided between August and September, spaces under both columns should be checked. Please note that hatchery cost recovery is treated as a separate commercial fishery in question 14.

12a. CURRENT/PERMITTED PRODUCTION -- ADULTS HARVESTED IN COMMERCIAL FISHERIES

YEARS	District #	Number of Fish	District #	Number of Fish	District #	Number of Fish	May	June	July	Aug.	Sept.	Oct.	Nov. +
1991 to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to 2021	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____

12b. FUTURE/PERMITTED PRODUCTION -- ADULTS HARVESTED IN COMMERCIAL FISHERIES

YEARS	District #	Number of Fish	District #	Number of Fish	District #	Number of Fish	May	June	July	Aug.	Sept.	Oct.	Nov. +
1991 to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to 2021	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____

12c. Provide any information on other wild and/or enhanced stocks harvested in these same fisheries.

13. ADULTS HARVESTED IN SPORT/PERSONAL USE FISHERIES:

<u>CURRENT/PERMITTED</u>		<u>PLANNED/FUTURE PERMITTED</u>	
<u>Years</u>	<u>Number of Fish</u>	<u>Years</u>	<u>Number of Fish</u>
1992 to _____	_____	1992 to _____	_____
_____ to _____	_____	_____ to _____	_____
_____ to _____	_____	_____ to _____	_____
_____ to _____	_____	_____ to _____	_____
_____ to 2021	_____	_____ to 2021	_____

14. Please provide information on your annual facility cost recovery. Indicate your estimated price per pound; harvest costs per pound (or vessel charter expenses per pound), computed on an ex-vessel (or ex-hatchery) basis, in 1991 dollars; and the total pound and number of fish harvested for cost recovery.

FACILITY COST RECOVERY:

<u>Years</u>	<u>Price/lb.</u>	<u>Costs/lb.</u>	<u>Total Pounds</u>	<u># of Fish</u>
1992 to _____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____
_____ to 2021	_____	_____	_____	_____

SALMON ENHANCEMENT PROJECT SURVEY

Please provide information on salmon production at your facility; we would like this information on a "project" basis. In this survey, a project is defined as one species and life stage of salmon released at one location. All fish released in one project should have approximately the same assumed survival rate, migration, and exploitation through major fishing districts. For example, if you release chum and pink salmon fry directly from your hatchery, then you have two different projects. Alternatively, if you release coho and chinook smolts from your hatchery and coho smolts to two different unrelated lake and river drainages, then you have four projects. We are requesting that you complete one survey for each project. Thank you!!!!!!

1. Please provide information about your project such as the location and when the project was initiated.

PROJECT DESCRIPTION: _____

2. What is the name of the hatchery involved with this particular project.

FACILITY NAME: _____

3. Please enter the project species--pink, chum, sockeye, coho, or chinook.

SPECIES: _____

4. LIFE STAGE OF RELEASE (e.g., emergent fry, fed fry, fingerling, age-0 smolt, age-1 smolt):

5. Please provide your estimated survival rate from the green-egg life stage to release. We are looking for your estimation of the most likely survival rate over the 30-year projected time period, 1992-2022.

HATCHERY SURVIVAL:

Green Egg to Release _____ percent

Version
IV

6. Enter the expected percentage of total marine survival of releases to returning adult. Include in your survival estimate those returning adults harvested in the common property fishery--both commercial and personal use/sport fisheries.

TOTAL SURVIVAL TO ADULT:

- A. Release to adult _____ percent
- B. Survival is estimated by:
- a. coded wire tags _____
- b. minimal estimate based on return to hatchery and terminal harvest

- c. guess based on hatchery return, terminal harvest, and guess of mixed-stock harvest

7. Please provide information on your PROJECT'S currently permitted and planned operating capacity and the years in which each of these will be in effect. If the current capacity is less than permitted capacity, provide your actual capacity. Planned capacity refers to possible future increases in permitted capacity that you think will be approved. If your permitted capacity is the same as planned operating capacity, indicate "same" in the planned capacity response space. Please remember that a different form is used for each species and lifestage release. Under the "number released" column, enter the number of fish to be released. The number of fish to be released should be based on the survival percentage listed in question number 5.

PROJECT CAPACITY:

CURRENT/PERMITTED			PLANNED/FUTURE PERMITTED		
Years	# Eggs	# Releases	Years	# Eggs	# Releases
1992 to _____	_____	_____	1992 to _____	_____	_____
_____ to _____	_____	_____	_____ to _____	_____	_____
_____ to _____	_____	_____	_____ to _____	_____	_____
_____ to _____	_____	_____	_____ to _____	_____	_____
_____ to _____	_____	_____	_____ to _____	_____	_____
_____ to _____	_____	_____	_____ to _____	_____	_____
_____ to _____	_____	_____	_____ to _____	_____	_____
_____ to _____	_____	_____	_____ to _____	_____	_____
_____ to 2021	_____	_____	_____ to 2021	_____	_____

8. Please provide information on the number of returning adults to your enhancement project for both your current/permited production capacity and your planned production. As in question 7, planned production refers to the production levels identified in your regional plan.

ADULT RETURNS:

<u>CURRENT/PERMITTED</u>		<u>PLANNED/FUTURE PERMITTED</u>	
<u>Years</u>	<u>Number of Fish</u>	<u>Years</u>	<u>Number of Fish</u>
1992 to _____	_____	1992 to _____	_____
_____ to _____	_____	_____ to _____	_____
_____ to _____	_____	_____ to _____	_____
_____ to _____	_____	_____ to _____	_____
_____ to _____	_____	_____ to _____	_____
_____ to 2021	_____	_____ to 2021	_____

9. MEAN WEIGHT OF RETURNING ADULT MALES: _____ pounds
10. MEAN WEIGHT OF RETURNING ADULT FEMALES: _____ pounds
11. ADULTS HARVESTED IN SPORT/PERSONAL USE FISHERIES:

<u>CURRENT/PERMITTED</u>		<u>PLANNED/FUTURE PERMITTED</u>	
<u>Years</u>	<u>Number of Fish</u>	<u>Years</u>	<u>Number of Fish</u>
1992 to _____	_____	1992 to _____	_____
_____ to _____	_____	_____ to _____	_____
_____ to _____	_____	_____ to _____	_____
_____ to _____	_____	_____ to _____	_____
_____ to 2021	_____	_____ to 2021	_____

12. Please provide information on your annual facility cost recovery. Indicate your estimated price per pound; harvest costs per pound (or vessel charter expenses per pound), computed on an ex-vessel (or ex-hatchery) basis, in 1991 dollars; and the total pound and number of fish harvested for cost recovery.

FACILITY COST RECOVERY:

<u>Years</u>	<u>Price/lb.</u>	<u>Costs/lb.</u>	<u>Total Pounds</u>	<u># of Fish</u>
1992 to _____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____
_____ to 2021	_____	_____	_____	_____

SALMON ENHANCEMENT PROJECT SURVEY

Please provide information on salmon production at your facility; we would like this information on a "project" basis. In this survey, a project is defined as one species and life stage of salmon released at one location. All fish released in one project should have approximately the same assumed survival rate, migration, and exploitation through major fishing districts. For example, if you release chum and pink salmon fry directly from your hatchery, then you have two different projects. Alternatively, if you release coho and chinook smolts from your hatchery and coho smolts to two different unrelated lake and river drainages, then you have four projects. We are requesting that you complete one survey for each project. Thank you!!!!!!

1. Please provide information about your project such as the location and when the project was initiated.

PROJECT DESCRIPTION: _____

2. What is the name of the hatchery involved with this particular project.

FACILITY NAME: _____

3. Please enter the project species--pink, chum, sockeye, coho, or chinook.

SPECIES: _____

4. LIFE STAGE OF RELEASE (e.g., emergent fry, fed fry, fingerling, age-0 smolt, age-1 smolt):

5. Please provide your estimated survival rate from the green-egg life stage to release. We are looking for your estimation of the most likely survival rate over the 30-year projected time period, 1992-2022.

HATCHERY SURVIVAL:

Green Egg to Release _____ percent

Version 3
Green 70

6. Enter the expected percentage of total marine survival of releases to returning adult. Include in your survival estimate those returning adults harvested in the common property fishery--both commercial and personal use/sport fisheries.

TOTAL SURVIVAL TO ADULT:

- A. Release to adult _____ percent
- B. Survival is estimated by:
- a. coded wire tags _____
- b. minimal estimate based on return to hatchery and terminal harvest

- c. guess based on hatchery return, terminal harvest, and guess of mixed-stock harvest

7. Please provide information on your PROJECT'S current and planned operating capacity and the years in which each of these will be in effect. Planned capacity refers to possible future increases in capacity that you expect to occur. If your current capacity is the same as planned or expected operating capacity, indicate "same" in the planned capacity response space. Please remember that a different form is used for each species and lifestage release. Under the "number released" column, enter the number of fish to be released. The number of fish to be released should be based on the survival percentage listed in question number 5.

PROJECT CAPACITY:

CURRENT			PLANNED		
<u>Years</u>	<u># Eggs</u>	<u># Releases</u>	<u>Years</u>	<u># Eggs</u>	<u># Releases</u>
1992 to _____	_____	_____	1992 to _____	_____	_____
_____ to _____	_____	_____	_____ to _____	_____	_____
_____ to _____	_____	_____	_____ to _____	_____	_____
_____ to _____	_____	_____	_____ to _____	_____	_____
_____ to _____	_____	_____	_____ to _____	_____	_____
_____ to _____	_____	_____	_____ to _____	_____	_____
_____ to _____	_____	_____	_____ to _____	_____	_____
_____ to _____	_____	_____	_____ to _____	_____	_____
_____ to 2021	_____	_____	_____ to 2021	_____	_____

8. Please provide information on the number of returning adults to your enhancement project for both your current production capacity and your planned production. As in question 8, planned production refers to the production levels expected to occur in the future that are different than current production capacity.

ADULT RETURNS:

<u>CURRENT</u>		<u>PLANNED</u>	
<u>Years</u>	<u>Number of Fish</u>	<u>Years</u>	<u>Number of Fish</u>
1992 to _____	_____	1992 to _____	_____
_____ to _____	_____	_____ to _____	_____
_____ to _____	_____	_____ to _____	_____
_____ to _____	_____	_____ to _____	_____
_____ to _____	_____	_____ to _____	_____
_____ to 2021	_____	_____ to 2021	_____

9. MEAN WEIGHT OF RETURNING ADULT MALES: _____ pounds
10. MEAN WEIGHT OF RETURNING ADULT FEMALES: _____ pounds
11. ADULTS HARVESTED IN SPORT/PERSONAL USE FISHERIES:

<u>CURRENT</u>		<u>PLANNED</u>	
<u>Years</u>	<u>Number of Fish</u>	<u>Years</u>	<u>Number of Fish</u>
1992 to _____	_____	1992 to _____	_____
_____ to _____	_____	_____ to _____	_____
_____ to _____	_____	_____ to _____	_____
_____ to _____	_____	_____ to _____	_____
_____ to 2021	_____	_____ to 2021	_____

SALMON ENHANCEMENT PROJECT SURVEY

Please provide information on salmon production at your facility; we would like this information on a "project" basis. In this survey, a project is defined as one species and life stage of salmon released at one location. All fish released in one project should have approximately the same assumed survival rate, migration, and exploitation through major fishing districts. For example, if you release chum and pink salmon fry directly from your hatchery, then you have two different projects. Alternatively, if you release coho and chinook smolts from your hatchery and coho smolts to two different unrelated lake and river drainages, then you have four projects. We are requesting that you complete one survey for each project. Thank you!!!!!!

1. Please provide information about your project such as the location and when the project was initiated.

PROJECT DESCRIPTION: _____

2. What is the name of the hatchery involved with this particular project.

FACILITY NAME: _____

3. Please enter the project species--pink, chum, sockeye, coho, or chinook.

SPECIES: _____

4. LIFE STAGE OF RELEASE (e.g., emergent fry, fed fry, fingerling, age-0 smolt, age-1 smolt):

5. Please provide your estimated survival rate from the green-egg life stage to release. We are looking for your estimation of the most likely survival rate over the 30-year projected time period, 1992-2022.

HATCHERY SURVIVAL:

Green Egg to Release _____ percent

Version 2

100% 30

8. Please provide information on your PROJECT'S current and planned operating capacity and the years in which each of these will be in effect. Planned capacity refers to possible future increases in capacity that you expect to occur. If your current capacity is the same as planned operating capacity, indicate "same" in the planned capacity response space. Please remember that a different form is used for each species and lifestage release. Under the "number released" column, enter the number of fish to be released. The number of fish to be released should be based on the survival percentage listed in question number 5.

PROJECT CAPACITY:

CURRENT			PLANNED		
Years	# Eggs	# Releases	Years	# Eggs	# Releases
1992 to _____	_____	_____	1992 to _____	_____	_____
_____ to _____	_____	_____	_____ to _____	_____	_____
_____ to _____	_____	_____	_____ to _____	_____	_____
_____ to _____	_____	_____	_____ to _____	_____	_____
_____ to _____	_____	_____	_____ to _____	_____	_____
_____ to _____	_____	_____	_____ to _____	_____	_____
_____ to _____	_____	_____	_____ to _____	_____	_____
_____ to _____	_____	_____	_____ to _____	_____	_____
_____ to 2021	_____	_____	_____ to 2021	_____	_____

9. Please provide information on the number of returning adults to your enhancement project for both your current production capacity and your planned production. As in question 8, planned production refers to the production levels expected to occur in the future that are different than current production capacity.

ADULT RETURNS:

CURRENT		PLANNED	
Years	Number of Fish	Years	Number of Fish
1992 to _____	_____	1992 to _____	_____
_____ to _____	_____	_____ to _____	_____
_____ to _____	_____	_____ to _____	_____
_____ to _____	_____	_____ to _____	_____
_____ to _____	_____	_____ to _____	_____
_____ to 2021	_____	_____ to 2021	_____

10. MEAN WEIGHT OF RETURNING ADULT MALES: _____ pounds

11. MEAN WEIGHT OF RETURNING ADULT FEMALES: _____ pounds

12. Please provide information on the expected number of fish harvested in the commercial fishery by district(s) number and month for both your current capacity (10a) and your future expected capacity. Check the months or months in which 95 percent of the commercial harvest occurs. For example, if you estimate that 3 percent of the commercial harvest occurs in August, 2 percent in October, and 95 percent in September, one check should be made in the September column. Alternatively, if the harvest is equally divided between August and September, spaces under both columns should be checked.

12a. CURRENT PRODUCTION -- ADULTS HARVESTED IN COMMERCIAL FISHERIES

YEARS	District #	Number of Fish	District #	Number of Fish	District #	Number of Fish	May	June	July	Aug.	Sept.	Oct.	Nov. +
1991 to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to 2021	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____

12b. FUTURE PRODUCTION -- ADULTS HARVESTED IN COMMERCIAL FISHERIES

YEARS	District #	Number of Fish	District #	Number of Fish	District #	Number of Fish	May	June	July	Aug.	Sept.	Oct.	Nov. +
1991 to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to 2021	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____

12c. Provide any information on other wild and/or enhanced stocks harvested in these same fisheries.

13. ADULTS HARVESTED IN SPORT/PERSONAL USE FISHERIES:

CURRENT		PLANNED	
Years	Number of Fish	Years	Number of Fish
1992 to _____	_____	1992 to _____	_____
_____ to _____	_____	_____ to _____	_____
_____ to _____	_____	_____ to _____	_____
_____ to _____	_____	_____ to _____	_____
_____ to 2021	_____	_____ to 2021	_____

Survey fairly subjective; would be nice to compare w/ coded weir data

Com fish comments

1) high enhanced harvest

2) harvest up to wild stock escape goals to maintain stocks

3) do both via tagging

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regional, fishing & gear group
species or

SALMON ENHANCEMENT PROJECT SURVEY

Please provide information on salmon production at your facility; we would like this information on a "project" basis. In this survey, a project is defined as one species and life stage of salmon released at one location. All fish released in one project should have approximately the same assumed survival rate, migration, and exploitation through major fishing districts. For example, if you release chum and pink salmon fry directly from your hatchery, then you have two different projects. Alternatively, if you release coho and chinook smolts from your hatchery and coho smolts to two different unrelated lake and river drainages, then you have three projects if the lake cohos' return migration is through the same fisheries. If the lake-released cohos do not have similar survival rates, migrations paths, and exploitation fisheries, then you have four projects. We are requesting that you complete one survey for each project. Thank you!!!!!!

1. Please provide information about your project such as the location, when the project was initiated, first year of egg take, and any other pertinent information.

PROJECT DESCRIPTION: _____

2. What is the name of the facility involved with this particular project.

FACILITY NAME: _____

3. Please enter the project species--pink, chum, sockeye, coho, or chinook.

SPECIES: _____

4. LIFE STAGE OF RELEASE: _____

Com fish - D's to escapement goals for various fisheries
might plan out of date?

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5. Please provide your estimated survival rate from the green-egg life stage to release. We are looking for your estimation of the most likely survival rate over the 30-year projected time period, 1992-2022.

HATCHERY SURVIVAL:

Green Egg to Release _____ percent

6. Enter the expected percentage of total marine survival of releases to returning adult. Include in your survival estimate those returning adults harvested in the common property fishery--both commercial and personal use/sport fisheries.

TOTAL SURVIVAL TO ADULT:

Release to adult	percent
100	100
90	90
80	80
70	70
60	60
50	50
40	40
30	30
20	20
10	10
0	0

how is this estimated

A. Corded wire tags

b. minimal estimate of return to habitat: $\frac{1}{2}$ of normal

7. We would like information on the rate at which adult salmon return to your enhancement project based on the number of years these fish are in the ocean or their "OCEAN AGE CLASS." In the European aging system, the number to the left of the decimal point is the number of winters that juveniles spend in fresh water; the number to the right of the decimal point is the number of winters that returning adults spend in salt water. On line 7a, enter the estimated percentage of the total number of returning adults produced for a brood year below the expected age of return. For example, chum eggs taken in 1991 might be expected to return in 1994 (20%), 1995 (70%), and 1996 (10%). In this case, you would enter 20% below age .2, 70% below age .3, and 10% below age .4. The total percentage must, of course, equal 100. For line 7b, enter the percentage of females for each age class that is expected to return, as indicated on line 7a.

ADULT RETURN BY OCEAN AGE & SEX RATIO:

[illegible]

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8. Please provide information on your PROJECT'S currently permitted and planned operating capacity and the years in which each of these will be in effect. If current production is less than your permitted production, provide your actual production. Planned operating capacity refers to production capacity identified in your regional plan. If your permitted capacity is the same as planned operating capacity, indicate "same" in the planned capacity response space. Please remember that a different form is used for each species and lifestage release. Under the "number released" column, enter the number of fish to be released.

PROJECT CAPACITY:

CURRENT/PERMITTED			PLANNED		
Years	# Eggs	# Releases	Years	# Eggs	# Releases
1992 to _____	_____	_____	1992 to _____	_____	_____
_____ to _____	_____	_____	_____ to _____	_____	_____
_____ to _____	_____	_____	_____ to _____	_____	_____
_____ to _____	_____	_____	_____ to _____	_____	_____
_____ to _____	_____	_____	_____ to _____	_____	_____
_____ to _____	_____	_____	_____ to _____	_____	_____
_____ to _____	_____	_____	_____ to _____	_____	_____
_____ to _____	_____	_____	_____ to _____	_____	_____
_____ to 2021	_____	_____	_____ to 2021	_____	_____

9. Please provide information on the number of returning adults to your enhancement project for both your current/permitted production capacity and your planned production. As in question 7, planned production refers to the production levels identified in your regional plan.

ADULT RETURNS:

CURRENT/PERMITTED		PLANNED	
Years	Number of Fish	Years	Number of Fish
1992 to _____	_____	1992 to _____	_____
_____ to _____	_____	_____ to _____	_____
_____ to _____	_____	_____ to _____	_____
_____ to _____	_____	_____ to _____	_____
_____ to _____	_____	_____ to _____	_____
_____ to 2021	_____	_____ to 2021	_____

10. MEAN WEIGHT OF RETURNING ADULT MALES: _____ pounds

11. MEAN WEIGHT OF RETURNING ADULT FEMALES: _____ pounds

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12. Please provide information on the expected number of fish harvested in the commercial fishery by district(s) number and month for both your current/permited capacity (10a) and your planned production capacity (based on your regional plan). Check the months or months in which 95 percent of the commercial harvest occurs. For example, if you estimate that 3 percent of the commercial harvest occurs in August, 2 percent in October, and 95 percent in September, one check should be made in the September column. Alternatively, if the harvest is equally divided between August and September, spaces under both columns should be checked. Please note that hatchery cost recovery is treated as a separate commercial fishery in question 14.

12a. CURRENT/PERMITTED PRODUCTION -- ADULTS HARVESTED IN COMMERCIAL FISHERIES

YEARS	District #	Number of Fish	District #	Number of Fish	District #	Number of Fish	May	June	July	Aug.	Sept.	Oct.	Nov. +
1991 to													
to													
to													
to													
to													
to													
to 2021													

12b. PLANNED PRODUCTION -- ADULTS HARVESTED IN COMMERCIAL FISHERIES

YEARS	District #	Number of Fish	District #	Number of Fish	District #	Number of Fish	May	June	July	Aug.	Sept.	Oct.	Nov. +
1991 to													
to													
to													
to													
to													
to													
to 2021													

12c.

which offer wild or enhanced stocks are being harvested in the same fishery

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13. ADULTS HARVESTED IN SPORT/PERSONAL USE FISHERIES:

CURRENT/PERMITTED		PLANNED	
Years	Number of Fish	Years	Number of Fish
1992 to _____	_____	1992 to _____	_____
_____ to _____	_____	_____ to _____	_____
_____ to _____	_____	_____ to _____	_____
_____ to _____	_____	_____ to _____	_____
_____ to 2021	_____	_____ to 2021	_____

14. Please provide information on your annual facility cost recovery. Indicate your estimated price per pound; harvest costs per pound (or vessel charter expenses per pound), computed on an ex-vessel (or ex-hatchery) basis, in 1991 dollars; and the total pound and number of fish harvested for cost recovery.

FACILITY COST RECOVERY:

Years	Price/lb.	Costs/lb.	Total Pounds	# of Fish
1992 to _____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____
_____ to 2021	_____	_____	_____	_____

OPERATING AND CAPITAL COSTS

Please describe annual operating and capital costs for all salmon production at your facility for all "projects" collectively and by individual project. A project is defined as one species of salmon that is released at a common location and all releases have the same release lifestage, and approximately the same assumed survival rate, migration, and exploitation through major fisheries districts. For each fiscal year or series of years, provide your estimated total annual costs as well as how costs can be allocated between commercial and sport/personal use fisheries. In addition, please indicate your annual source of funds for your operating costs/expenditures. The total annual costs allocated between commercial and sport/personal use should add up to the "TOTAL ANNUAL COSTS." The costs allocated among the "source of funds" should also add to the "TOTAL ANNUAL COSTS."

Operating Costs and Expenditures--the following are examples of costs to be included as operating costs (\$1,000s)

Total Full-Time Salary: _____
 Total Full-Time Benefits: _____
 Total Part-Time Salary: _____
 Total Part-Time Benefits: _____
 Loan repayment: _____
 Travel: _____
 Contractual: _____
 Equipment and Supplies _____
 Other (Specify): _____
 TOTAL OPERATING COSTS: _____

15A. YEARS	TOTAL ANNUAL COSTS (\$1,000s)	TOTAL ANNUAL COSTS		SOURCE OF FUNDS						
		COMMERCIAL	SPORT/ PERSONAL USE	LOANS	ENHANCE- MENT TAX	COST RECOVERY	FEDERAL GRANTS	US/CANADA TREAT	INTEREST	OTHER
1992 to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to 2021	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____

15B. PROJECT 1: Name _____

YEARS	TOTAL ANNUAL COSTS (\$1,000s)	TOTAL ANNUAL COSTS		SOURCE OF FUNDS						
		COMMERCIAL	SPORT/ PERSONAL USE	LOANS	ENHANCE- MENT TAX	COST RECOVERY	FEDERAL GRANTS	US/CANADA TREAT	INTEREST	OTHER
1992 to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to 2021	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____

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OPERATING AND CAPITAL COSTS (continued)

15C. PROJECT 2: Name _____

YEARS	TOTAL ANNUAL COSTS (\$1,000s)	TOTAL ANNUAL COSTS		SOURCE OF FUNDS						
		COMMERCIAL	SPORT/ PERSONAL USE	LOANS	ENHANCE- MENT TAX	COST RECOVERY	FEDERAL GRANTS	US/CANADA TREAT	INTEREST	OTHER
1992 to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to 2021	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____

15D. PROJECT 3: Name _____

YEARS	TOTAL ANNUAL COSTS (\$1,000s)	TOTAL ANNUAL COSTS		SOURCE OF FUNDS						
		COMMERCIAL	SPORT/ PERSONAL USE	LOANS	ENHANCE- MENT TAX	COST RECOVERY	FEDERAL GRANTS	US/CANADA TREAT	INTEREST	OTHER
1992 to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to 2021	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____

15E. PROJECT 4: Name _____

YEARS	TOTAL ANNUAL COSTS (\$1,000s)	TOTAL ANNUAL COSTS		SOURCE OF FUNDS						
		COMMERCIAL	SPORT/ PERSONAL USE	LOANS	ENHANCE- MENT TAX	COST RECOVERY	FEDERAL GRANTS	US/CANADA TREAT	INTEREST	OTHER
1992 to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to 2021	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____

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CAPITAL/CONSTRUCTION COSTS

The following are examples of costs to be included in the total costs (in \$1,000s):

Facility/Capital Improvement: _____
 Other (Specify): _____
 TOTAL CAPITAL COSTS: _____

16 YEARS	TOTAL CAPITAL COSTS (\$1,000s)	TOTAL CAPITAL COSTS		ALLOCATION OF CAPITAL COSTS AMONG PROJECTS					
		COMMERCIAL	SPORT/ PERSONAL USE	ONE	TWO	THREE	FOUR	FIVE	SIX
1992 to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to 2021	_____	_____	_____	_____	_____	_____	_____	_____	_____

In the next set of questions, we would like to know how your costs would change under some possible production changes in the salmon enhancement program. These change have NOT been proposed; they will be used to estimate the cost of incremental changes in the program. We would like you to list your cost changes by individual projects as well as collectively which would include any economies of scale cost savings. If a proposed change would result in a cost savings, please indicate savings as negative costs. Assume any expansions would begin in FY 93. Changes in production are number of returning adult fish harvested in the common property commercial fisheries.

CASE 1 The salmon enhancement program continues at your regional plan's currently projected levels. This is your planned production as indicated in the previous portion of the survey. Estimate your cost increase collectively rather than by individual projects.

YEARS	TOTAL ANNUAL COST (\$1,000s)	
	OPERATING	CAPITAL/CONSTRUCTION
1993 to _____	_____	_____
_____ to _____	_____	_____
_____ to _____	_____	_____
_____ to _____	_____	_____
_____ to _____	_____	_____
_____ to _____	_____	_____
_____ to 2022	_____	_____

CASE 2 Salmon production from all enhancement projects is increased by 15 percent (in terms of the number of returning adult fish to be harvested by commercial fisheries.) Estimate your cost increases collectively rather than by individual projects

YEARS	TOTAL ANNUAL COST (\$1,000s)	
	OPERATING	CAPITAL/CONSTRUCTION
1993 to _____	_____	_____
_____ to _____	_____	_____
_____ to _____	_____	_____
_____ to _____	_____	_____
_____ to _____	_____	_____
_____ to _____	_____	_____
_____ to 2022	_____	_____

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CASE 3 Salmon production from all enhancement projects is decreased by 15 percent (in terms of the number of returning adult fish to be harvested by commercial fisheries). Estimate your cost (negative savings) collectively rather than by individual projects

YEARS	TOTAL ANNUAL COST (\$1,000s)	
	OPERATING	CAPITAL/CONSTRUCTION
1993 to _____	_____	_____
_____ to _____	_____	_____
_____ to _____	_____	_____
_____ to _____	_____	_____
_____ to _____	_____	_____
_____ to _____	_____	_____
_____ to 2022	_____	_____

CASE 4 The pink salmon portion of the salmon enhancement program is eliminated and all other projects remain at the currently permitted capacity level. Please estimate the net cost increase (negative if savings) of this program change.

YEARS	TOTAL ANNUAL COST (\$1,000s)	
	OPERATING	CAPITAL/CONSTRUCTION
1993 to _____	_____	_____
_____ to _____	_____	_____
_____ to _____	_____	_____
_____ to _____	_____	_____
_____ to _____	_____	_____
_____ to _____	_____	_____
_____ to 2022	_____	_____

CASE 5 The sockeye salmon portion of the salmon enhancement program is eliminated. Production from all other projects remains at the currently permitted capacity level. Please estimate the net cost increase (negative if savings) of this program change.

YEARS	TOTAL ANNUAL COST (\$1,000s)	
	OPERATING	CAPITAL/CONSTRUCTION
1993 to _____	_____	_____
_____ to _____	_____	_____
_____ to _____	_____	_____
_____ to _____	_____	_____
_____ to _____	_____	_____
_____ to _____	_____	_____
_____ to 2022	_____	_____

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CASE 6 The purpose of this case is to measure the change in costs to individual enhancement projects that would result from a 15 percent increase or decrease in the production of returning adult salmon harvested in the commercial fisheries. On a project basis, estimate how your costs would change from a 15 percent increase and a 15 percent decrease in the number of adult salmon produced and harvested by commercial fisheries.

PROJECT 1		15 PERCENT INCREASE IN PRODUCTION		15 PERCENT DECREASE IN PRODUCTION	
		TOTAL ANNUAL COST (\$1,000s)		TOTAL ANNUAL COST (\$1,000s)	
YEARS		OPERATING	CAPITAL/CONSTRUCTION	OPERATING	CAPITAL/CONSTRUCTION
1993	to _____	_____	_____	_____	_____
_____	to _____	_____	_____	_____	_____
_____	to _____	_____	_____	_____	_____
_____	to _____	_____	_____	_____	_____
_____	to _____	_____	_____	_____	_____
_____	to 2022	_____	_____	_____	_____

PROJECT 2		15 PERCENT INCREASE IN PRODUCTION		15 PERCENT DECREASE IN PRODUCTION	
		TOTAL ANNUAL COST (\$1,000s)		TOTAL ANNUAL COST (\$1,000s)	
YEARS		OPERATING	CAPITAL/CONSTRUCTION	OPERATING	CAPITAL/CONSTRUCTION
1993	to _____	_____	_____	_____	_____
_____	to _____	_____	_____	_____	_____
_____	to _____	_____	_____	_____	_____
_____	to _____	_____	_____	_____	_____
_____	to _____	_____	_____	_____	_____
_____	to 2022	_____	_____	_____	_____

PROJECT 3		15 PERCENT INCREASE IN PRODUCTION		15 PERCENT DECREASE IN PRODUCTION	
		TOTAL ANNUAL COST (\$1,000s)		TOTAL ANNUAL COST (\$1,000s)	
YEARS		OPERATING	CAPITAL/CONSTRUCTION	OPERATING	CAPITAL/CONSTRUCTION
1993	to _____	_____	_____	_____	_____
_____	to _____	_____	_____	_____	_____
_____	to _____	_____	_____	_____	_____
_____	to _____	_____	_____	_____	_____
_____	to _____	_____	_____	_____	_____
_____	to 2022	_____	_____	_____	_____

PROJECT 4		15 PERCENT INCREASE IN PRODUCTION		15 PERCENT DECREASE IN PRODUCTION	
		TOTAL ANNUAL COST (\$1,000s)		TOTAL ANNUAL COST (\$1,000s)	
YEARS		OPERATING	CAPITAL/CONSTRUCTION	OPERATING	CAPITAL/CONSTRUCTION
1993	to _____	_____	_____	_____	_____
_____	to _____	_____	_____	_____	_____
_____	to _____	_____	_____	_____	_____
_____	to _____	_____	_____	_____	_____
_____	to _____	_____	_____	_____	_____
_____	to 2022	_____	_____	_____	_____

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brood

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7. FECUNDITY: _____ (eggs/female)
(The average number of eggs per returning female.)

8. ADULT HOLDING MORTALITY: _____ %
(The percentage of returning adults held that die prior to spawning.)

9. MINIMUM ANNUAL STREAM ESCAPEMENT:
a. _____ (number) from _____ to _____ (Year)
b. _____ (number) from _____ to _____ (Year)
c. _____ (number) from _____ to _____ (Year)

(Enter the minimum number of returning fish required to spawn naturally in the stream and the years in which this escapement is required. If the minimum number changes, enter the change and the years affected by the change on lines 9b and 9c. Enter zero if no escapement is required.)

12. NUMBER OF RETURNING ADULTS FROM PREVIOUS RELEASES BY RETURN YEAR, BY OCEAN AGE

Age	1992	1993	1994	1995	1996	1997
a. .0	_____					
b. .1	_____	_____				
c. .2	_____	_____	_____			
d. .3	_____	_____	_____	_____		
e. .4	_____	_____	_____	_____	_____	
f. .5	_____	_____	_____	_____	_____	_____

(For each year, enter the number of adults expected to return from previous releases by age class. As an example, if chum salmon eggs were first taken in 1989, then the expected number of adults to return at .2 would be entered on line c under year 1992. The number expected to return at age .3 from the 1989 brood would be entered on line d under 1993. Expected returns for eggs taken in 1990 would follow the same sequence, except the age .2 returns would be entered on line c under in the 1993 column.)

13. REMOTE EGG TAKES:

	Year			
a.	1992	Number of eggs	through Year	_____
b.	_____	Number of eggs	through Year	_____
c.	_____	Number of eggs	through Year	_____
d.	_____	Number of eggs	through Year	_____
e.	_____	Number of eggs	through Year	_____

(List the years and number of eggs to be taken at sites other than the facility. If the desired number of remote egg takes changes, use the additional lines b-e to list these changes.)

[brood stock requirement in terms of # of ♂ and ♀ needed]

OPERATING AND CAPITAL COSTS

Please describe annual operating and capital costs for all salmon production at your facility for all "projects" collectively and by individual project. A project is defined as one species of salmon that is released at a common location and all releases have the same release lifestage, and approximately the same assumed survival rate, migration, and exploitation through major fisheries districts. For each fiscal year or series of years, provide your estimated total annual costs as well as how costs can be allocated between commercial and sport/personal use fisheries. In addition, please indicate your annual source of funds for your operating costs/expenditures. The total annual costs allocated between commercial and sport/personal use should add up to the "TOTAL ANNUAL COSTS." The costs allocated among the "source of funds" should also add to the "TOTAL ANNUAL COSTS."

Operating Costs and Expenditures -- the following are examples of costs to be included as operating costs (\$1,000s)

Total Full-Time Salary: _____
 Total Full-Time Benefits: _____
 Total Part-Time Salary: _____
 Total Part-Time Benefits: _____
 Loan repayment: _____
 Travel: _____
 Contractual: _____
 Equipment and Supplies: _____
 Other (Specify): _____
 TOTAL OPERATING COSTS: _____

15A.	YEARS	TOTAL ANNUAL COSTS (\$1,000s)	TOTAL ANNUAL COSTS		SOURCE OF FUNDS						
			COMMERCIAL	SPORT/ PERSONAL USE	LOANS	ENHANCE- MENT TAX	COST RECOVERY	FEDERAL GRANTS	US/CANADA TREAT	INTEREST	OTHER
	1992 to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
	_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
	_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
	_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
	_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
	_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
	_____ to 2021	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____

15B. PROJECT 1: Name _____

YEARS	TOTAL ANNUAL COSTS (\$1,000s)	TOTAL ANNUAL COSTS		SOURCE OF FUNDS						
		COMMERCIAL	SPORT/ PERSONAL USE	LOANS	ENHANCE- MENT TAX	COST RECOVERY	FEDERAL GRANTS	US/CANADA TREAT	INTEREST	OTHER
	1992 to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____
	_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____
	_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____
	_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____
	_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____
	_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____
	_____ to 2021	_____	_____	_____	_____	_____	_____	_____	_____	_____

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OPERATING AND CAPITAL COSTS (continued)

15C. PROJECT 2: Name _____

YEARS	TOTAL ANNUAL COSTS (\$1,000s)	TOTAL ANNUAL COSTS		SOURCE OF FUNDS						
		COMMERCIAL	SPORT/ PERSONAL USE	LOANS	ENHANCE- MENT TAX	COST RECOVERY	FEDERAL GRANTS	US/CANADA TREAT	INTEREST	OTHER
1992 to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to 2021	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____

15D. PROJECT 3: Name _____

YEARS	TOTAL ANNUAL COSTS (\$1,000s)	TOTAL ANNUAL COSTS		SOURCE OF FUNDS						
		COMMERCIAL	SPORT/ PERSONAL USE	LOANS	ENHANCE- MENT TAX	COST RECOVERY	FEDERAL GRANTS	US/CANADA TREAT	INTEREST	OTHER
1992 to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to 2021	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____

15E. PROJECT 4: Name _____

YEARS	TOTAL ANNUAL COSTS (\$1,000s)	TOTAL ANNUAL COSTS		SOURCE OF FUNDS						
		COMMERCIAL	SPORT/ PERSONAL USE	LOANS	ENHANCE- MENT TAX	COST RECOVERY	FEDERAL GRANTS	US/CANADA TREAT	INTEREST	OTHER
1992 to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to 2021	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____

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CAPITAL/CONSTRUCTION COSTS

The following are examples of costs to be included as capital costs (in \$1,000s):

Facility/Capital Improvement: _____

Other (Specify): _____

TOTAL CAPITAL COSTS: _____

16 YEARS	TOTAL CAPITAL COSTS (\$1,000s)	TOTAL CAPITAL COSTS		ALLOCATION OF CAPITAL COSTS AMONG PROJECTS					
		COMMERCIAL	SPORT/ PERSONAL USE	ONE	TWO	THREE	FOUR	FIVE	SIX
1992 to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____ to 2021	_____	_____	_____	_____	_____	_____	_____	_____	_____

In the next set of questions, we would like to know how your costs would change under some possible production changes in the salmon enhancement program. These change have NOT been proposed; they will be used to estimate the cost of incremental changes in the program. We would like you to list your cost changes by individual projects as well as collectively which would include any economies of scale cost savings. If a proposed change would result in a cost savings, please indicate savings as negative costs. Assume any expansions would begin in FY 93. Changes in production are number of returning adult fish harvested in the common property commercial fisheries.

CASE 1 The salmon enhancement program continues at your regional plan's currently projected levels. This is your planned production as indicated in the previous portion of the survey. Estimate your cost increase collectively rather than by individual projects.

YEARS	TOTAL ANNUAL COST (\$1,000s)	
	OPERATING	CAPITAL/CONSTRUCTION
1993 to _____	_____	_____
_____ to _____	_____	_____
_____ to _____	_____	_____
_____ to _____	_____	_____
_____ to _____	_____	_____
_____ to _____	_____	_____
_____ to 2022	_____	_____

CASE 2 Salmon production from all enhancement projects is increased by 15 percent (in terms of the number of returning adult fish to be harvested by commercial fisheries.) Estimate your cost increases collectively rather than by individual projects

YEARS	TOTAL ANNUAL COST (\$1,000s)	
	OPERATING	CAPITAL/CONSTRUCTION
1993 to _____	_____	_____
_____ to _____	_____	_____
_____ to _____	_____	_____
_____ to _____	_____	_____
_____ to _____	_____	_____
_____ to _____	_____	_____
_____ to 2022	_____	_____

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CASE 3 Salmon production from all enhancement projects is decreased by 15 percent (in terms of the number of returning adult fish to be harvested by commercial fisheries). Estimate your cost (negative savings) collectively rather than by individual projects

YEARS	TOTAL ANNUAL COST (\$1,000s)	
	OPERATING	CAPITAL/CONSTRUCTION
1993 to _____	_____	_____
_____ to _____	_____	_____
_____ to _____	_____	_____
_____ to _____	_____	_____
_____ to _____	_____	_____
_____ to _____	_____	_____
_____ to 2022	_____	_____

CASE 4 The pink salmon portion of the salmon enhancement program is eliminated and all other projects remain at the currently permitted capacity level. Please estimate the net cost increase (negative if savings) of this program change.

YEARS	TOTAL ANNUAL COST (\$1,000s)	
	OPERATING	CAPITAL/CONSTRUCTION
1993 to _____	_____	_____
_____ to _____	_____	_____
_____ to _____	_____	_____
_____ to _____	_____	_____
_____ to _____	_____	_____
_____ to _____	_____	_____
_____ to 2022	_____	_____

CASE 5 The sockeye salmon portion of the salmon enhancement program is eliminated. Production from all other projects remains at the currently permitted capacity level. Please estimate the net cost increase (negative if savings) of this program change.

YEARS	TOTAL ANNUAL COST (\$1,000s)	
	OPERATING	CAPITAL/CONSTRUCTION
1993 to _____	_____	_____
_____ to _____	_____	_____
_____ to _____	_____	_____
_____ to _____	_____	_____
_____ to _____	_____	_____
_____ to _____	_____	_____
_____ to 2022	_____	_____

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CASE 6 The purpose of this case is to measure the change in costs to individual enhancement projects that would result from a 15 percent increase or decrease in the production of returning adult salmon harvested in the commercial fisheries. On a project basis, estimate how your costs would change from a 15 percent increase and a 15 percent decrease in the number of adult salmon produced and harvested by commercial fisheries.

PROJECT 1	15 PERCENT INCREASE IN PRODUCTION		15 PERCENT DECREASE IN PRODUCTION	
	TOTAL ANNUAL COST (\$1,000s)		TOTAL ANNUAL COST (\$1,000s)	
	OPERATING	CAPITAL/CONSTRUCTION	OPERATING	CAPITAL/CONSTRUCTION
YEARS				
1993 to _____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____
_____ to 2022	_____	_____	_____	_____

PROJECT 2	15 PERCENT INCREASE IN PRODUCTION		15 PERCENT DECREASE IN PRODUCTION	
	TOTAL ANNUAL COST (\$1,000s)		TOTAL ANNUAL COST (\$1,000s)	
	OPERATING	CAPITAL/CONSTRUCTION	OPERATING	CAPITAL/CONSTRUCTION
YEARS				
1993 to _____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____
_____ to 2022	_____	_____	_____	_____

PROJECT 3	15 PERCENT INCREASE IN PRODUCTION		15 PERCENT DECREASE IN PRODUCTION	
	TOTAL ANNUAL COST (\$1,000s)		TOTAL ANNUAL COST (\$1,000s)	
	OPERATING	CAPITAL/CONSTRUCTION	OPERATING	CAPITAL/CONSTRUCTION
YEARS				
1993 to _____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____
_____ to 2022	_____	_____	_____	_____

PROJECT 4	15 PERCENT INCREASE IN PRODUCTION		15 PERCENT DECREASE IN PRODUCTION	
	TOTAL ANNUAL COST (\$1,000s)		TOTAL ANNUAL COST (\$1,000s)	
	OPERATING	CAPITAL/CONSTRUCTION	OPERATING	CAPITAL/CONSTRUCTION
YEARS				
1993 to _____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____
_____ to _____	_____	_____	_____	_____
_____ to 2022	_____	_____	_____	_____

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7. FECUNDITY: _____ (eggs/female)

(The average number of eggs per returning female.)

8. ADULT HOLDING MORTALITY: _____ %

(The percentage of returning adults held that die prior to spawning.)

9. MINIMUM ANNUAL STREAM ESCAPEMENT:

- a. _____ (number) from _____ to _____ (Year)
 b. _____ (number) from _____ to _____ (Year)
 c. _____ (number) from _____ to _____ (Year)

(Enter the minimum number of returning fish required to spawn naturally in the stream and the years in which this escapement is required. If the minimum number changes, enter the change and the years affected by the change on lines 9b and 9c. Enter zero if no escapement is required.)

12. NUMBER OF RETURNING ADULTS FROM PREVIOUS RELEASES BY RETURN YEAR, BY OCEAN AGE

Age	1992	1993	1994	1995	1996	1997
a. .0	_____					
b. .1	_____	_____				
c. .2	_____	_____	_____			
d. .3	_____	_____	_____	_____		
e. .4	_____	_____	_____	_____	_____	
f. .5	_____	_____	_____	_____	_____	_____

(For each year, enter the number of adults expected to return from previous releases by age class. As an example, if chum salmon eggs were first taken in 1989, then the expected number of adults to return at .2 would be entered on line c under year 1992. The number expected to return at age .3 from the 1989 brood would be entered on line d under 1993. Expected returns for eggs taken in 1990 would follow the same sequence, except the age .2 returns would be entered on line c under in the 1993 column.)

13. REMOTE EGG TAKES:

- Year
 a. 1992 Number of eggs _____ through Year _____
 b. _____ Number of eggs _____ through Year _____
 c. _____ Number of eggs _____ through Year _____
 d. _____ Number of eggs _____ through Year _____
 e. _____ Number of eggs _____ through Year _____

(List the years and number of eggs to be taken at sites other than the facility. If the desired number of remote egg takes changes, use the additional lines b-e to list these changes.)

Hatchery: Cannon Creek

FY92 Operating cost: 960,047

FY92 Personnel:

Travels: 29,43 -

Contractual: 25,784 -

Regions:

Capital costs: 249,010

Commodities:

Equipment: 182,600

Loan payment: -0-

Total salary full time: 285,423

Total benefits full time: 38,540 -

Number employees full time: 7

Salary part time: 190,244 -

Benefits part time: -0-

Employees part time: 27

Source of Operating Funds

Loan Amount:

Cost Recovery Amount:

Assessment Amount:

Other Sources:

Egg survival, Release, and Harvest information from 2190 Production

BY91

Egg Survival to Release

Surv King Fry:	Sv K Fingling:	Sv K Smolt:
Surv Silvr Fry:	Sv S Fingling:	Sv S Smolt:
Surv Sock Fry:	Sv So Fingling:	Sv So Smolt:
Surv Chum Fry:	Sv C Fingling:	
Surv Pink Fry: 92.2%	Sv P Fingling:	

Releases

King Fry:	King Fingers:	K Smolt:
Silvr Fry:	Silvr Fingers:	S Smolt:
Sock Fry:	Sock Fingers:	So Smolt:
Chum Fry:	Chum Fingers:	
Pink Fry: 139 mm	Pink Fingers:	

Total release by species

Tot King Rel:	Tot Silvr Rel:	Tot Sock Rel:
Tot Chum Rel:	Tot Pink Rel: 139 mm	

Projected Adult Returns that are released at the following life stages

Ret King Fry:	Ret K Fingling:	Ret K Smolt:
Ret Silvr Fry:	Ret S Fingling:	Ret S Smolt:
Ret Sock Fry:	Ret So Fingling:	Ret So Smolt:
Ret Chum Fry:	Ret C Fingling:	
Ret Pink Fry: 7.7 mm	Ret P Fingling: 2190	

Projected Salmon Harvest

King Comm:	K sport:	K Cost recov:
Silvr Com:	S sport:	S Cost recov:
Sock Comm:	So sport:	So cost recov:
Chum Comm:	C sport:	C Cost recov:
Pink Comm: 5,631,571	P sport: 0	P Cost recov: 2,115,530

Total Harvested Adults

Adult King:	Adult Silvr:	Adult Sock:
Adult Chum:	Adult Pink:	

[Total Comm Harvest:] 7,747,101

Hatchery: Main BurgFY91 Operating cost: 737,807FY92 Personnel: -Travel: 12,120Contractual: 4,000-Region: -Capital cost: 216,475Commodities: -Equipment: 107,305Loan payment: -0-Total salary full time: 221,587-Total benefits full time: 23,186-Number employees full time: 5Salary part time: 142,996-Benefits part time: -0-Employee part time: 21

Source of Operating Funds

Loan Amount: -Cost Recovery Amount: -Assessment Amount: -Other Sources: -

Egg Survival, Release, and Harvest Information from 8190 Production

8Y41

Egg Survival to Release

Surv King Fry:	Sv K Fingling:	Sv K Smolt:
Surv Silvr Fry:	Sv S Fingling:	Sv S Smolt:
Surv Sock Fry:	Sv So Fingling:	Sv So Smolt: <u>70.52</u>
Surv Chum Fry:	Sv C Fingling:	
Surv Pink Fry:	Sv P Fingling:	

Releases

King Fry:	King Fingers:	K Smolt:
Silvr Fry:	Silvr Fingers:	S Smolt: <u>3,500,000</u>
Sock Fry: <u>3,500,000</u>	Sock Fingers:	So Smolt:
Chum Fry:	Chum Fingers:	
Pink Fry:	Pink Fingers:	

Total release by species

Tot King Rel:	Tot Silvr Rel:	Tot Sock Rel: <u>3,500,000</u>
Tot Chum Rel:	Tot Pink Rel:	

Projected Adult Returns that are released at the following life stages

Ret King Fry:	Ret K Fingling:	Ret K Smolt:
Ret Silvr Fry:	Ret S Fingling:	Ret S Smolt: <u>173,819</u>
Ret Sock Fry:	Ret So Fingling:	Rt So Smolt:
Ret Chum Fry:	Ret C Fingling:	
Ret Pink Fry:	Ret P Fingling:	

Projected Salmon Harvest

King Comm:	K sport:	K Cost recov:
Silvr Comm:	S sport:	S Cost recov:
Sock Comm: <u>168,519</u>	So sport: <u>2</u>	So cost recov: <u>2</u>
Chum Comm:	C sport:	C Cost recov:
Pink Comm:	P sport:	P Cost recov:

Total Harvested Adults

Adult King:	Adult Silvr:	Adult Sock: <u>168,519</u>
Adult Chum:	Adult Pink:	

[Total Comm Harvest:] 168,519

hatchery: No. 1000

~~Fixed~~ Operating costs: 1,762,528

FY 82 Personnel: -

Travel: 34,629

Contractual: 33,955

Regions:

Capital costs: 224,180-

Commodities:

Equipment: 112,360

Loan payment: 1,085,015

Total salary full time: 405,619

Total benefits full time: 55,497-

Number employees full time: 10

Salary part time: 490,220-

Benefits part time: -0-

Employees part time: 47

Source of Operating Funds

Loan Amount:

Cost Recovery Amount:

Assessment Amount:

Other Sources:

Egg survival, Release, and Harvest information from ~~BY 90~~ Production

BY 91

Egg Survival to Release

Surv King Fry:	Sv K Fingling:	Sv K Smolt: <u>82,22</u>
Surv Silvr Fry:	Sv S Fingling:	Sv S Smolt: <u>84.9%</u>
Surv Sock Fry: -	Sv So Fingling: -	Sv So Smolt: -
Surv Chum Fry: <u>89.3%</u>	Sv C Fingling:	
Surv Pink Fry: <u>92.2%</u>	Sv P Fingling:	

Releases

King Fry: -	King Finger: -	K Smolt: <u>822,000</u>
Silvr Fry: -	Silvr Finger: -	S Smolt: <u>2.1 mm</u>
Sock Fry: -	Sock Finger: -	So Smolt: -
Chum Fry: <u>100 mm</u>	Chum Finger: -	
Pink Fry: <u>156 mm</u>	Pink Finger: -	

Total release by species

Tot King Rel: 822,000 Tot Silvr Rel: 2.1 mm Tot Sock Rel: -
Tot Chum Rel: 100 mm Tot Pink Rel: 156 mm

Projected Adult Returns that are released at the following life stages

Ret King Fry:	Ret K Fingling:	Ret K Smolt: <u>1,782</u>
Ret Silvr Fry:	Ret S Fingling:	Ret S Smolt: <u>310,000</u>
Ret Sock Fry: <u>0</u>	Ret So Fingling:	Ret So Smolt: -
Ret Chum Fry: <u>1.0 mm</u>	Ret C Fingling:	
Ret Pink Fry: <u>13.5 mm</u>	Ret P Fingling:	

Projected Salmon Harvest

King Comm: <u>1408</u>	K sport: <u>0</u>	K Cost recov: <u>0</u>
Silvr Comm: <u>369,000</u>	S sport: <u>0</u>	S Cost recov: <u>0</u>
Sock Comm: <u>0</u>	So sport: <u>0</u>	So cost recov: <u>0</u>
Chum Comm: <u>600,000</u>	C sport: <u>0</u>	C Cost recov: <u>300,000</u>
Pink Comm: <u>9.5 mm</u>	P sport: <u>0</u>	P Cost recov: <u>3.7 mm</u>

Total Harvested Adults

Adult Kings: 1700 Adult Silvr: 309,000 Adult Sock: 0
Adult Chum: 900,000 Adult Pink: 13.2
Total Comm Harvest: 14,400,000

Hatchery: **AFK**
Operating cost: **870,770-**
Personnel:
Travel: **37,724**
Contractual: **8,860**

Region:
Capital cost: **312,510-**
Commodities:
Equipment: **36,400-**
Loan payment: **808,447-**

Total salary full time: **298,702**
Total benefits full time: **25,922-**
Number employees full time: **7**

Salary part time: **166,904-**
Benefits part time: **-0-**
Employees part time: **23**

Source of Operating Funds

Loan Amount: Cost Recovery Amount:
Assessment Amount: Other Sources:

Egg survival, Release, and Harvest information from **BY90** Production

BY91

Egg Survival to Release

Surv King Fry:	Sv K Fingling:	Sv K Smolt:
Surv Slvr Fry:	Sv S Fingling:	Sv S Smolt:
Surv Sock Fry:	Sv So Fingling:	Sv So Smolt:
Surv Chum Fry:	Sv C Fingling:	
Surv Pink Fry: 92.2%	Sv P Fingling:	

Releases

King Fry:	King Fingling:	K Smolt:
Slvr Fry:	Slvr Fingling:	S Smolt:
Sock Fry:	Sock Fingling:	So Smolt:
Chum Fry:	Chum Fingling:	
Pink Fry: 116,000,000	Pink Fingling:	

Total release by species

Tot King Rel:	Tot Slvr Rel:	Tot Sock Rel:
Tot Chum Rel:	Tot Pink Rel: 116,000,000	

Projected Adult Returns that are released at the following life stages

Ret King Fry:	Ret K Fingling:	Ret K Smolt:
Ret Slvr Fry:	Ret S Fingling:	Ret S Smolt:
Ret Sock Fry:	Ret So Fingling:	Ret So Smolt:
Ret Chum Fry:	Ret C Fingling:	
Ret Pink Fry: 6.6 MM	Ret P Fingling:	

Projected Salmon Harvest

King Comm:	K sport:	K Cost recov:
Slvr Comm:	S sport:	S Cost recov:
Sock Comm:	So sport:	So cost recov:
Chum Comm:	C sport:	C Cost recov:
Pink Comm: 4,622,020	P sport: Q	P Cost recov: 1,762,866

Total Harvested Adults

Adult King:	Adult Slvr:	Adult Sock:
Adult Chum:	Adult Pink: 6,384,886	

Total Comm Harvest:

**ALASKA DEPARTMENT OF FISH AND GAME
DIVISION OF FISHERIES REHABILITATION,
ENHANCEMENT AND DEVELOPMENT**

**DRAFT
STRATEGIC PLAN**

**Don W. Collinsworth
Commissioner**

**Brian J. Allee, Ph.D.
Director**

**P.O. Box 3-2000
Juneau, AK 99802-2000**

December 1990

DRAFT
STRATEGIC PLAN

I. INTRODUCTION

The mission of the Division of Fisheries Rehabilitation, Enhancement and Development (FRED) of the Alaska Department of Fish and Game (ADF&G) is to sustain and enhance Alaska's fisheries through development and application of technologies in supplemental production and natural stock rehabilitation.

The statutory duties (AS 16.05.092) of the FRED Division considered as goals in this strategic planning effort are:

1. Develop and continually maintain a comprehensive, coordinated state plan for the orderly present and long-range rehabilitation, enhancement, and development of all aspects of the state's fisheries for the perpetual use, benefit, and enjoyment of all citizens, and revise and update this plan annually;
2. Encourage the investment by private enterprise in the technological development and economic utilization of the fisheries resources;
3. Through rehabilitation, enhancement, and development programs, do all things necessary to ensure perpetual and increasing production and use of the food resources of Alaska waters and continental shelf areas; and
4. Compile a comprehensive annual report to the Legislature that contains detailed information regarding its accomplishments under this section and proposals of plans and activities for next fiscal year no later than 20 days after the convening of each regular session.

The FRED Division Senior Management Team set out to address the division's goals in a strategic planning document designed to articulate the direction of the

division for the 1990s in an orderly and ongoing process. The current and future roles of the FRED Division, as envisioned by the Senior Management Team, are:

- Assess critical areas of need and provide technical assistance necessary to implement projects for fisheries rehabilitation, enhancement, and development across the state;
- Develop and transfer new information and aquaculture technologies to the private nonprofit (PNP) sector and public at large;
- Manage and operate hatcheries for sport, subsistence, commercial, and personal use;
- Develop, implement, and evaluate technology for natural stock and habitat rehabilitation in lake, stream, nearshore, and marine environments;
- Apply existing and new techniques to evaluate biological and harvest implications of fishery enhancement programs relative to natural stocks;
- Conduct regional comprehensive fisheries production planning and management planning for state and PNP hatcheries;
- Identify and implement efficient methods for hatchery contracting and cooperative operation to make the best use of the PNP and state hatcheries;
- Facilitate and regulate Alaska's PNP salmon enhancement program;
- Educate, inform, and involve the public in Alaska's fisheries rehabilitation, enhancement, and development program;
- Develop and maintain a computerized database of information on the program;
- Provide economic evaluation of the statewide aquaculture program; and
- Restore losses to fisheries caused by natural and manmade disasters.

II. HISTORICAL PERSPECTIVE

The FRED Division was created in 1971 by the Alaska State Legislature and Governor because the people of Alaska expressed grass roots support for an

enhancement program to revitalize an ailing salmon fishing industry. Catches were at all-time lows (Figure 1) and the development of an enhancement program that could serve the state in years of both lean and bountiful salmon harvests was envisioned by Alaskans. Bond

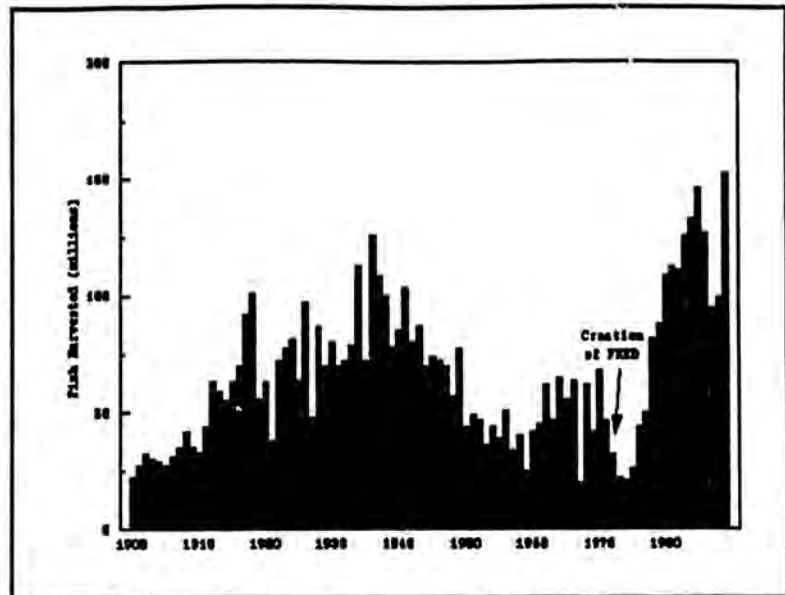


Figure 1. *Alaskan commercial salmon harvest, 1900-1989.*

issues to build the public

hatchery facilities were passed in the mid-1970s. The FRED Division was given broad statutory authority for the enhancement program. Technical disciplines developed since the program's inception include biology, engineering, fish culture, pathology, limnology, genetics, economics, and planning. The division's main role has been to operate hatcheries to produce salmonid fishes for commercial, sport, subsistence, and personal-use fisheries. FRED Division staff also coordinate rehabilitation and enhancement activities of the department and of regional aquaculture associations (AS 16.10.380), coordinate reviews of applications for PNP hatcheries (AS 16.10.440), process fish transport permits, provide technical assistance to PNP hatchery operators and to the statewide mariculture program (AS 16.10.443 and AS 16.40.100-160), and coordinate the development and maintenance of regional comprehensive salmon plans (AS 16.10.375).

The State of Alaska has 37 hatcheries: 12 public, 17 PNP, and 8 that are publicly owned with all or portions of the operations presently contracted to PNP aquaculture associations (Figure 2). Capital construction funding to date for public and PNP hatcheries total roughly \$140 million in the form of public bonds, PNP loans, or federal mitigation grants.

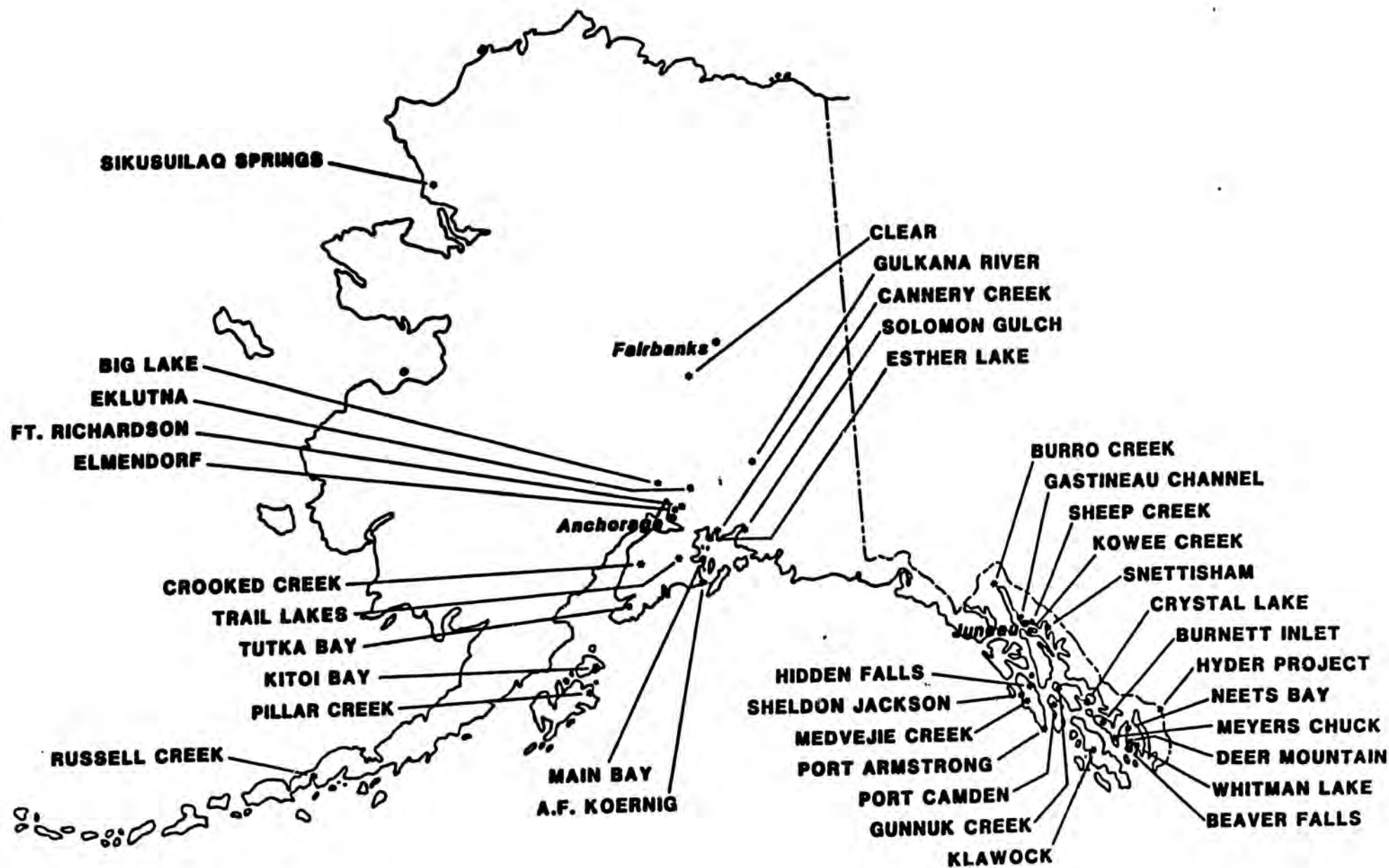


Figure 1. State and private nonprofit hatcheries in Alaska.

In addition to public enhancement projects funded by the state General Fund, from 1975 through 1985, funding necessary for the implementation of salmon rehabilitation and enhancement activities by PNP corporations was obtained primarily through the Fisheries

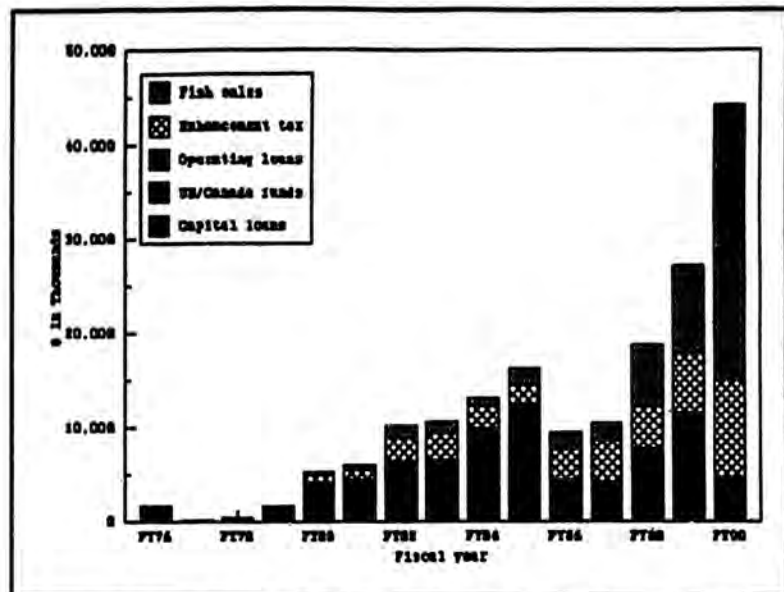


Figure 3. PNP hatcheries' total funding sources, FY 76-FY 88.

Enhancement Revolving Loan Fund administered by the Alaska Department of Commerce and Economic Development. These loans are secured through collateral that may include returning hatchery fish and enhancement tax assessments of commercial fishermen. Since 1985, cost-recovery harvests and salmon enhancement tax assessments have emerged as major funding sources for implementation of PNP corporation activities (Figure 3).

In spite of the many accomplishments, the major factor limiting the full production programs of the division in the 1980s that continues to present a formidable challenge to the public fisheries enhancement program is the lack of fiscal support. The enhancement program has experienced budget fluctuations caused primarily by lack of support and a decline in state revenues. State support for the division's program has been inconsistent; this has forced the division to rely on other funding sources and to either close state hatcheries or contract the operational and fiscal responsibilities of these facilities to the PNP sector. General lack of state funding support erodes the division's ability to provide assistance to the PNP sector and also reduces appropriations to the Revolving Loan Fund which finances the PNP sector programs.

Use of state general funds for hatchery maintenance and operations initially came under close scrutiny in 1983. During the FY 86 budget process, various publicly operated hatcheries were considered for either funding reductions or elimination. Since then, funding has been reduced in hatchery operations, evaluation, technical support, planning, and administration. In response to legislative intent directed by the 1987 Alaska State Legislature, the FRED Division began to cooperate with the PNP sector by allowing them to recover project costs by selling returning salmon in order to maintain hatchery operations and production capabilities. Legislators supported these cooperative efforts and joint ventures allowed several hatcheries, scheduled for closure, to continue fish production. Three hatcheries were initially contracted in 1987 with hatchery cost recovery as the financing mechanism. A contract for a fourth facility was developed with support from a regional aquaculture association while the FRED Division continued to operate the facility. The approximately \$1.4 million previously spent by the state to operate these three facilities was reprogrammed to further sockeye salmon development and to optimize productivity of the remaining facilities operated by the FRED Division. The contracting hatchery scenario has proven to be effective, whether financed and operated by regional aquaculture associations or publicly operated but financed by regional aquaculture associations.

III. PROGRAM SUCCESS

The Alaskan enhancement program has been extremely successful. Some of the past and recent accomplishments of the public and PNP program and projections for the future are listed below.

- ° Built the largest enhancement program in North America in the midst of abundant wild stocks;
- ° Established the infrastructure, diverse technical expertise, and operational efficiency within 15 years to bring the program to its current status;

- Developed technology to lead the world in culture of sockeye salmon, Arctic grayling, and Arctic char, and lake production.
- Established state-of-the-art laboratories in pathology, genetics, limnology, and tag processing to serve aquaculturists and fishery managers;
- Built a balanced enhancement program that serves all user groups;
- Created a shellfish and marine plant mariculture program;
- Evolved lake ecosystem models that forecast salmon production which, in turn, guide enhancement planning and escapement goal setting;
- Achieved a proven economic return on investment—one of the highest, if not the highest returns ever realized from state investments (Figure 4).

Some recent program highlights include:

- Over 47% of the record-breaking sport salmon catch for the Ketchikan area in 1990 is attributed to hatchery coho and chinook salmon returning to local hatcheries;
- In 1990 FRED Division projects accounted for over 64% (more than 600,000 fish) of the \$1.7 million ex-vessel value of the lower Cook Inlet salmon harvest;
- Kitoi Bay Hatchery produced 98% of the entire Kodiak Island pink salmon harvest and 100% of the Afognak District harvest in 1989;

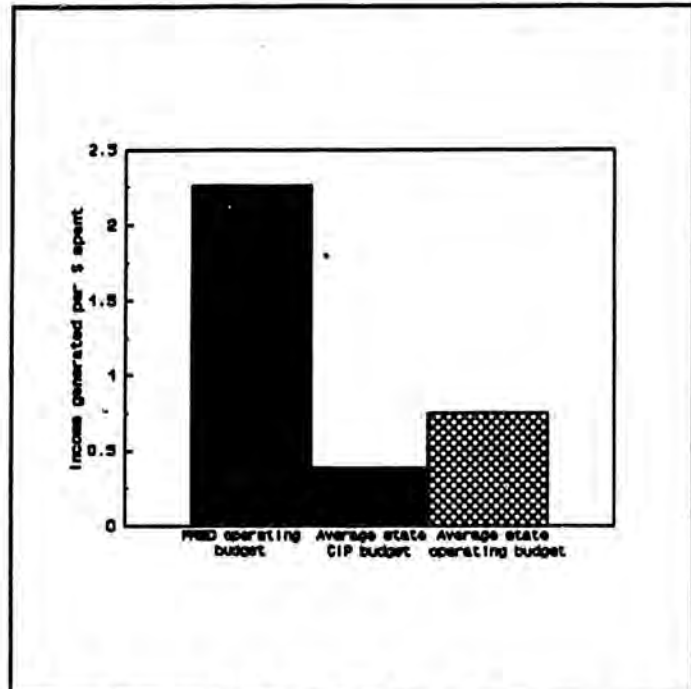


Figure 4. *FY 1991-FY 2010 long-range state revenue forecast, in 1990 dollars. Data from the Institute of Social and Economic Research.*

- An estimated total harvest of 9,373 Crooked Creek chinook salmon were sport caught in 1989, exceeding the early-run Kenai River chinook salmon harvest by 2,000 fish. Crooked Creek Hatchery contributed 66% of the chinook salmon to the Crooked Creek run;
- Over 39,000 salmon were harvested by sport fishermen in 1989 from various enhancement projects in the Kachemak Bay area. An estimated 264,000 hatchery-produced sockeye salmon returned in 1989 from the Tustumena Lake enhancement project, representing a hatchery contribution of 33% for the total run;
- Collected 1.4 billion eggs in 1989 compared to 2 million in 1974;
- Produced 36 million adult fish in 1989 compared to 30,000 in 1976;
- 1990 egg takes will produce approximately 35.3 million adult fish, resulting in \$119 million in gross earnings to commercial fishermen, \$278 million to seafood processors, undeterminable millions to the recreational industry, and 3,500 resident jobs.

The FRED of the 1990s produces fish for all user groups. The division's fishery enhancement projects provide jobs in many major regions of the state and in many sectors of the economy. In 1989, enhanced fish amounted to 12.7% of the total Alaskan commercial fishery. Fish targeted for sport fisheries were released at approximately 365 different locations. Chum salmon from the Sikusuilag Springs Hatchery contributed 40% of the subsistence catch on the Noatak River in Kotzebue Sound. The FRED Division encourages and contributes to educational facilities, such as a small hatchery run by the Village of Ouzinkie on Kodiak Island which boasted its first return of 1,500 coho salmon in 1989—a relatively small return in number, but a major impact to this community.

Significant milestones have also been reached in the nonanadromous fish program. This involves production of unique Arctic species, including Arctic char, grayling, lake trout, and sheefish. Over 10 million eggs were taken in 1989 (including rainbow trout); the fry that hatch will be planted into numerous lake

systems in Cook Inlet, Prince William Sound, Kodiak, and the Interior for enhancement of sport fisheries. The urban lakes sport fishery, which the program supports, is the largest sport fishery in Alaska, in terms of numbers of adults caught.

IV. PRESENT ENVIRONMENT

Support by the public for fishery enhancement continues to be strong, especially where successful enhancement projects have benefited communities that have experienced poor natural salmon stock abundance. However, support for funding the FRED Division hatchery program has diminished because of a mistaken view that salmon populations are abundant statewide. It is incorrect to conclude that because the salmon harvests in 1989 and 1990 represent the two largest harvests in Alaskan-recorded history, salmon stocks are uniformly robust on a statewide basis. Factors affecting each of the thousands of individual stocks of salmon are a complex mixture of physical, environmental, and genetic parameters. Hatchery pink salmon have saved the fishery in Prince William Sound for the last few years. Similarly, hatchery production in the Tanana Valley continues to contribute more than half of the area's total sport harvest while reducing the fishing pressure on more fragile wild stocks.

A. Declining Revenues

In the present sociopolitical environment, people have incorrectly concluded that since salmon harvests are in the boom cycle, there is no need to maintain a public investment. Examination of the historical salmon catch will verify that the harvest of salmon is characterized by reoccurring boom and bust cycles (See Figure 1). As prudent investors recognize, it is wise to maintain capital assets in order to realize the return on these investments in periods of adversity.

The division's ability to provide future benefits to the common property fishery that are equal or in excess to its past achievements has been weakened by declining budgets (Figure 5). This fiscal decline has jeopardized all existing capabilities and capacities of the division. This decline also allows virtually no latitude to finance new projects or to expand into the rehabilitation of new species.

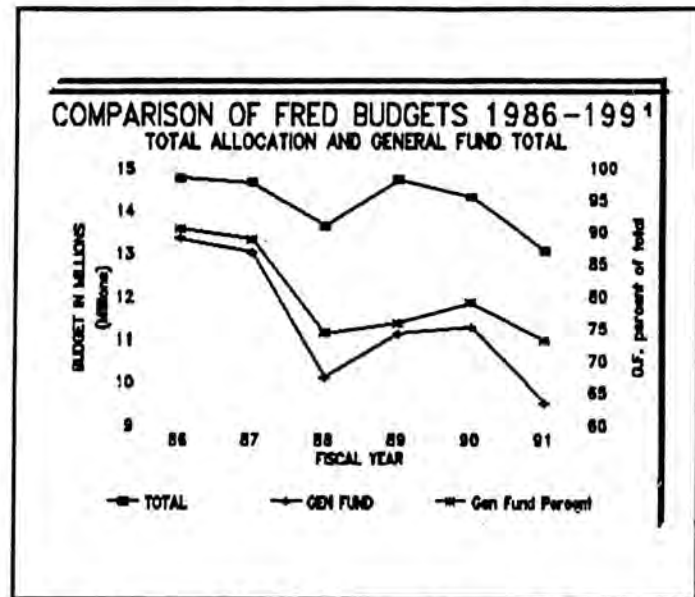


Figure 5. *FRED Division General Fund allocation, FY 86-FY 91.*

B. Areas of Need

Some areas of the state are unique in that indigenous finfish and shellfish are weak or not available for harvest. Presently, the FRED Division is working in the western Alaska areas of Elim, Chevak, Nelson Island, Nome, and in the Yukon to assess opportunities for fisheries rehabilitation and development projects. In these areas and others, salmon fisheries can be developed to meet subsistence and economic needs. As an example, a proposal is being developed for King crab enhancement at Kodiak. The FRED Division is responding to stream rehabilitation needs in the Anchorage area and in southeast Alaska. Restoration programs for fish, shellfish, and marine plants are being developed for oil spill-affected areas of Alaska as well.

The bounty of Alaska's fisheries resource is not evenly distributed across the state. Many areas in northwest Alaska, for example, have relatively

limited fishery resources upon which to build a more stable economy. Technology exists to both rehabilitate and establish salmon returns in these areas; the division will provide a leadership role in implementing these programs.

C. User Pays

Historically, the FRED Division has been heavily invested in the commercial fishery production-hatchery business. The division realizes it must diversify into other areas while at the same time maintain its production responsibilities. One method of doing this will be to develop activities that can be transferred to the PNP sector following the "user pays" concept of funding. The fisheries resource users will be asked to share the price tag for programs that benefit them. Dollars generated from fishing and boating equipment taxes and state fishing license fees pay for a major share of the sport fish enhancement programs operated by the FRED Division. The statewide enhancement program is estimated to be 70%-funded by user groups. Both the FRED Division and the PNP sector must demonstrate that the resources used in the statewide enhancement program pay premium benefits to Alaskans. Additional information on how fishery enhancement affects regional employment and income must be generated.

D. Social and Political Issues

Users expect that the FRED Division will produce additional fish for their use, even though state funding for both the public and PNP enhancement programs has been substantially reduced. Demands on the FRED Division by other agencies and organizations have increased. Examples of these demands include increased public participation in developing the fisheries resource, U.S./Canada Pacific Salmon Treaty mitigation efforts and

transboundary river enhancement, oil spill damage assessment and restoration, federal aid administration and reporting, and increased agency interaction.

The FRED Division has lost one of its cornerstones: large-scale production of fish for commercial users. With the FY 91 budget reduction of \$2 million in hatchery support mandated by the Executive Branch, both the public and PNP aquaculture communities were forced into a crisis-funding mode. The FRED Division is now severely restricted by lack of funding from large-scale salmon production for commercial users. Remaining hatcheries are either producing primarily sport fish, subsistence fish, commercial fish in treaty-mitigation programs, or are in an early stage of development for eventual contracting, if other sources of funding are not secured.

The FRED Division continues to be involved in numerous rehabilitation and enhancement projects, ranging from stream rehabilitation to lake enrichment. Most of these projects are accomplished on a cooperative basis with other state agencies, other ADF&G divisions, PNP regional aquaculture associations, and the U.S. Forest Service.

V. FRED DIVISION IN THE '90S

Based upon an assessment of the social, political, and economic climate, and taking into account traditional roles, the Senior Management Team analyzed the strengths and weaknesses of the FRED Division and realized that it must maintain some of its current programs while diversifying and growing selectively into new areas. The FRED Division must serve as a "CATALYST" to identify, focus, and facilitate new opportunities from those fishery development resources available within government and the private sector. The activities of the division are diversifying to (1) provision of technical services, (2) fishery planning in

current and new areas of the state, (3) assistance in salmon hatchery development, (4) fisheries rehabilitation, (5) sport fish production, (6) solidification of commercial fish production programs before contracting to the private sector, (7) special enhancement project development, (8) area support, (9) habitat rehabilitation and restoration of oil spill-affected areas, (10) enhancement in north and northwest Alaska, and (11) development of a King crab enhancement program.

The expectations of legislators who, in 1974, envisioned a salmon enhancement program to restore the state's depleted salmon fisheries are now being realized. This reality provides an insurance policy against the uncertainty of nature associated with fluctuating salmon populations. The FRED Division has been directed to move away from some traditional activities, such as hatchery operation for production of pink, chum, and sockeye salmon for commercial users. Eight hatcheries have been contracted to regional aquaculture associations for all or part of their operation. The FRED Division will strive to maintain current levels of production, but this will require further cooperation with the PNP aquaculture sector. The division will continue to seek operational funding for commercial fish production in fisheries-depressed regions, for areas without regional aquaculture associations, and for the production of fish designed to benefit sport, subsistence, and personal-use fishermen. The division will consider cooperative strategies for the implementation of new rehabilitation and enhancement projects, including the identification of alternative funding sources. In the technical disciplines of engineering, biology, pathology, limnology, genetics, and fish and shellfish culture, the FRED Division will continue to address enhancement of salmon and trout species, Arctic char, Arctic grayling, and sheefish. The FRED Division also needs to broaden its focus to include marine species, such as King crab, scallops, sablefish, halibut, and herring.

The FRED Division has examined current and future economic and organizational trends and will make every effort to evaluate the effectiveness and

return on investment of all activities. This ongoing evaluation is part of the strategic planning process and will include division staff and constituent and public involvement so that rationales for diversification and changes in program operations will be understood and accepted.

Based on the overwhelming success of this program, there is growing interest in using fisheries enhancement as a tool for economic diversification for both rural and urban Alaska. From western to southeastern Alaska, the public is seeking fisheries enhancement as an important diversification tool. With projected oil production on the decline, the need to diversify the economy in all of Alaska becomes essential, and renewable natural resources become much more critical to Alaska's economy. The biological and economic potential of all of Alaska's fisheries can be more fully realized through fisheries enhancement.

PRIVATE NONPROFIT HATCHERY PROGRAM

STATUS SHEET

Attached is a listing of Private Nonprofit (PNP) salmon hatchery permits issued and the Scientific or Educational (Sci/Ed) permits for PNP research projects, school district aquaculture programs, and other research projects (under the auspices of ADF&G) that have been issued in 1991 by Fisheries Rehabilitation and Enhancement Development (FRED) Division. This list is organized according to region and contains information regarding location, production status, and numbers of eggs or fish permitted.

To date, 30 PNP salmon hatchery permits have been issued and three permits have been given up. Four permits were issued in 1988 to regional aquaculture associations for operation of state-owned hatcheries. Twenty-one of the permitted hatcheries are currently in operation. Twenty of the permitted hatcheries had adult returns in 1990.

April 1991

PRIVATE NONPROFIT HATCHERY PROGRAM

<u>REGION</u>	<u>STATUS</u>	<u>LOCATION</u>	<u># OF EGGS OR FISH PERMITTED</u>
<u>Southern Southeast</u>			
1. Southern Southeast Regional Aquaculture Association (SSRAA) 1621 Tongass Avenue, #103 Ketchikan, AK 99901 Office (907)225-9605 Whitman Lake Hatchery 225-2635 Neets Bay Hatchery 247-8790 Attn: Don Amend, Gen Mgr Bill Halloran, Production Mgr Mike Blanchard, Special Proj. Mgr Rod Neterer, Neets Bay Hatchery Manager Jay Creasy, Whitman Lake Hatchery Manager	Regional Association PNP Permit #8, Operational Issued 3/9/78 PNP Permit #19, Operational Issued 6/17/83 PNP Permit #24, Operational Issued 7/1/86	Ketchikan Whitman Lake, Ketchikan Neets Bay, Revillagigedo Island Beaver Falls, Ketchikan	45.8 million chum 3.4 million coho 1.5 million chinook 2.5 million sockeye 60 million chum 5 million coho 4 million chinook 1.5 million sockeye .04 million chinook
2. Alaska Aquaculture, Inc. P. O. Box 1288 Wrangell, AK 99929 Office (907)874-2250 Attn: Tod A. Jones 874-2013	PNP Permit #5, Operational Issued 4/28/76	Burnett Inlet, Etolin Is Wrangell	40 million pink 20 million chum .25 million coho .75 million chinook
3. Meyers Chuck Aquaculture Assn 5001 Nottingham Way Anchorage, AK 99501 Attn: Robert M. Meyer 261-4625	PNP Permit #10, Not Operational Issued 7/22/79	Meyers Creek, Meyers Chuck	5 million pink 1 million coho 5 million chum
4. Bell Island American Aquaculture Corp. P.O. Box 6338 Ketchikan, AK 99901 Attn: Robert Campbell 225-8751	PNP Permit #30, Not Operational Issued 4/06/90	Bell Island Creek Bell Island Behm Canal	65,000 chinook 16,800 coho 8,000 steelhead trout
5. Aquaculture, Inc. P. O. Box 1499 Wrangell, AK 99929 Attn: Robin Larsson 874-3458	PNP Permit #22, Not Operational Issued 4/17/83	Crittenden Creek, Wrangell	12 million chum 3 million pink

PRIVATE NONPROFIT HATCHERY PROGRAM

<u>REGION</u>	<u>STATUS</u>	<u>LOCATION</u>	<u># OF EGGS OR FISH PERMITTED</u>
<u>Southern Southeast</u>			
6. Gro-Fish, Inc. 1435 "N" Street Anchorage, AK 99501 Attn: Michael A. Brogan	PNP Permit #21, Not Operational Issued 2/2/84	Santa Anna Creek, Ernest Sound	3 million pink 10 million chum
<u>Northern Southeast</u>			
1. Northern Southeast Regional Aquaculture Association (NSRAA) 1308 Sawmill Creek Road Sitka, AK 99835 Office (907)747-6850 FAX 747-1470 Medvejie Creek Hatchery 747-5863 Hidden Falls Hatchery 788-3215 Attn: Peter Esquiro, General Mgr Bruce Bachen, Operations Mgr Steve Reifenstuhel, Field Projects Manager Dail Hurdlow, Mgr Medvejie Tim Linley, Mgr Hidden Falls	Regional Association PNP Permit #16, Operational Issued 8/17/81 PNP Permit #23, Operational Issued 12/19/85 PNP Permit #28, Operational Issued 6/22/88	Sitka Medvejie Creek, Sitka Port Camden, Kuiu Island Hidden Falls, Baranof Island	38 million chum 3.3 million coho 2.0 million chinook .3 million pink 10 million chum 88 million chum 3.5 million chinook .25 million coho
2. Sheldon Jackson College Aquaculture Program P. O. Box 479 Sitka, AK 99835 Office 747-5254 Hatchery 747-5209 Attn: Mel Seifert Bill Coltharp, Manager Message 747-5222	PNP Permit #3, Operational Issued 4/29/75	Indian River, Sitka	20 million pink and chum .15 million coho .1 million chinook .02 million steelhead trout
3. Douglas Island Pink and Chum, Inc. (DIPAC) 2697 Channel Drive Juneau, AK 99801 Office: (907)463-5114 FAX: (907)463-3213	PNP Permit #6, Operational Issued 7/30/76 PNP Permit #11, Operational Issued 9/19/79	Kowee Creek, Juneau Sheep Creek, Juneau	70,000 steelhead trout 40 million pink and chum .05 million coho

PRIVATE NONPROFIT HATCHERY PROGRAM

<u>REGION</u>	<u>STATUS</u>	<u>LOCATION</u>	<u># OF EGGS OR FISH PERMITTED</u>
<u>Northern Southeast</u>			
DIPAC Cont. Attn: Ladd Macaulay Kowee Creek Hatchery 586-4041 Sheep Creek Hatchery 586-3663 John Ennor, Hatchery Manager Gastineau Hatchery 463-5114 Rich Mattson, Pink and Chum Manager Rick Focht, Chinook and Coho Manager	PNP Permit #25, Operational Issued 6/3/87	Gastineau Channel, Juneau	50 million pink 111 million chum 1 million coho
4. Kake Nonprofit Fisheries Corporation P.O. Box 523 Kake, AK 99830 Gunnuk Creek Hatchery 785-6460 Attn: Brock Meredith Steve Andison 789-2914	PNP Permit #7, Operational Issued 4/1/77	Gunnuk Creek, Kake	.2 million chinook 26 million pink and chum
5. Burro Creek Farms P. O. Box 455 Skagway, AK 99840 Hatchery 983-2355 Attn: Eugene W. Richards	PNP Permit #12, Operational Issued 5/23/80	Burro Creek, Skagway	10 million pink and chum 50,000 coho 50,000 chinook
6. Armstrong-Keta, Inc. P. O. Box 21990 Juneau, AK 99802 Office 586-3443 Port Armstrong Hatchery 568-2228 Port Armstrong via Port Alexander 99836 Attn: Bart Watson - 586-4139 Bob Lium - 586-1164 Wm. Ritchie Phillips, Hatchery Mgr.	PNP Permit #13, Operational Issued 2/23/81	Port Armstrong, Baranof Island	110 million pink 10 million chum .25 million chinook .5 million coho
7. Angoon Aquaculture Assoc, Inc. P. O. Box 138 Angoon, AK 99820 Office 788-3411 Attn: Martha Jack	PNP Permit #18, Not Operational Issued 8/5/82	Favorite Bay, Angoon	7.5 million pink 20 million chum 1.5 million coho

PRIVATE NONPROFIT HATCHERY PROGRAM

<u>REGION</u>	<u>STATUS</u>	<u>LOCATION</u>	<u># OF EGGS OR FISH PERMITTED</u>
<u>Prince William Sound</u>			
1. Prince William Sound Aquaculture Corporation (PWSAC) P. O. Box 1110 Cordova, AK 99574 Office 424-7511 or 424-7512 FAX (907) 424-7514 AFK Hatchery 573-5136 Attn: Bruce Suzumoto, President Jeff Olsen, Operations Manager John McMullen, Special Projects Manager Dan Warren, Capital Projects Manager (274-6066) Eric Prestigard, Assistant Operations Mgr. Howard Ferren, Planner	Regional Association PNP Permit #2, Operational Issued 9/29/75 PNP Permit #20, Operational Issued 6/17/83 PNP Permit #26, Operational Issued 6/22/88	Cordova Port San Juan, Evans Island Esther Lake Cannery Creek	150 million pink 13 million chum 211 million pink 111 million chum 4 million chinook 4 million coho 31 million sockeye 147 million pink 5 million chum
2. NERKA, Inc. P. O. Box 80165 Fairbanks, AK 99708 Attn: Dr. Jack M. Van Hying	PNP Permit #1, Not Operational Issued 9/19/75 479-2476	Perry Island	10 million pink 10 million chum
3. Valdez Fisheries Development Association P.O. Box 125 Valdez, AK 99686 Office 835-4874 Hatchery 835-5947 Attn: Jason Wells, Project Director Paul McCollum, Manager	PNP Permit #15, Operational Issued 6/26/81	Solomon Gulch, Valdez	156 million pink 18 million chum 2 million coho .3 million chinook

PRIVATE NONPROFIT HATCHERY PROGRAM

<u>REGION</u>	<u>STATUS</u>	<u>LOCATION</u>	<u># OF EGGS OR FISH PERMITTED</u>
<u>Cook Inlet</u>			
1. Cook Inlet Aquaculture Assn HC 2, Box 849 Soldotna, AK 99669-9707 Office (907)283-5761 FAX 283-9433 Eklutna Hatchery 745-5692 Trail Lakes Hatchery 288-3688	Regional Association PNP Permit #17, Operational Issued 2/8/82 PNP Permit #27, Operational Issued 6/22/88	Soldotna Eklutna hydroelectric project, Matanuska Valley Trail Lakes, Kenai Peninsula	20 million pink and chum 1.1 million coho .1 million chinook 30 million sockeye 6 million coho 4 million chinook
<u>Bristol Bay</u>			
1. Bristol Bay Regional Aquaculture Association P.O. Box 82 Dillingham, AK 99576 Attn: Jim Bingman, President	Regional Association	Dillingham	No hatcheries
<u>Alaska Peninsula</u>			
1. Chignik Regional Aquaculture Association P.O. Box 1397 Seward, AK 99664 Attn: Charles McCallum, President Lois Munson, Registered Agent	Regional Association		No hatcheries
<u>Arctic/Yukon/Kuskokwim</u>			
1. Lower Yukon/Kuskokwim Regional Aquaculture Association General Delivery Russian Mission, AK 99657 Attn: John Massey	Inactive Regional Association	Bethel	No hatcheries

PRIVATE NONPROFIT HATCHERY PROGRAM

<u>REGION</u>	<u>STATUS</u>	<u>LOCATION</u>	<u># OF EGGS OR FISH PERMITTED</u>
<u>Kodiak</u>			
1. Kodiak Regional Aquaculture Association (KRAA) P.O. Box 3407 Kodiak, AK 99615 Office (907)486-6555 Attn: Oliver Holm, President Larry Malloy, Executive Director Norma Holt, Admin. Assistant	Regional Association PNP Permit #29, Operational Issued 7/5/88	Kodiak Kitoi Bay, Afognak Island	Permitted for cost recovery only.

SCIENTIFIC OR EDUCATIONAL PERMITS

Southern Southeast

1. Southern Southeast Regional Aquaculture Association 1621 Tongass Avenue, #103 Ketchikan, AK 99901 Attn: William Halloran	Sci/Ed Permit F-91-001	Ketchikan	950 sockeye smolt will be marine net pen reared to age one year. Growth and survival monitored to assess this technique.
	Sci/Ed Permit F-91-030	Beaver Falls Hatchery	30,000 chinook smolt to experiment producing zero age chinook salmon smolt using heat exchanger technology, to determine if an economic method of accelerated growth can be developed with a positive benefit-cost ratio.
	Sci/Ed Permit F-91-031	Unnamed lake, Neets Bay	Collect up to a total of 120 aggregate of cutthroat, Brook, Dolly Varden, rainbow trout, and/or coho salmon for pathology screening to assess the feasibility of using the lake for a coho or chinook salmon lake stocking project.

PRIVATE NONPROFIT HATCHERY PROGRAM

<u>REGION</u>	<u>STATUS</u>	<u>LOCATION</u>	<u># OF EGGS OR FISH PERMITTED</u>
<u>SCIENTIFIC OR EDUCATIONAL PERMITS</u>			
<u>Southern Southeast</u>			
2. Craig Elementary School P.O. Box 800 Craig, AK 99921 Attn: Nola Kathleen	Sci/Ed Permit F-91-006	Craig	500 coho salmon eggs to be obtained from Klawock Hatchery and reared in a in a classroom incubation project. Resultant fry are to be released at Klawock River under ADF&G supervision.
3. Scott Walker, Biologist Commercial Fisheries Division Alaska Department of Fish and Game 2030 Sea Level Drive #205 Ketchikan, AK 99901	Sci/Ed Permit F-91-008	Ketchikan	50 chinook salmon eggs to be obtained from Deer Mountain Hatchery and reared in a home/classroom incubation project. Resultant fry are to be released at Ketchikan Creek under ADF&G supervision.
4. Petersburg High School P.O. Box 289 Petersburg, AK 99833 Attn: Jack Eddy, Jr.	Sci/Ed Permit F-91-029	Petersburg	50 adult pink salmon to be obtained from Five Mile Creek for egg take purposes. Eggs are incubated at the school hatchery. Resultant fry are released into Sandy Beach and City Creeks after authorized by ADF&G Pathology Lab staff and under supervision of ADF&G.
5. USFS, Misty Fjords and ADF&G FRED Division 3031 Tongass/ 2030 Sea Level Drive Ketchikan, AK 99901 Attn: Scott Russell Carol Denton	Sci/Ed Permit F-91-042	Bryce Creek tributary to Salmon River, Hyder.	1,000 coho salmon fry to be obtained from Fish Creek and transferred to Bryce Creek.

PRIVATE NONPROFIT HATCHERY PROGRAM

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<u>SCIENTIFIC OR EDUCATIONAL PERMITS</u>			
<u>Northern Southeast</u>			
1. Northern Southeast Regional Aquaculture Association 1308 Sawmill Creek Road Sitka, AK 99835 Attn: Richard Crone Lon Garrison Steve Reifentuhl	Sci/Ed Permit F-91-012	Deer Lake and others	All salmon species, various amounts allowed to be capture and collected.
	Sci/Ed Permit F-91-016	24 Mile, Haines	500,000 chum salmon fry are to be trapped, enumerated, and released unharmed.
	Sci/Ed Permit F-91-017	Herman Creek, Haines	1,200,000 chum salmon fry are to be trapped, enumerated, and released unharmed.
	Sci/Ed Permit F-91-036	Green Lake, Silver Bay	60 Brook trout for pathology sampling.
2. USDA Forest Service 8465 Old Dairy Road Juneau, AK 99801 Attn: Don Martin	Sci/Ed Permit F-91-019	Davidson Creek	200 adult coho salmon to be taken from Fish Creek. Eggs will be incubated at Snettisham Hatchery. Resultant fry will be released into Davidson Creek. Out-migration studies are planned.
3. USDA Forest Service P.O. Box 135 Hoonah, AK 99829 Attn: John McDonell	Sci/Ed Permit F-91-044	Suntaheen Creek	5,500 coho salmon fry to be obtain from lower Suntaheen Creek and released in upper Suntaheen Creek above a barrier. CWT is being done.
4. USDA Forest Service P.O. Box 135 Hoonah, AK 99829 Attn: John McDonell	Sci/Ed Permit F-91-045	Game Creek	10,000 coho salmon fry to be obtained from lower Game Creek and released into upper Game Creek above a waterfall into newly available habitat.

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<u>SCIENTIFIC OR EDUCATIONAL PERMITS</u>			
<u>Northern Southeast</u>			
5. USDA Forest Service P.O. Box 135 Hoonah, AK 99829 Attn: John McDonell	Sci/Ed Permit F-91-046	Game Creek and Suntaheen Creek	60 adult coho salmon to be obtained from lower Game Creek for an egg take. Eggs will be incubated at Medvejie Hatchery. Resultant fry will be released into upper Suntaheen Creek. CWT is being done.
<u>Prince William Sound</u>			
1. University of Alaska Seward Marine Center P.O. Box 730 Seward, AK 99664 Attn: Dr. Sven Ebbesson	Sci/Ed Permit F-91-028	Seward	2000 coho presmolt to be obtained from Crooked Creek or Trail Lakes Hatcheries. Coho will be sacrificed for experimental purposes.
<u>Cook Inlet</u>			
1. Houston Junior/Senior High School Mat-Su School Dist. 125 W. Evergreen Palmer, AK 99645 Attn: Gary Moore	Sci/Ed Permit F-91-004	Palmer	250 coho salmon eggs are be obtained from Big Lake Hatchery and reared in a classroom incubation project. Resultant fry will be released into Rocky Lake w/supervision.
2. Palmer High School 1170 Arctic Avenue Palmer, AK 99645 Attn: Nancy Sallee Patricia Chesbro	Sci/Ed Permit F-91-005	Palmer	250 coho salmon eggs are to be obtained from Big Lake Hatchery and reared in a classroom incubation project. Resultant fry will be released into Rocky Lake under supervision of ADF&G.

<u>REGION</u>	<u>STATUS</u>	<u>LOCATION</u>	<u># OF EGGS OR FISH PERMITTED</u>
<u>SCIENTIFIC OR EDUCATIONAL PERMITS</u>			
<u>Cook Inlet</u>			
3. Susitna Elementary School Anchorage School District 7500 Tyone Court Anchorage, AK 99504 Attn: David A. Gillam	Sci/Ed Permit F-91-007	Anchorage	250 coho salmon eggs are to be obtained from Big Lake Hatchery and reared in a classroom incubation project. Resultant fry will be released into Waldon Pond under supervision of ADF&G.
4. East High School Anchorage School District 4025 East Northern Lights Blvd Anchorage, AK 99508 Attn: Jan Heinrich	Sci/Ed Permit F-91-010	Anchorage	500 coho salmon fingerling are to be obtained from Fort Richardson Hatchery to be classroom experiments. The fish will be destroyed.
5. Colony Middle School Mat-Su School District 125 W. Evergreen Palmer, AK 99645 Attn: John Brown	Sci/Ed Permit F-91-011	Palmer	250 coho salmon eggs are to be obtained from Big Lake Hatchery and reared in a classroom incubation project. Resultant fry will be released into Rocky Lake under supervision of ADF&G.
6. Girdwood Junior High School Anchorage School District P.O. Box 187 Girdwood, AK 99587 Attn: Mary Klopfer	Sci/Ed Permit F-91-013	Girdwood	1,000 eyed coho eggs to be obtained from Elmendorf Hatchery and reared in a classroom incubation project. Resultant fry will be released into Portage Valley Lake under supervision of ADF&G.
7. Wasilla High School 701 Bogard Road Wasilla, AK 99687 Attn: Matt Weaver	Sci/Ed Permit F-91-014	Wasilla	250 coho salmon eggs are to be obtained from Big Lake Hatchery and reared in a classroom incubation project. Resultant fry will be released into Rocky Lake under supervision of ADF&G.

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<u>Cook Inlet</u>			
8. Homer Intermediate School 360 W. Pioneer Ave Homer, AK 99603 Attn: Mike Cline Bill Morisette	Sci/Ed Permit F-91-015	Homer	250 pink salmon eggs are to be obtained from Tutka Hatchery and reared in a classroom incubation project. Resultant fry will be released at Homer Spit under supervision of ADF&G.
9. Chugiak High School P.O. Box 770218 Eagle River, AK 99577 Attn: Andrew Sullivan	Sci/Ed Permit F-91-018	Eagle River	250 coho salmon eggs are to be obtained from Big Lake Hatchery and reared in a classroom incubation project. Resultant fry will be released at Waldon Pond under supervision of ADF&G.
10. Homer High School Kenai Peninsula Borough School District 600 E Fairview Homer, AK 99603 Attn: Al Poindexter	Sci/Ed Permit F-91-023	Homer	1,000 pink salmon eggs are to be obtained from Tutka Hatchery and reared in a classroom incubation project. Resultant fry will be released at Homer Spit under supervision of ADF&G.
11. Port Graham Village Council Port Graham, AK 99603 Attn: Elenore McMullen, Chief	Sci/Ed Permit F-91-026	Port Graham	250,000 eyed pink salmon eggs obtained from the Tutka Hatchery and reared at Port Graham. To determine the potential of a production pink salmon hatchery in Port Graham. Resultant fry will be released in Port Graham Bay.

<u>REGION</u>	<u>STATUS</u>	<u>LOCATION</u>	<u># OF EGGS OR FISH PERMITTED</u>
<u>SCIENTIFIC OR EDUCATIONAL PERMITS</u>			
<u>Cook Inlet</u>			
12 Big Lake Elementary Mat-Su School District P.O. Box 520049 Big Lake, AK 99687 Attn: Theresa Slaven	Sci/Ed Permit F-91-027	Big Lake	250 coho salmon eggs to be obtained from Big Lake Hatchery and reared in a classroom incubation project. Resultant fry will be released at Rocky Lake under supervision of ADF&G.
13 Inlet View Elementary School 1219 "N" Anchorage, AK 99501 Attn: John Butler Ed Brewer	Sci/Ed Permit F-91-033	Anchorage	50 coho salmon eggs to be obtained from Elmendorf Hatchery and reared in a classroom incubation project. Resultant fry will be destroyed.
14 Gruening Middle School Anchorage School District Lee Street Eagle River, AK 99577 Attn: Clifford Johnson	Sci/Ed Permit F-91-040	Eagle River, AK	250 coho salmon eggs to be obtained from Big Lake Hatchery and reared in a classroom incubation project. Resultant fry will be released into Waldon Pond under supervision of ADF&G.
<u>Interior</u>			
1. Delta/Greely School District Delta Junction, AK 99137 Attn: Rick Johnson	Sci/Ed Permit F-91-024	Delta Clearwater River	8 adult coho salmon are to taken for egg take at Delta Delta Clearwater River. Eggs will be incubated in classroom incubation project. Resultant fry will be released back into Delta Clearwater River under supervision of ADF&G.

<u>REGION</u>	<u>STATUS</u>	<u>LOCATION</u>	<u># OF EGGS OR FISH PERMITTED</u>
<u>SCIENTIFIC OR EDUCATIONAL PERMITS</u>			
<u>Interior</u>			
2. North Pole Middle School Fairbanks North Star Borough School District 1300 Minnie Street Fairbanks, AK 99701 Attn: Jeffrey James Jacobson	Sci/Ed Permit F-91-025	Delta River	10 adult chum salmon are to be taken for egg take at Delta River. Eggs will be incubated at the school hatchery. Resultant fry will be released into the Delta River under supervision of ADF&G.
3. Cominco Alaska, Inc. Red Dog Mine P.O. Box 1230 Kotzebue, AK 99752 Attn: Lisa Parker	Sci/Ed Permit F-91-032	Red Dog Creek	1000 Arctic char and 100 Rainbow trout to be obtained from Fort Richardson and Clear Hatcheries. Fish are used in continuous flow-through biomonitoring facility as required by NPDES permit AD-003865-2.
4. Russian Mission School Lower Yukon School District P.O. Box 90 Russian Mission, AK 99657 Attn: Steve Hackett	Sci/Ed Permit F-91-041	Russian Mission, AK	60 coho fry to be obtained from Fort Richardson Hatchery and reared in a classroom incubation project. The fry will be destroyed.
<u>Alaska Peninsula</u>			
1. Aleutian East Borough School District P.O. Box 429 Sand Point, AK 99661 Attn: Ray Vergin	Sci/Ed Permit F-91-002	Humbolt Creek, Sand Point	10 adult coho salmon taken for eggs to be incubated in an instream incubator. This is a district high school program. Some eggs will be kept in a classroom aquarium to monitor development and record data. The later resultant fry will be destroyed.

REGIONSTATUSLOCATION# OF EGGS OR
FISH PERMITTEDSCIENTIFIC OR EDUCATIONAL PERMITSAlaska Peninsula

2. Sand Point Schools
P.O. Box 269
Sand Point, AK 99661
Attn: Patricia Jenkins

Sci/Ed Permit F-91-003

Humbolt Creek, Sand Point

40 pink salmon and 35 coho salmon adults for eggs to be incubated in school hatchery. Resultant fry will be released back into Humbolt Creek.

3. Unalaska City School District
P.O. Box 260
Unalaska, AK 99685
Attn: Debra S. Alden

Sci/Ed Permit F-91-035

Unalaska Stream

30 pink salmon and 20 coho salmon adults for egg to be incubated in school hatchery. Resultant fry will be released back into Unalaska Stream.

Arctic/Yukon/Kuskokwim

1. Nome-Beltz School
Nome School District
P.O. Box 131
Nome, AK 99762
Attn: Steve Garrison

Sci/Ed Permit F-91-009

Snake River, Nome
Shovel Creek, Nome

50 adult coho salmon taken from Snake River. Eggs will be reared in school hatchery project. Resultant fry may be released after pre-inspection by ADF&G Pathology Section.

**STATE OF ALASKA
DEPARTMENT OF FISH AND GAME
DIVISION OF FISHERIES REHABILITATION, ENHANCEMENT
AND DEVELOPMENT (FRED)**

AREA	HATCHERY NAME, ADDRESS, PHONE NUMBER, & MANAGER	SPECIES
Ketchikan	Beaver Falls Hatchery 2030 Sea Level Drive, Suite 205 Ketchikan, AK 99901 <u>Manager:</u> Southern Southeast Regional Aquaculture Association* <u>Phone:</u> (907)225-9605 <u>Fax:</u> (907)225-1348	Sockeye salmon
Big Lake	Big Lake Hatchery P.O. Box 520455 Big Lake, AK 99652-0455 <u>Manager:</u> Dan Moore <u>Phone:</u> (907)892-6816 <u>Fax:</u> (907)892-7513	Sockeye and coho salmon
Whittier (remote) (Northern Prince William Sound)	Cannery Creek Hatchery P.O. Box 788 Whittier, AK 99693-0788 <u>Manager:</u> Prince William Sound Aquaculture Corporation* <u>Phone:</u> (907)424-7511, 7512 <u>Fax:</u> (907)424-7514	Pink and chum salmon
Clear (60 miles SW of Fairbanks)	Clear Hatchery P.O. Box 40219 Clear, AK 99704-0219 <u>Manager:</u> Dave Parks <u>Phone:</u> (907)582-2964 <u>Fax:</u> none	Rainbow and lake trout, Arctic grayling, Arctic char, and sheefish
Kasilof (Kenai Peninsula)	Crooked Creek Hatchery P.O. Box 430, Route 2 Kasilof, AK 99610-0430 <u>Manager:</u> Bob Och <u>Phone:</u> (907)262-4159 <u>Fax:</u> none	Sockeye, coho, and chinook salmon, and steelhead trout

* Hatchery operations contracted to private aquaculture association. See last page for address.

AREA	PHONE NUMBER, & MANAGER	SPECIES
Petersburg	Crystal Lake Hatchery P.O. Box 1088 Petersburg, AK 99833-1088 <u>Manager:</u> Jim Billi <u>Phone:</u> (907)772-4772 <u>Fax:</u> (907)772-9336	Chinook and coho salmon, and steelhead trout
Ketchikan	Deer Mountain Hatchery 2030 Sea Level Drive, Suite 205 Ketchikan, AK 99901 <u>Manager:</u> David Bright <u>Phone:</u> (907)225-6760 <u>Fax:</u> (907)225-0599	Chinook and coho salmon, and steelhead trout
Anchorage (Elmendorf AFB)	Elmendorf Hatchery 716 Steel Street Anchorage, AK 99501 <u>Manager:</u> Darrell Keifer <u>Phone:</u> (907)274-0065 <u>Fax:</u> (907)274-0065 (call first)	Chinook and coho salmon
Anchorage	Fort Richardson Hatchery P.O. Box 5-337 Fort Richardson, AK 99505-0337 <u>Hatchery Manager:</u> Gary Wall <u>Rainbow Trout Broodstock Development</u> <u>Leader:</u> Irv Brock <u>Phone:</u> (907)428-1347, 1348 <u>Fax:</u> (907)428-3548	Rainbow and steelhead trout, and chinook and coho salmon
Glennallen	Gulkana Hatchery P.O. Box 47 Glennallen, AK 99588-0047 <u>Manager:</u> Ken Roberson <u>Phone:</u> (907)822-5520 <u>Fax:</u> (907)822-3811	Sockeye and chinook salmon
Sitka (remote) (Eastern Baranof Island)	Hidden Falls Hatchery 1308 SMC Road Sitka, AK 99835 <u>Manager:</u> Northern Southeast Regional Aquaculture Association* <u>Phone:</u> (907)788-3215 <u>Fax:</u> (907)747-1470	Chum, coho, and chinook salmon

* Hatchery operations contracted to private aquaculture association. See last page for address.

AREA	PHONE NUMBER, & MANAGER	SPECIES
Kodiak (remote) (Afognak Island)	Kitot Bay Hatchery* 211 Mission Road Kodiak, AK 99615-6399 <u>Manager:</u> Tim Joyce <u>Phone:</u> (907)269-5467 <u>Fax:</u> (907)269-5468	Pink, chum, sockeye, and coho salmon, and rainbow trout
Klawock (Prince of Wales Island)	Klawock Hatchery P.O. Box 101 Klawock, AK 99925-0101 <u>Manager:</u> Steve Hansen <u>Phone:</u> (907)755-2232 <u>Fax:</u> (907)755-2440	Coho and sockeye salmon, and steelhead trout
Baranof Island (remote)	Little Port Walter Research Station Little Port Walter P.O. Box 9040 Sitka, AK 99835-9040 <u>Manager:</u> Frank Thrower (NMFS & ADF&G)** <u>Phone:</u> Marine Radio WRY8219 <u>Fax:</u> none	Chinook salmon and steelhead trout (pen-reared)
Cordova (remote) (Northwestern Prince William Sound)	Main Bay Hatchery P.O. Box FLJ Cordova, AK 99574 <u>Manager:</u> Prince William Sound Aquaculture Corporation* <u>Phone:</u> (907)269-5451 <u>Fax:</u> (907)269-5452	Sockeye and pink salmon
Kodiak	Pillar Creek Hatchery 211 Mission Road Kodiak, AK 99615-6399 <u>Manager:</u> Chris Clevenger <u>Phone:</u> (907)486-4791	Sockeye salmon
Cold Bay (Alaska Peninsula)	Russell Creek Hatchery P.O. Box 50 Cold Bay, AK 99571-0050 <u>Manager:</u> Richard (Butch) Cobb <u>Phone:</u> (907)532-2373 <u>Fax:</u> (907)532-2450	Sockeye and pink salmon

* Hatchery contracted to Kodiak Regional Aquaculture Association; state employees in charge of hatchery operations.

** Experimental research station jointly funded by the FRED Division and the National Marine Fisheries Service.

AREA	PHONE NUMBER, & MANAGER	SPECIES
Kotzebue (remote) (Noatak River)	Sikusilaq Springs Hatchery P.O. Box 686 Kotzebue, AK 99752-0686 <u>Manager:</u> Peter Rob <u>Phone:</u> (907)485-2160 <u>Fax:</u> (907)485-2160 (call first)	Chum salmon
Juneau (remote)	Snettisham Hatchery P.O. Box 20 Douglas, AK 99824-0020 <u>Manager:</u> John McNair <u>Phone:</u> (907)586-3838-11 <u>Fax:</u> (907)586-3838-34	Chum, coho, sockeye, and chinook salmon
Moose Pass (Kenai Peninsula)	Trail Lakes Hatchery P.O. Box 49 Moose Pass, AK 99631-0049 <u>Manager:</u> Cook Inlet Aquaculture Association* <u>Phone:</u> (907)288-3606 <u>Fax:</u> (907)283-9433	Sockeye, chinook, and coho salmon
Homer (remote) (Kachemak Bay)	Tutka Lagoon Hatchery 3298 Douglas Street Homer, AK 99603-1942 <u>Manager:</u> Cook Inlet Aquaculture Association* <u>Phone:</u> (907)235-8486 <u>Fax:</u> (907)235-8486 (call first)	Pink, chum, and sockeye salmon

* Hatchery operations contracted to private aquaculture association. See last page for address.

ASSOCIATIONS CURRENTLY CONTRACTED TO OPERATE SEVEN STATE FACILITIES

Cook Inlet Aquaculture Association

HC 2, Box 849

Soldotna, AK 99669-9707

Office: (907)283-5761

Fax: (907)283-9433

Tom Mears, Executive Director

State Hatcheries Operated: Trail Lakes Hatchery and Tutka Hatchery

Kodiak Regional Aquaculture Association

P.O. Box 3407

Kodiak, AK 99615

Office: (907)486-6555

Fax: (907)486-5932

Larry Malloy, Executive Director

Norma Holt, Administrative Assistant

State Hatchery Operated (partially): Kitoi Bay Hatchery

Northern Southeast Regional Aquaculture Association

1308 SMC Road

Sitka, AK 99835

Office: (907)747-6850

Fax: (907)747-1470

Peter Esquiro, General Manager

State Hatchery Operated: Hidden Falls Hatchery

Prince William Sound Aquaculture Corporation

P.O. Box 1110

Cordova, AK 99574

Office: (907)424-7511, 7512

Fax: (907)424-7514

Bruce Suzumoto, President

State Hatcheries Operated: Cannery Creek Hatchery and Main Bay Hatchery

Southern Southeast Regional Aquaculture Association

1621 Tongass Avenue, #103

Ketchikan, AK 99901

Office: (907)225-9605

Fax: (907)225-1348

Donald F. Amend, General Manager

State Hatchery Operated: Beaver Falls Hatchery

HATCHERIES IN ALASKA

AREA	HATCHERY NAME, ADDRESS PHONE NUMBER, AND REPRESENTATIVE/MANAGER	SPECIES
Ketchikan	Beaver Falls Hatchery c/o Southern Southeast Regional Aquaculture Association 1621 Tongass Avenue, #103 Ketchikan, AK 99901 <u>Representative:</u> Donald F. Amend <u>Phone:</u> (907)225-9605 <u>Fax:</u> (907)225-1348	Sockeye and chinook salmon
Ketchikan	Bell Island Hatchery c/o American Aquaculture Corporation P.O. Box 6338 Ketchikan, AK 99901 <u>Representative:</u> Robert Campbell <u>Phone:</u> (907)225-8751	Chinook and coho salmon and steelhead trout
Wrangell	Burnett Inlet Hatchery c/o Alaska Aquaculture, Inc. P.O. Box 1288 Wrangell, AK 99929 <u>Representative:</u> Tod Jones <u>Phone:</u> (907)874-2250	Pink, chum, coho, and chinook salmon
Skagway	Burro Creek Hatchery c/o Burro Creek Farms P.O. Box 455 Skagway, AK 99840 <u>Representative:</u> Eugene W. Richards <u>Phone:</u> (907)983-2355	Pink, chum, coho, and chinook salmon
Soldotna (Matanuska Valley)	Eklutna Hatchery c/o Cook Inlet Aquaculture Association HC 2, Box 849 Soldotna, AK 99669-9707 <u>Manager:</u> Loran Waldron <u>Phone:</u> (907)745-5692 <u>Fax:</u> (907)283-9433	Pink, chum, coho, and chinook salmon
Cordova	Esther Lake Hatchery (Wally Noerenberg Hatchery) c/o Prince William Sound Aquaculture Corporation P.O. Box 1110 Cordova, AK 99574 <u>Representative:</u> Bruce Suzumoto <u>Phone:</u> (907)424-7511 <u>Fax:</u> (907)424-7514	Pink, chum, coho, chinook, and sockeye salmon

AREA	PHONE NUMBER, AND REPRESENTATIVE/MANAGER	SPECIES
Juneau	Gastineau Channel Hatchery c/o Douglas Island Pink and Chum, Inc. 2697 Channel Drive Juneau, AK 99801 <u>Representative:</u> Ladd Macaulay <u>Phone:</u> (907)463-5114 <u>Fax:</u> (907)463-3213	Pink, chum, and coho salmon
Kake (Kupreanof Island)	Gunnuk Creek Hatchery c/o Kake Nonprofit Fisheries Corporation P.O. Box 523 Kake, AK 99830 <u>Manager:</u> Brock Meredith <u>Phone:</u> (907)785-6460	Pink and chum salmon
Juneau	Kowee Creek Hatchery c/o Douglas Island Pink and Chum, Inc. 2697 Channel Drive Juneau, AK 99801 <u>Representative:</u> Ladd Macaulay <u>Phone:</u> (907)586-4041 <u>Fax:</u> (907)463-3213	Steelhead trout
Sitka	Medvejie Creek Hatchery c/o Northern Southeast Regional Aquaculture Association 1308 SMC Road Sitka, AK 99835 <u>Manager:</u> Dail Hurdlow <u>Phone:</u> (907)747-5863 <u>Fax:</u> (907)747-1470	Chum, coho, pink, and chinook salmon
Cleveland Peninsula	Meyers Chuck Hatchery c/o Meyers Chuck Aquaculture Association 5001 Nottingham Way Anchorage, AK 99501 <u>Manager:</u> Robert M. Meyer <u>Phone:</u> (907)261-4625	Pink, coho, and chum salmon
Revillagigedo Island	Neets Bay Hatchery c/o Southern Southeast Regional Aquaculture Association 1621 Tongass Avenue, #103 Ketchikan, AK 99901 <u>Manager:</u> Ron Neterer <u>Phone:</u> (907)247-8790 <u>Fax:</u> (907)225-1348	Chum, coho, and chinook salmon

AREA	PHONE NUMBER, AND REPRESENTATIVE/MANAGER	SPECIES
Baranof Island	Port Armstrong Hatchery c/o Armstrong-Keta, Inc. P.O. Box 21990 Juneau, AK 99802 <u>Manager:</u> Wm. Ritchie Phillips <u>Phone:</u> (907)586-3443	Pink, chum, coho, and chinook salmon
Kake (Kuiu Island)	Port Camden Streamside Incubation Facility c/o Northern Southeast Regional Aquaculture Association 1308 SMC Road Sitka, AK 99835 <u>Representative:</u> Pete Esquiro <u>Phone:</u> (907)747-6850 <u>Fax:</u> (907)747-1470	Chum salmon
Cordova (Evans Island)	Port San Juan Hatchery (AFK Hatchery) c/o Prince William Sound Aquaculture Corporation P.O. Box 1110 Cordova, AK 99574 <u>Representative:</u> Bruce Suzumoto <u>Phone:</u> (907)424-7511, 7512 <u>Fax:</u> (907)424-7514	Pink and chum salmon
Juneau	Sheep Creek Hatchery c/o Douglas Island Pink and Chum, Inc. 2697 Channel Drive Juneau, AK 99801 <u>Representative:</u> Ladd Macaulay <u>Phone:</u> (907)586-3663 <u>Fax:</u> (907)463-3213	Pink, chum, and coho salmon
Sitka	Sheldon Jackson College Aquaculture Program P.O. Box 479 Sitka, AK 99835 <u>Manager:</u> Bill Coltharp <u>Phone:</u> (907)747-5209	Pink, chum, coho, and chinook salmon and steelhead trout
Valdez	Solomon Gulch Hatchery c/o Valdez Fisheries Development Association P.O. Box 125 Valdez, AK 99686 <u>Manager:</u> Paul McCollum <u>Phone:</u> (907)835-4874	Pink, chum, coho, and chinook salmon

AREA**PHONE NUMBER, AND
REPRESENTATIVE/MANAGER****SPECIES**

Ketchikan

Whitman Lake Hatchery
c/o Southern Southeast Regional
Aquaculture Association
1621 Tongass Avenue, #103
Ketchikan, AK 99901
Manager: Jay Creasy
Phone: (907)225-2635
Fax: (907)225-1348

Chum, coho, chinook,
and sockeye salmon

STATE HATCHERIES CONTRACTED TO THE STATE OF ALASKA
UNDER PRIVATE NONPROFIT HATCHERY PERMITS

AREA	HATCHERY NAME, ADDRESS PHONE NUMBER, AND REPRESENTATIVE/MANAGER	SPECIES
Ketchikan	Beaver Falls Hatchery 1621 Tongass Avenue, #103 Ketchikan, AK 99901 <u>Manager:</u> Southern Southeast Regional Aquaculture Association 1621 Tongass Avenue, #103 Ketchikan, AK 99901 <u>Phone:</u> (907)225-9605 <u>Fax:</u> (907)225-1348	Sockeye salmon
Whittier (Northern Prince William Sound)	Cannery Creek Hatchery P.O. Box 788 Whittier, AK 99693-0788 <u>Manager:</u> Prince William Sound Aquaculture Corporation P.O. Box 1110 Cordova, AK 99574 <u>Phone:</u> (907)424-7511, 7512 <u>Fax:</u> (907)424-7514	Pink and chum salmon
Sitka (Eastern Baranof Island)	Hidden Falls Hatchery P.O. Box 510 Sitka, AK 99835-0510 <u>Manager:</u> Northern Southeast Regional Aquaculture Association 1308 SMC Road Sitka, AK 99835 <u>Phone:</u> (907)747-6850 <u>Fax:</u> (907)747-1470	Chum, coho, and chinook salmon
Kodiak (Afognak Island)	Kitoi Bay Hatchery 211 Mission Road Kodiak, AK 99615-6399 <u>Manager:</u> Kodiak Regional Aquaculture Association P.O. Box 3407 Kodiak, AK 99615 <u>Phone:</u> (907)486-6555 <u>Fax:</u> (907)486-5932	Pink, chum, sockeye, and coho salmon, and rainbow trout

AREA	HATCHERY NAME, ADDRESS PHONE NUMBER, AND REPRESENTATIVE/MANAGER	SPECIES
Cordova (remote) (Northwestern Prince William Sound)	Main Bay Hatchery P.O. Box FLJ Cordova, AK 99574 <u>Manager:</u> Prince William Sound Aquaculture Corporation P.O. Box 1110 Cordova, AK 99574 <u>Phone:</u> (907)269-5451 <u>Fax:</u> (907)269-5452	Sockeye and pink salmon
Homer (remote) (Kachemak Bay)	Tutka Lagoon Hatchery HC 2, Box 849 Soldotna, AK 99669-9707 <u>Manager:</u> Cook Inlet Aquaculture Association HC 2, Box 849 Soldotna, AK 99669-9707 <u>Phone:</u> (907)235-8486 <u>Fax:</u> (907)235-8486 (call first)	Pink, chum, and sockeye salmon
Moose Pass (Kenai Peninsula)	Trail Lakes Hatchery P.O. Box 49 Moose Pass, AK 99631-0049 <u>Manager:</u> Cook Inlet Aquaculture Association HC 2, Box 849 Soldotna, AK 99669-9707 <u>Phone:</u> (907)288-3688 <u>Fax:</u> (907)283-9433	Sockeye, chinook, and coho salmon

FORM NO. 56

interview / 3/24/31

State of Alaska, Private Nonprofit Hatchery Program

HATCHERY BROODSTOCK DEVELOPMENT/FACILITY BENEFIT COST ANALYSIS

--data input format and instructions--

Line 1. FACILITY: Esther Lake

Main Bay Chum

Line 2. SPECIES: Chum

(Pink, chum, coho, chinook. A separate form must be completed for each species at the facility.)

Line 3. FACILITY DESCRIPTION: Permit # 20

(Provide information about the facility such as location; the year primary hatchery construction is completed; first year of egg take; other species at facility; design capacity, etc.)

Line 4. FIRST YEAR OF SIMULATION: 1984

(The term simulation refers to a computer modeling study. For our purposes, the first year of simulation is 1984.)

Line 5. LENGTH OF SIMULATION: 20 years

(The number of years that the simulation is to be run.)

Line 6. AGE AT MIGRATION: 0(Enter the number of winters that fish (not eggs or alevins) of this species spend in freshwater before migrating to sea. Must be 0 for pink and chum; 1 or 2 for other species. Remember that the age at migration may be different than the age at release. For example, chinook fry may be planted into a lake at age 0, but they are assumed to migrate to sea at age 1. In that case enter 1 for line 6.)Line 7. HATCHERY SURVIVALS:

a. Green Egg to Eyed	<u>90</u> %	(<u>90</u> %)
b. Eyed to Emergent Fry	<u>95</u> %	(<u>95</u> %)
c. Emergent Fry to Fed Fry	<u>95</u> %	(<u>95</u> %)
d. Fed Fry to Fingerling	<u> </u> %	(<u> </u> %)
e. Fingerling to Smolt	<u> </u> %	(<u> </u> %)

(We have provided our estimation of survival rates as percent survival from one life stage to the next life stage. We are looking for your estimation of the most likely survival rates to occur over the length of the simulations.)

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Line 8. TOTAL SURVIVAL TO ADULT BY RELEASE STAGE:

a. Emergent fry to adult	_____ %	(_____ %)
b. Fed Fry to adult	<u>100</u> %	(<u>1.0</u> %)
c. Fingerling to adult	_____ %	(_____ %)
d. Smolt to adult	_____ %	(_____ %)

(Enter the expected percent total marine survival to returning adult for every stage that fish are released. Include in the survival estimate those returning adults harvested in the common property fishery. As an example, if chinook are released only as smolts, then the expected survival to adult would be entered on line 8d. No other entry on line 8 would be required.)

Line 9. ADULT RETURN BY OCEAN AGE & SEX RATIO:

a. Ocean age	.0	.1	.2	.3	.4	.5	.6
b. % of Return	_____	_____	<u>15</u>	<u>75</u>	<u>10</u>	_____	_____
c. % Female	_____	_____	<u>50</u>	<u>50</u>	<u>50</u>	_____	_____

(In the European aging system the number to the left of the decimal point is the number of winters that juveniles spend in fresh water and the number to the right of the decimal point is the number of winters that returning adults spend in salt water. On line 9b enter the assumed percentage of the total adults produced for a brood year below the expected age of return. For example: Chum eggs taken in 1981 might be expected to return in 1984 (20%), 1985 (70%), and 1986 (10%). In this case you would enter 20% below age .2, 70% below age .3, and 10% below age .4. The total percentage must, of course, equal 100. For line 9c enter the percentage of females for each age class that fish are expected to return.)

Line 10. FECUNDITY: 2700 (eggs/female)

(The average number of eggs per returning female.)

Line 11. ADULT HOLDING MORTALITY: 10 %

(The percent of adults being held that die prior to spawning.)

Line 12. MINIMUM ANNUAL STREAM ESCAPEMENT:

a. <u>0</u> # From (Year) <u>1974</u> to <u>2004</u>
b. _____ # From (Year) _____ to _____
c. _____ # From (Year) _____ to _____

(Enter the minimum number of returning fish required to spawn naturally in the stream and the years that this escapement is required. If the minimum number changes, enter this change and the years that this change is in effect on lines 12b and 12c. Enter zero if no escapement is required.)

13. ASSUMED INTERCEPTION RATES:

a. Commercial Interception 92 % From (Year) 1990 to 2004
 Will rate change? % From (Year) to
 % From (Year) to

b. Sport Interception 0 % From (Year) 1994 to 2004
 Will Rate Change? % From (Year) to
 % From (Year) to

(Enter the assumed percent interception rate for the commercial fishery by year on line 13a. If this rate changes, enter the change and the years of this change on the lines below. Enter the percent of the return that will be intercepted by the sport fishery on line 13b, and list any future changes on the lines below. These rates are the minimum interception rates. The fish in excess of hatchery brood-stock needs are added back to commercial and sport harvests by the program. Hatchery cost-recovery is treated as a separate commercial gear type on line 24.)

Line 14. PRESENT HATCHERY CAPACITY:

1984 → 1987

Life Stage	#Eggs or Fish	#Released	(#Eggs or Fish)	(#Released)
a. green egg	<u>10.0 x 10⁶</u>	<u> </u>	<u>(26.7 x 10⁶)</u>	<u>()</u>
b. eyed egg	<u>9.0 x 10⁶</u>	<u> </u>	<u>(24.0 x 10⁶)</u>	<u>()</u>
c. emergent fry	<u>8.5 x 10⁶</u>	<u> </u>	<u>(22.8 x 10⁶)</u>	<u>()</u>
d. fed fry	<u> </u>	<u>8.5 x 10⁶</u>	<u>()</u>	<u>(21.7 x 10⁶)</u>
e. fingerling	<u> </u>	<u> </u>	<u>()</u>	<u>()</u>
f. smolt	<u> </u>	<u> </u>	<u>()</u>	<u>()</u>

(Enter the years that these capacities will be in effect. Enter the maximum numbers of eggs or fish that can be handled by the present facility for each life stage. Remember that a different form is used for each species. List the hatchery's capacity only for the species entered on line 2. Under the number released column enter the number of fish that are planned to be released for each life stage. If releases are not planned for certain life stage enter 0 for that line. If you provide alternative capacities, please attach justification.)

Line 15. PERMITTED HATCHERY CAPACITY:

1988 → 2004

Life Stage	#Eggs or Fish	#Released	(#Eggs or Fish)	(Released)
a. green egg	<u>11.1 x 10⁷</u>	<u> </u>	<u>(11.1 x 10⁷)</u>	<u>()</u>
b. eyed egg	<u>10.0 x 10⁷</u>	<u> </u>	<u>(10.0 x 10⁷)</u>	<u>()</u>
c. emergent fry	<u>9.5 x 10⁷</u>	<u> </u>	<u>(9.5 x 10⁷)</u>	<u>()</u>
d. fed fry	<u> </u>	<u>9.4 x 10⁷</u>	<u>()</u>	<u>(9.0 x 10⁷)</u>
e. fingerling	<u> </u>	<u> </u>	<u>()</u>	<u>()</u>
f. smolt	<u> </u>	<u> </u>	<u>()</u>	<u>()</u>

(The instructions from line 14 apply here. In many cases the hatchery capacities will change directly from present capacity to permitted capacity. If present capacity is the same as permitted capacity, line 15 will not be needed. Please indicate this on line 14. If you provide alternative capacities, please attach justification. If additional capital and operational costs will be required to reach permitted capacity, then please indicate this change on line 21.)

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Line 16. ULTIMATE CAPACITY:

Ultimate Capacity _____ Year to 2004

Life Stage	#Eggs or Fish	#Released	(#Eggs or Fish)	(#Released)
a. green egg	_____	_____	(_____)	(_____)
b. eyed egg	_____	_____	(_____)	(_____)
c. emergent fry	_____	_____	(_____)	(_____)
d. fed fry	_____	_____	(_____)	(_____)
e. fingerling	_____	_____	(_____)	(_____)
f. smolt	_____	_____	(_____)	(_____)

(See instructions for lines 14 and 15. If ultimate capacity is the same as present capacity or permitted capacity, line 16 will not be needed. Please indicate this on line 14 or line 15. We have entered our best estimate of ultimate permitted capacity for this facility for the species listed on line 2, given the known constraints of the site and physical plant capabilities. If you provide alternative capacities, please attach justification. Be certain to enter the number of fish that are planned to be released for each life stage. If additional capital and operational costs will be required to reach ultimate capacity, then please indicate this change on line 21.)

Line 17. NUMBER OF RETURNING ADULTS FROM PREVIOUS RELEASES BY RETURN YEAR, BY OCEAN AGE:

N/A.

	Age	Year 1984	Year _____	Year _____	Year _____	Year _____	Year _____
a. #Fish	.0	_____	_____	_____	_____	_____	_____
b. #Fish	.1	_____	_____	_____	_____	_____	_____
c. #Fish	.2	_____	_____	_____	_____	_____	_____
d. #Fish	.3	_____	_____	_____	_____	_____	_____
e. #Fish	.4	_____	_____	_____	_____	_____	_____
f. #Fish	.5	_____	_____	_____	_____	_____	_____

The year and numbers of adults expected to return from previous by age class. The year entered in the first column must be the first year of simulation (line 4). Use the remaining column for future consecutive years. As an example, since the first year of simulation is 1984, then the year of the first column must be 1984 and the next year would be 1985, etc. If chum salmon eggs were first taken in 1981, then the expected number of adults to return at age .2 would be entered on line c under year 1984. The number expected to return at age .3 (from 1981 brood) would be entered on line 17d under year 1985, and the return at age .4 would be entered on line 17e under year 1986. The expected returns for eggs taken in 1982 would follow the same sequence, except the returns for age .2 would be entered on line 17c under 1985. The returns for 1983 brood in this example would not need to be entered as the information from lines 19 and 20 will be used to estimate those returns.)

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Line 18. REMOTE EGG TAKES:

a. Year 1984 #Eggs 10.0×10^6 thru Year 1985
 b. Year 1986 #Eggs 39.5×10^6 thru Year 1986
 c. Year 1987 #Eggs 32.0×10^6 thru Year 1987
 d. Year 1988 #Eggs 18.4×10^6 thru Year 1988
 1989 4.5×10^6 1989

(List the years and number of eggs to be taken at sites other than the facility. If the desired number of remote egg takes changes, use lines 18b, 18c, and 18d to list those changes.)

Line 19. NUMBER OF FIRST YEAR EMERGENT FRY:

Year 1984 Emergent Fry 7.6×10^6

(Enter the number of fry that emerge during the first year of simulation (line 4). Enter the number of emergent fry only for species listed on line 2. These fry are a result of eggs taken in 1983.)

Line 20. FIRST YEAR OF SMOLT RELEASES:

Year 1984 #Released N/A

(Enter the number of smolt released during the first year of simulation (line 4) if applicable to this species. These releases will originate from the eggs taken in 1982.)

Line 21. FUTURE ANNUAL FACILITY COSTS IN 1984 DOLLARS:

See Item # 55

Capital Costs			Annual Operating Costs		
	Year	Capital Costs		Year to Year	Total Annual Operating Costs
a.	_____	_____	a.	_____	_____
b.	_____	_____	b.	_____	_____
c.	_____	_____	c.	_____	_____
d.	_____	_____	d.	_____	_____
e.	_____	_____	e.	_____	_____
f.	_____	_____	f.	_____	_____
g.	_____	_____	g.	_____	_____
h.	_____	_____	h.	_____	_____
i.	_____	_____	i.	_____	_____
j.	_____	_____	j.	_____	_____

(Indicate all future annual capital and operating costs (in 1000's of \$) for the facility. Capital costs should be listed in single year increments. Annual operating costs may be grouped in a year X to year Y format, where appropriate. To be filled out in real (1984) dollars. Please include annual administrative and evaluation costs (i.e., planning, tagging) with operational costs when computing total annual operating costs.)

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Line 22. MEAN WEIGHT OF MALES: 8.4 (lbs.)

(List the mean weight (in pounds) per male for fish returning to the facility (if available) or from brood-stock source.)

Line 23. MEAN WEIGHT OF FEMALES: 9.4 (lbs.)

(List the mean weight (in pounds) per female for fish returning to the facility (if available) or from brood-stock source.)

Line 24. FACILITY COST-RECOVERY:

Gear Type: Special Harvest Area Permit% of Commercial Harvest: 15 %

Year	Year	Price/lb.	Costs/lb.
<u>1990</u>	<u>to 2000</u>	<u>.35</u>	<u>.013</u>
<u>to</u>	<u>to</u>	<u>to</u>	<u>to</u>
<u>to</u>	<u>to</u>	<u>to</u>	<u>to</u>
<u>to</u>	<u>to</u>	<u>to</u>	<u>to</u>

(Indicate the commercial gear type that will be used to harvest hatchery returns within the special harvest area for cost-recovery. Indicate your estimate of the average percentage of the total commercial harvest expected to be taken for facility cost-recovery over the duration of the simulation. Indicate the estimated price per pound (in 1984 dollars) and the estimated harvest costs per pound (or vessel charter expenses per pound), computed on an ex-vessel (or ex-hatchery) basis, in 1984 dollars.)

FORM NO.

55

5/24/84

State of Alaska, Private Nonprofit Hatchery Program

HATCHERY BROODSTOCK DEVELOPMENT/FACILITY BENEFIT COST ANALYSIS

--data input format and instructions--

Line 1. FACILITY: Esther LakeMain Bay PinkLine 2. SPECIES: pink

(Pink, chum, coho, chinook. A separate form must be completed for each species at the facility.)

Line 3. FACILITY DESCRIPTION: permit # 20

(Provide information about the facility such as location; the year primary hatchery construction is completed; first year of egg take; other species at facility; design capacity, etc.)

Line 4. FIRST YEAR OF SIMULATION: 1984

(The term simulation refers to a computer modeling study. For our purposes, the first year of simulation is 1984.)

Line 5. LENGTH OF SIMULATION: 20 years

(The number of years that the simulation is to be run.)

Line 6. AGE AT MIGRATION: 0

(Enter the number of winters that fish (not eggs or alevins) of this species spend in freshwater before migrating to sea. Must be 0 for pink and chum; 1 or 2 for other species. Remember that the age at migration may be different than the age at release. For example, chinook fry may be planted into a lake at age 0, but they are assumed to migrate to sea at age 1. In that case enter 1 for line 6.)

Line 7. HATCHERY SURVIVALS:

a. Green Egg to Eyed	<u>90</u> %	(<u>90</u> %)
b. Eyed to Emergent Fry	<u>75</u> %	(<u>75</u> %)
c. Emergent Fry to Fed Fry	<u>75</u> %	(<u>75</u> %)
d. Fed Fry to Fingerling	<u>75</u> %	(<u>75</u> %)
e. Fingerling to Smolt	<u>75</u> %	(<u>75</u> %)

(We have provided our estimation of survival rates as percent survival from one life stage to the next life stage. We are looking for your estimation of the most likely survival rates to occur over the length of the simulations.)

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Line 8. TOTAL SURVIVAL TO ADULT BY RELEASE STAGE:

a. Emergent fry to adult	_____ %	(<u>0.7</u> %)
b. Fed Fry to adult	<u>6.0</u> %	(_____ %)
c. Fingerling to adult	_____ %	(_____ %)
d. Smolt to adult	_____ %	(_____ %)

(Enter the expected percent total marine survival to returning adult for every stage that fish are released. Include in the survival estimate those returning adults harvested in the common property fishery. As an example, if chinook are released only as smolts, then the expected survival to adult would be entered on line 8d. No other entry on line 8 would be required.)

Line 9. ADULT RETURN BY OCEAN AGE & SEX RATIO:

a. Ocean age	.0	.1	.2	.3	.4	.5	.6
b. % of Return	_____	<u>100</u>	_____	_____	_____	_____	_____
c. % Female	_____	<u>50</u>	_____	_____	_____	_____	_____

(In the European aging system the number to the left of the decimal point is the number of winters that juveniles spend in fresh water and the number to the right of the decimal point is the number of winters that returning adults spend in salt water. On line 9b enter the assumed percentage of the total adults produced for a brood year below the expected age of return. For example: Chum eggs taken in 1981 might be expected to return in 1984 (20%), 1985 (70%), and 1986 (10%). In this case you would enter 20% below age .2, 70% below age .3, and 10% below age .4. The total percentage must, of course, equal 100. For line 9c enter the percentage of females for each age class that fish are expected to return.)

Line 10. FECUNDITY: 1600 (eggs/female)

(The average number of eggs per returning female.)

Line 11. ADULT HOLDING MORTALITY: 10 %

(The percent of adults being held that die prior to spawning.)

Line 12. MINIMUM ANNUAL STREAM ESCAPEMENT:

a. <u>0</u> # From (Year) <u>1984</u> to <u>2004</u>
b. _____ # From (Year) _____ to _____
c. _____ # From (Year) _____ to _____

(Enter the minimum number of returning fish required to spawn naturally in the stream and the years that this escapement is required. If the minimum number changes, enter this change and the years that this change is in effect on lines 12b and 12c. Enter zero if no escapement is required.)

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13. ASSUMED INTERCEPTION RATES:

- a. Commercial Interception 97 % From (Year) 1987 to 2004
 Will rate change? % From (Year) to
 % From (Year) to
- b. Sport Interception 0 % From (Year) 1987 to 2004
 Will Rate Change? % From (Year) to
 % From (Year) to

(Enter the assumed percent interception rate for the commercial fishery by year on line 13a. If this rate changes, enter the change and the years of this change on the lines below. Enter the percent of the return that will be intercepted by the sport fishery on line 13b, and list any future changes on the lines below. These rates are the minimum interception rates. The fish in excess of hatchery brood-stock needs are added back to commercial and sport harvests by the program. Hatchery cost-recovery is treated as a separate commercial gear type on line 24.)

Line 14. PRESENT HATCHERY CAPACITY:

Present Capacity <u>1984</u> Year to <u>1985</u>		<u>1984</u> → <u>1985</u>	
Life Stage	#Eggs or Fish	#Released	(#Eggs or Fish) (#Released)
a. green egg	<u>26.0 x 10⁶</u>	<u> </u>	(<u>33.5 x 10⁶</u>) (<u> </u>)
b. eyed egg	<u>31.2 x 10⁶</u>	<u> </u>	(<u>30.1 x 10⁶</u>) (<u> </u>)
c. emergent fry	<u> </u>	<u> </u>	(<u> </u>) (<u>28.6 x 10⁶</u>)
d. fed fry	<u> </u>	<u>32.5 x 10⁶</u>	(<u> </u>) (<u> </u>)
e. fingerling	<u> </u>	<u> </u>	(<u> </u>) (<u> </u>)
f. smolt	<u> </u>	<u> </u>	(<u> </u>) (<u> </u>)

(Enter the years that these capacities will be in effect. Enter the maximum numbers of eggs or fish that can be handled by the present facility for each life stage. Remember that a different form is used for each species. List the hatchery's capacity only for the species entered on line 2. Under the number released column enter the number of fish that are planned to be released for each life stage. If releases are not planned for a certain life stage enter 0 for that line. If you provide alternative capacities, please attach justification.)

Line 15. PERMITTED HATCHERY CAPACITY:

Permitted Capacity <u>1986</u> Year to <u>2004</u>		<u>1986</u> → <u>2004</u>	
Life Stage	#Eggs or Fish	#Released	(#Eggs or Fish) (Released)
a. green egg	<u>21.1 x 10⁷</u>	<u> </u>	(<u>21.1 x 10⁷</u>) (<u> </u>)
b. eyed egg	<u>20.2 x 10⁷</u>	<u> </u>	(<u>19.0 x 10⁷</u>) (<u> </u>)
c. emergent fry	<u>19.0 x 10⁷</u>	<u> </u>	(<u>18.0 x 10⁷</u>) (<u> </u>)
d. fed fry	<u> </u>	<u>17.7 x 10⁷</u>	(<u> </u>) (<u>17.1 x 10⁷</u>)
e. fingerling	<u> </u>	<u> </u>	(<u> </u>) (<u> </u>)
f. smolt	<u> </u>	<u> </u>	(<u> </u>) (<u> </u>)

(The instructions from line 14 apply here. In many cases the hatchery capacities will change directly from present capacity to permitted capacity. If present capacity is the same as permitted capacity, line 15 will not be needed. Please indicate this on line 14. If you provide alternative capacities, please attach justification. If additional capital and operational costs will be required to reach permitted capacity, then please indicate this change on line 21.)

3/PNP/3-20-84

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Line 16. ULTIMATE CAPACITY:

Ultimate Capacity _____ Year to 2004 _____

Life Stage	#Eggs or Fish	#Released	(#Eggs or Fish)	(#Released)
a. green egg	_____	_____	(_____)	(_____)
b. eyed egg	_____	_____	(_____)	(_____)
c. emergent fry	_____	_____	(_____)	(_____)
d. fed fry	_____	_____	(_____)	(_____)
e. fingerling	_____	_____	(_____)	(_____)
f. smolt	_____	_____	(_____)	(_____)

(See instructions for lines 14 and 15. If ultimate capacity is the same as present capacity or permitted capacity, line 16 will not be needed. Please indicate this on line 14 or line 15. We have entered our best estimate of ultimate permitted capacity for this facility for the species listed on line 2, given the known constraints of the site and physical plant capabilities. If you provide alternative capacities, please attach justification. Be certain to enter the number of fish that are planned to be released for each life stage. If additional capital and operational costs will be required to reach ultimate capacity, then please indicate this change on line 21.)

Line 17. NUMBER OF RETURNING ADULTS FROM PREVIOUS RELEASES BY RETURN YEAR, BY OCEAN AGE:

N/A

	Age	Year 1984	Year _____	Year _____	Year _____	Year _____	Year _____
a. #Fish	.0	_____	_____	_____	_____	_____	_____
b. #Fish	.1	_____	_____	_____	_____	_____	_____
c. #Fish	.2	_____	_____	_____	_____	_____	_____
d. #Fish	.3	_____	_____	_____	_____	_____	_____
e. #Fish	.4	_____	_____	_____	_____	_____	_____
f. #Fish	.5	_____	_____	_____	_____	_____	_____

(Enter the year and numbers of adults expected to return from previous releases by age class. The year entered in the first column must be the same as the first year of simulation (line 4). Use the remaining column headings for future consecutive years. As an example, since the first year of simulation is 1984, then the year of the first column must be 1984 and the next year would be 1985, etc. If chum salmon eggs were first taken in 1981, then the expected number of adults to return at age .2 would be entered on line c under year 1984. The number expected to return at age .3 (from 1981 brood) would be entered on line 17d under year 1985, and the return at age .4 would be entered on line 17e under year 1986. The expected returns for eggs taken in 1982 would follow the same sequence, except the returns for age .2 would be entered on line 17c under 1985. The returns for 1983 brood in this example would not need to be entered as the information from lines 19 and 20 will be used to estimate those returns.)

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Line 18. REMOTE EGG TAKES:

1983
 a. Year 1984 #Eggs 26,000 thru Year 1985
 b. Year 1985 #Eggs 55,000 thru Year 1986
 c. Year 1986 #Eggs 12,000 thru Year 1987
 d. Year _____ #Eggs _____ thru Year _____

(List the years and number of eggs to be taken at sites other than the facility. If the desired number of remote egg takes changes, use lines 18b, 18c, and 18d to list those changes.)

Line 19. NUMBER OF FIRST YEAR EMERGENT FRY:

Year 1984 Emergent Fry _____

N/A

(Enter the number of fry that emerge during the first year of simulation (line 4). Enter the number of emergent fry only for species listed on line 2. These fry are a result of eggs taken in 1983.)

Line 20. FIRST YEAR OF SMOLT RELEASES:

Year 1984 #Released _____

N/A

(Enter the number of smolt released during the first year of simulation (line 4) if applicable to this species. These releases will originate from the eggs taken in 1982.)

Line 21. FUTURE ANNUAL FACILITY COSTS IN 1984 DOLLARS:

Capital Costs			Annual Operating Costs		
	Year	Capital Costs		Year to Year	Total Annual Operating Costs
a.	<u>1984</u>	<u>500</u>	a.	<u>1984</u> <u>1984</u>	<u>293.4</u>
b.	<u>1985</u>	<u>2500</u>	b.	<u>1985</u> <u>1985</u>	<u>433.4</u>
c.	_____	_____	c.	<u>1986</u> <u>1986</u>	<u>465.0</u>
d.	_____	_____	d.	<u>1987</u> <u>1987</u>	<u>335.0</u>
e.	_____	_____	e.	<u>1988</u> <u>2004</u>	<u>1250.0</u>
f.	_____	_____	f.	_____	_____
g.	_____	_____	g.	_____	_____
h.	_____	_____	h.	_____	_____
i.	_____	_____	i.	_____	_____
j.	_____	_____	j.	_____	_____

(Indicate all future annual capital and operating costs (in 1000's of \$) for the facility. Capital costs should be listed in single year increments. Annual operating costs may be grouped in a year X to year Y format, where appropriate. To be filled out in real (1984) dollars. Please include annual administrative and evaluation costs (i.e., planning, tagging) with operational costs when computing total annual operating costs.)

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Line 22. MEAN WEIGHT OF MALES: 3.5 (lbs.)

(List the mean weight (in pounds) per male for fish returning to the facility (if available) or from brood-stock source.)

Line 23. MEAN WEIGHT OF FEMALES: 3.5 (lbs.)

(List the mean weight (in pounds) per female for fish returning to the facility (if available) or from brood-stock source.)

Line 24. FACILITY COST-RECOVERY:

Gear Type: Special Harvest Area Permit% of Commercial Harvest: 15 %

Year	Year	Price/lb.	Costs/lb.
<u>1989</u>	<u>to 2001</u>	<u>.28</u>	<u>.013</u>
	<u>to</u>		
	<u>to</u>		
	<u>to</u>		

(Indicate the commercial gear type that will be used to harvest hatchery returns within the special harvest area for cost-recovery. Indicate your estimate of the average percentage of the total commercial harvest expected to be taken for facility cost-recovery over the duration of the simulation. Indicate the estimated price per pound (in 1984 dollars) and the estimated harvest costs per pound (or vessel charter expenses per pound), computed on an ex-vessel (or ex-hatchery) basis, in 1984 dollars.)

NOTED FOR Fay

Sorry I didn't send this off sooner, but I had six phone calls this morning to contend with.

I have attached two surveys. One is the survey undertaken in late 1983 and early 1984 for the Mini-Cabinet Study (Port #64). The second is a survey that I have administered a few times to create input for the economic impact model created by the Division by ISER.

To address the needs of the CBA and some of the distributional questions these surveys need to be combined, with some additional revisions.

1. In CBA the distribution of costs and benefits is of minor concern, some components of the survey however, will address the source of funding for projects so that projections can be made of user funding vs funding from the State treasury.

2. The original (83/84) survey did not ask for catch projections by district or combination of districts. It will be necessary to define the aggregation of districts that we think are practice to apply to each of the projects. For example, in Southeast, some projects would only allow for differentiation of catches between northern and southern locations areas but others could be at the district level. For now we can ask for these by district but must make clear in instructions that it is ok to aggregate. Not everyone knows where the boundaries are so a map may need to be supplied for each region.

The original survey also did not stratify the catches temporally. It will be necessary to break projected catch into 2 week intervals (I need to verify the exact intervals with Boyce and Berman). I think the survey could have each of the months between May and October broken down by two week intervals and we would ask for the intervals that represent 90 % or more of the catch. Another interval would be required for the winter troll fishery.

4. The 83/84 survey allowed for a production projection in each year. I think given the problems in making these types of forecasts that we could ask for a point projection covering each 5 year interval. This would simplify the form to 6 entries over time. The impact survey was based on a broodyear, so catches occurred over several years.

These are just the first changes that occur to me. After spending some additional time with the forms I am sure that I can generate

Some suggestions for the letter to PNP operators.

I would like to thank you for the work that you invested the hatchery survey of intensely modeled enhancement projects for the Hatchery Research Project. The contractor for population modeling portion of the project is now using the survey data.

This is the last portion of the surveying for the project, and again we would like to request your help completing 2 forms.

The first form is the SALMON ENHANCEMENT PROJECT survey for the non-intensively modeled projects. It is shorter and simpler than the intensively modeled site form. A separate form for each project is included. If you have corrections to the project name or to other identifying data, or if there are additional projects not included in the surveys provided, please make the appropriate corrections or additions. Blank forms are attached.

The second form is a cost-of-production survey for each facility identified under FACILITY NAME field in the SALMON ENHANCEMENT PROJECT survey. This form, called the FACILITY OPERATING, CONSTRUCTION, AND MANAGEMENT COST SURVEY, is designed to be similar to the type of budget forecasting that you might do for any upcoming fiscal year. One of these forms must be filled out for each facility associated with INTENSELY or NON-INTENSELY modeled projects. There are, however, some special production cost cases, that will require you to project costs for production levels that may never be feasible for you to operate in. These cases are necessary to create a mathematical model of operating and construction costs for the statewide enhancement program, which allows the computation of costs of production levels not included in the survey. These other cases are to be very aggregate in scale, and will not be used to determine benefits and costs of individual hatchery outputs.

Ginny: Some of the following could be put in the instructions if it is too wordy here.

Operating and construction costs for some increased production scenarios are requested in the survey form. These production increases are aggregated by species while production survey forms are filled out for each project. Since some facilities will have more than 1 project and release location for a given species, this may cause some confusion in determining how to apportion these costs between projects. In these cases, the incremental production costs (for the 15% increase scenario) should be estimated for the most likely and efficient combination of production from each project that you have.

Example: Two sockeye projects are carried out at Facility 2. Together they produce 20,000 sockeye harvests in 1996, and are projected to produce 30,000 harvests in 1999 to 2021.

Increased production of project 1 for sockeye salmon (producing

harvests of 10,000 fish in 1996 from smolt releases in previous years) would be difficult to increase by 15% without some radical changes in management, or new construction.

Project 2 also produces 10,000 harvested fish in 1996 but, fry releases could easily be increased to 15% of the total sockeye production of 20,000 harvested fish ($20,000 \times 1.15 = 23,000$ fish from project 2).

Thus, costs for the increase production should be estimated for project 2, the most likely source of increased production.

For the 15% incremental increased production scenario, it may not be practical to increase production for this species at all in your facility. If there is simply no way to do this, without adding a new project, leave the associated 15% production case blank for that species, but note why you could not carry it out on the form.

Finally, the cost projections for the 15% production level increase should be based upon obtaining the increased harvests in one single salmon life cycle, or as nearly as possible to that time interval.

The completed survey forms need to be sent to Steve McGee at the ADF&G Headquarters Office by June 15, 1992.

There will undoubtedly be questions about how to fill out the survey, please address these to Steve McGee, ADF&G, 465-4160.

Jeff Hartman or

We discussed the first page of the survey being the facility name, name of the project, and the species that the project corresponds to. Some instructions about verifying that the project names, release locations, and species are correct would probably be a good idea.

1. Additional comment on the PNP production form;

One additional set of fields have been left off the non-intensively modeled survey form for PNP hatcheries. This field was included on the PNP survey form for intensely modeled sites. It is question 14, which summarizes the harvest of fish for cost recovery from the hatchery.

2. Additional comment on the PNP cost of production form;

Some additional clarification of the % of operating and construction costs attributable to commercial, or sport/pers use is needed. Some PNP operators will interperate that a portion of their hatcheries production is to perpetuate operating dollars for the facility. Thus, if they have 100,000 fish harvested in the commercial fishery, 100,000 fish harvested in the sport fishery, 100,000 fish required for cost recovery, they will respond with 33.3% and 33.3%, respectively in the %commfish and %sportfish fields. Perhaps the field should say "percentage of Total Annual Costs for common property fisheries" "percentages should add to 100%. An example might also be helpful.

SPECIES	LIFESTAGE	RELEASE SITE	REGION	HATCHERY	TYPE PROJECT	OPERATOR
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Project List for PNP Hatcheries

Southeast Chinook
PWS Pink and Chum
Cook Inlet Sockeye

(INTENSIVELY MODELED PROJECTS)

SPECIES	LIFESTAGE	RELEASE SITE	REGION	HATCHERY	TYPE PROJECT	OPERATOR
---------	-----------	--------------	--------	----------	-----------------	----------

Chinook	smolt	Herring Cove	SE	Whitman Lake	Stocking	SSRAA
Chinook	smolt	Carroll Inlet	SE	Whitman Lake	Stocking	SSRAA
Chinook	0-smolt	Carroll Inlet	SE	Beaver Falls	Stocking	SSRAA
Chinook	smolt	Neets Bay	SE	Neets Bay	Stocking	SSRAA
Chinook	smolt	Bear Cove	SE	Medvejie Creek	Stocking	NSRAA
Chinook	smolt	Kasnyku Bay	SE	Hidden Falls	Stocking	NSRAA
Chinook	smolt	Sitka Sound	SE	Sheldon Jackson College	Stocking	SJC
Chinook	smolt	Burnett Inlet	SE	Burnett Inlet	Stocking	AK AQUA
Chinook	smolt	Port Armstrong	SE	Port Armstrong	Stocking	AKI
Chinook	smolt	Gastineau Channel	SE	Gastineau	Stocking	DIPAC
Chinook	fry	Chilkat River	SE	Gastineau	Stocking	DIPAC
Chinook	smolt	Taiya Inlet	SE	Burro Creek	Stocking	BCF
Pink	fry	Port San Juan	PWS	Armin F. Koernig	Stocking	PWSAC
Pink	fry	Lake Bay	PWS	Esther Lake	Stocking	PWSAC
Pink	fry	Unakwik Inlet	PWS	Cannery Creek	Stocking	PWSAC
Pink	fry	Port Valdez	PWS	Solomon Gulch	Stocking	VFDA
Pink	fry	Boulder Bay	PWS	Solomon Gulch	Stocking	VFDA
Pink	fry	Naked Island	PWS	Solomon Gulch	Stocking	VFDA
Chum	fry	Port San Juan	PWS	Armin F. Koernig	Stocking	PWSAC
Chum	fry	Lake Bay	PWS	Esther Lake	Stocking	PWSAC
Chum	fry	Unakwik Inlet	PWS	Cannery Creek	Stocking	PWSAC
Chum	fry	Port Valdez	PWS	Solomon Gulch	Stocking	VFDA
Sockeye	fry	Packers Lake	CI	Trail Lakes	Stocking	CIAA
Sockeye	fry	Hidden Lake	CI	Trail Lakes	Stocking	CIAA
Sockeye	fry	Bear Lake	CI	Trail Lakes	Stocking	CIAA
Sockeye	fry	Chelatna Lake	CI	Trail Lakes	Stocking	CIAA
Sockeye	fry	Paint River Lakes	CI	Trail Lakes	Stocking	CIAA
Sockeye	0-smolt	Coal Creek	CI	Trail Lakes	Stocking	CIAA
Sockeye	0-smolt	Thumb Cove	CI	Trail Lakes	Stocking	CIAA

(NON-INTENSIVELY MODELED PROJECTS)

SE - Pink, Chum, Coho, Sockeye

PWS - Coho, Chinook, Sockeye

CI - Pink, Chum, Chinook, Coho

SPECIES	LIFESTAGE	RELEASE SITE	REGION	HATCHERY	TYPE PROJECT	OPERATOR
Chum S	fry	Naket Inlet	SE	Whitman Lake	Stocking	SSRA

SPECIES	LIFESTAGE	RELEASE SITE	REGION	HATCHERY	TYPE PROJECT	OPERATOR
Chum F	fry	Naket Inlet	SE	Whitman Lake	Stocking	SSRAA
Chum S	fry	Kendrick Bay	SE	Whitman Lake	Stocking	SSRAA
Chum S	fry	Earl West Cove	SE	Whitman Lake	Stocking	SSRAA
Coho	smolt	Naket Inlet	SE	Whitman Lake	Stocking	SSRAA
Coho	smolt	Neets Bay	SE	Whitman Lake	Stocking	SSRAA
Coho	smolt	Earl West Cove	SE	Whitman Lake	Stocking	SSRAA
Coho	smolt	Herring Cove	SE	Whitman Lake	Stocking	SSRAA
Chum S	fry	Neets Bay	SE	Neets Bay	Stocking	SSRAA
Chum F	fry	Neets Bay	SE	Neets Bay	Stocking	SSRAA
Coho	smolt	Neets Bay	SE	Neets Bay	Stocking	SSRAA
Sockeye	0-smolt	George Inlet	SE	Beaver Falls	Stocking	SSRAA
Sockeye	0-smolt	Shrimp Bay	SE	Beaver Falls	Stocking	SSRAA
Pink	fry	Burnett Inlet	SE	Burnett Inlet	Stocking	AAI
Pink	fry	Anita Bay	SE	Burnett Inlet	Stocking	AAI
Chum S	fry	Burnett Inlet	SE	Burnett Inlet	Stocking	AAI
Chum S	fry	Anita Bay	SE	Burnett Inlet	Stocking	AAI
Coho	smolt	Burnett Inlet	SE	Burnett Inlet	Stocking	AAI
Coho	smolt	Bell Island	SE	Bell Island	Stocking	AMERAQUA
Coho	smolt	Bailey Bay	SE	Bell Island	Stocking	AMERAQUA
Steelhead	smolt	Bell Island	SE	Bell Island	Stocking	AMERAQUA
Chum S	fry	Bear Cove	SE	Medvejie Creek	Stocking	NSRAA
Chum S	fry	Deep Inlet	SE	Medvejie Creek	Stocking	NSRAA
Coho	fry	Deer Lake	SE	Medvejie Creek	Stocking	NSRAA
Coho	fry	Patterson Bay Lakes	SE	Medvejie Creek	Stocking	NSRAA
Coho	fry	Kruzof Lakes	SE	Medvejie Creek	Stocking	NSRAA
Coho	smolt	Bear Cove	SE	Medvejie Creek	Stocking	NSRAA
Coho	smolt	Deep Inlet	SE	Medvejie Creek	Stocking	NSRAA
Coho	smolt	Shamrock Bay	SE	Medvejie Creek	Stocking	NSRAA
Chum S	fry	Kasnyku Bay	SE	Hidden Falls	Stocking	NSRAA
Chum S	fry	Takatz Bay	SE	Hidden Falls	Stocking	NSRAA
Coho	fry	Kasnyku Bay	SE	Hidden Falls	Stocking	NSRAA
Chum F	fry	East Camden	SE	Port Camden	Stocking	NSRAA
Chum F	fry	West Camden	SE	Port Camden	Stocking	NSRAA
Pink	fry	Sitka Sound	SE	Sheldon Jackson	Stocking	SJC
Chum S	fry	Sitka Sound	SE	Sheldon Jackson	Stocking	SJC
Coho	smolt	Sitka Sound	SE	Sheldon Jackson	Stocking	SJC
Pink	fry	Sheep Creek	SE	Sheep Creek	Stocking	DIPAC
Chum S	fry	Sheep Creek	SE	Sheep Creek	Stocking	DIPAC
Coho	smolt	Sheep Creek	SE	Sheep Creek	Stocking	DIPAC
Pink	fry	Sheep Creek	SE	Gastineau	Stocking	DIPAC
Pink	fry	Gastineau Channel	SE	Gastineau	Stocking	DIPAC

SPECIES	LIFESTAGE	RELEASE SITE	REGION	HATCHERY	TYPE PROJECT	OPERATOR
Chum S	fry	Sheep Creek	SE	Gastineau	Stocking	DIPAC
Chum S	fry	Gastineau	SE	Gastineau	Stocking	DIPAC
Chum S	fry	Amalga Harbor	SE	Gastineau	Stocking	DIPAC
Chum S	fry	Boat Harbor	SE	Gastineau	Stocking	DIPAC
Chum S	fry	Limestone Inlet	SE	Gastineau	Stocking	DIPAC
Chum S	fry	Sullivan Island	SE	Gastineau	Stocking	DIPAC
Chum S	fry	William Henry Bay	SE	Gastineau	Stocking	DIPAC
Coho	smolt	Gastineau Channel	SE	Gastineau	Stocking	DIPAC
Coho	smolt	Sheep Creek	SE	Gastineau	Stocking	DIPAC
Coho	catchables	Twin Lakes	SE	Gastineau	Stocking	DIPAC
Pink	fry	Gunnuk Creek	SE	Gunnuk Creek	Stocking	KNFC
Pink	fry	Southeast Cove	SE	Gunnuk Creek	Stocking	KNFC
Chum S	fry	Gunnuk Creek	SE	Gunnuk Creek	Stocking	KNFC
Chum S	fry	Southeast Cove	SE	Gunnuk Creek	Stocking	KNFC
Pink	fry	Taiya Inlet	SE	Burro Creek	Stocking	BCF
Chum S	fry	Taiya Inlet	SE	Burro Creek	Stocking	BCF
Coho	smolt	Taiya Inlet	SE	Burro Creek	Stocking	BCF
Pink	fry	Port Armstrong	SE	Port Armstrong	Stocking	AKI
Chum F	fry	Port Armstrong	SE	Port Armstrong	Stocking	AKI
Coho	smolt	Port Armstrong	SE	Port Armstrong	Stocking	AKI
Coho	smolt	Quillian Bay	PWS	Esther Lake	Stocking	PWSAC
Coho	smolt	Whittier	PWS	Esther Lake	Stocking	PWSAC
Coho	smolt	Fleming Spit	PWS	Esther Lake	Stocking	PWSAC
Chinook	smolt	Fleming Spit	PWS	Esther Lake	Stocking	PWSAC
Chinook	smolt	Whittier	PWS	Esther Lake	Stocking	PWSAC
Chinook	smolt	Port Valdez	PWS	Esther Lake	Stocking	PWSAC
Chinook	smolt	Quillian Bay	PWS	Esther Lake	Stocking	PWSAC
Sockeye	fry	Shoestring Lake	PWS	Esther Lake	Stocking	PWSAC
Sockeye	fry	Solf Lake	PWS	Esther Lake	Stocking	PWSAC
Sockeye	smolt	Main Bay (Eshamy)	PWS	Main Bay	Stocking	PWSAC
Sockeye	smolt	Main Bay (Eyak)	PWS	Main Bay	Stocking	PWSAC
Sockeye	smolt	Main Bay (Coghill)	PWS	Main Bay	Stocking	PWSAC
Sockeye	smolt	Eshamy Lake	PWS	Main Bay	Stocking	PWSAC
Coho	smolt	Port Valdez	PWS	Solomon Gulch	Stocking	VFDA
Coho	smolt	Tatitlek Creek	PWS	Solomon Gulch	Stocking	VFDA
Chinook	smolt	Port Valdez	PWS	Solomon Gulch	Stocking	VFDA
Sockeye	fry	Summit Lake	PWS	Gulkana I	Stocking	PWSAC
Sockeye	fry	Cross Wind Lake	PWS	Gulkana I	Stocking	PWSAC
Sockeye	fry	Gulkana River	PWS	Gulkana I	Stocking	PWSAC
Sockeye	fry	Gulkana River	PWS	Gulkana II	Stocking	PWSAC
Chinook	fry	Monsoon Lake	PWS	Gulkana II	Stocking	PWSAC

SPECIES	LIFESTAGE	RELEASE SITE	REGION	HATCHERY	TYPE PROJECT	OPERATOR
Pink	fry	Eklutna	CI	Eklutna	Stocking	CIAA
Chum	fry	Eklutna	CI	Eklutna	Stocking	CIAA
Coho	smolt	Eklutna	CI	Eklutna	Stocking	CIAA
Chinook	smolt	Eklutna	CI	Eklutna	Stocking	CIAA
Coho	smolt	Bear lake	CI	Trail Lakes	Stocking	CIAA
Chinook	smolt	?	CI	Trail Lakes	Stocking	CIAA
Pink	fry	Tutka Lagoon	CI	Tutka	Stocking	CIAA
Pink	fry	Ingram Creek	CI	Tutka	Stocking	CIAA
Pink	fry	Homer Spit	CI	Tutka	Stocking	CIAA
Pink	fry	Halibut Cove	CI	Tutka	Stocking	CIAA
Chum	fry	Tutka Lagoon	CI	Tutka	Stocking	CIAA

FACSIMILE TRANSMITTAL SHEET

FROM: Mark Herrmann

SCHOOL OF MANAGEMENT
UNIVERSITY OF ALASKA, FAIRBANKS
101 BUNNELL BLDG.
FAIRBANKS, ALASKA 99775

TELEPHONE: (907) 474-7461

FAX: (907) 474-5219

John A. Lehman, Acting Dean

TRANSMITTED TO: Ginny Fay

DATE: Apr 17

TIME: 3:00

PAGES: 2

MESSAGES: _____

THANK YOU !!

Fishing Costs Model Preliminary Report

- 0. Executive Summary**
- 1. Summary statistics by Region**
 - A. Regional Aggregate Statistics**
 - # Fishermen
 - Total Revenue
 - # Days Fished
 - Value of Catch Per Unit Effort/Day
 - Species Mix/Average Price
 - B. Gear Type Statistics**
 - Vessel Descriptions/Gear Type
 - # Days Active
 - # Areas Fished
 - Value of Catch per Unit Effort/Day
 - Species Mix/Average Price
- 2. Value of CPUE/Day**
 - A. Relationship with Amount of Effort**
 - Congestion Effects in Effort
 - Number of Processors
 - Variance Across Fishermen
 - Variance Across Gear Types
 - Variance Across Regions
 - B. Relationship with Entry and Selection of Areas**
 - C. Relationship with Exiting Behavior**
- 3. Estimation of Cost/Day and Cost/Opening**
 - A. Relationship of Cost/Opening with:**
 - Vessel/Effort Descriptive Statistics
 - Value of CPUE/Day
 - Probability of Entering
 - B. Relationship of Cost/Day with:**
 - Vessel/Effort Descriptive Statistics
 - Value of CPUE/Day
 - Probability of Exiting
- 4. Estimation of Profits**
 - A. Aggregation Over the Season**
 - B. Relationship with Quantity and Price Variables**
 - C. Example, using Cook Inlet Purse Seine**

**UNIVERSITY OF ALASKA FAIRBANKS****School of Management**
Fairbanks, Alaska 99775-1070

DATE: April 17, 1991
TO: Ginny Fay
FROM: Mark L. Herrmann *MLH*
Department of Economics
Re: Conference Call

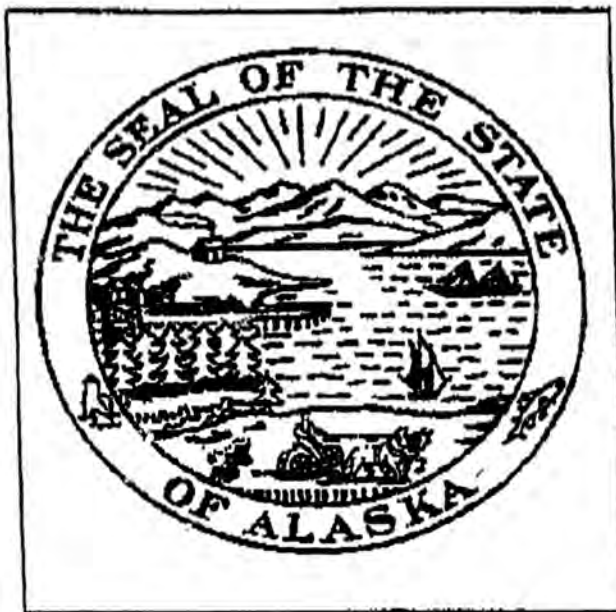
I am glad that we will have the opportunity to talk on Monday at 1:30. Josh and I are in the middle of writing a report on the work in progress on the Salmon Demand Modelling portion of the grant. The main body of the report will be about 100 pages so we are going to summarize the report into a 5 to 10 page executive summary.

The parts of the long report are as follows

- 1) Abstract
- 2) Introduction
- 3) Project's Goals and Objectives
- 4) Progress Report
- 5) Report on Budget
- 6) The Model
- 7) Data Glossary
- 8) Estimation technique
- 9) Estimation results of the exvessel prices for North America and goodness of fit statistics etc.
- 10) Correlation analysis and Estimation results of the exvessel prices for Prince William Sound drift gill net and purse seine, Cook Inlet drift gill, purse seine, Kodiak purse seine and set net, and Southeast hand and power troll by species.
- 11) Conclusion to date.
- 12) Future work to be done

Plus a Executive Summary that will be mainly conclusions of work to date and possible ramifications.

Ginny, Sorry this is late. I just found it on my clock under a pile of rubble. I hope it gets to you on time 😊



FROM:

*Ginny Fay*SENATOR SAM COTTEN
Juneau Office:PO Box V, MS 3100
Room 11, Capitol Bldg
Juneau, AK 99811
FAX: (907) 465-4979
Phone: (907) 465-3711

DATE:

4/9/92

TO:

Jeff Hartman
FRED

FAX #

4/68

MESSAGE:

*Pls. review this language to go
above with the LCM Survey questions
id like to get the forms done today because
the log. res. person is gone today &
you are next week*

Number of Pages:

3

(not counting cover sheet)

Scotch® 7664 "Post-it" Routing-Request Pad

ROUTING - REQUEST

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- ☐ READ
☐ HANDLE
☐ APPROVE
 and
☐ FORWARD
☐ RETURN
☐ KEEP OR DISCARD
☐ REVIEW WITH ME

To *Steve McGee*
*Ginny wants us to
 review the cost form
 language and the
 PNP production form
 for non intensively
 modeled sites*

Date

From

she needs by Monday *Jeff H*
my comments attached

correspond to a specific

SALMON ENHANCEMENT FACILITY OPERATING, CONSTRUCTION, AND MANAGEMENT COSTS

Please describe the annual operating and construction costs for your facility. Your cost estimates should be for fiscal years and for all salmon produced by your facility rather than on a project basis (as the production surveys). For each fiscal year or series of years, provide your estimated total annual costs, as well as how costs can be allocated between commercial and sport/personal use fisheries. The percentage of total annual costs allocated between commercial and sport/personal use fisheries should account for the "TOTAL ANNUAL COSTS." The "management costs" column is to be completed by Alaska Department of Fish and Game fisheries managers.

This is different from

what about the cost of production needed for cost recovery?

The results of the survey will be strictly confidential. No results will be reported on an individual facility basis. Instead the results will be used collectively to calculate an average incremental or "marginal" cost of increases or decreases in enhanced salmon production.

1. This first question refers to the annual operating and construction costs of your facility's **currently permitted production**. For each fiscal year or series of years, please include the costs of all salmon production by your facility, and how these costs are allocated between commercial and sport/personal use fisheries production.

2. Please provide information on the source of funds for your facility production costs listed in question one. The information should be reported in percentages that add up to 100 percent for each year.

3. This question refers to the annual costs of your facility's **future expected permitted production**. For each fiscal year or series of years, please include the expected operating and construction costs of all salmon production by your facility, and how you expect these costs to be allocated between commercial and sport/personal use fisheries.

The next series of questions are intended to provide information to determine the potential change in costs of the salmon enhancement program as a result of increases or decreases in production. The scenarios used to estimate cost changes are completely

These scenarios are for evaluating a mathematical model of hatchery costs

Early scenario is

①

Granny: It would be nice to have the for each year, are a survey we can't get by with 1991. I'm afraid people won't respond. It's a hard leg. will hold them to their promises.

hypothetical and are not being proposed by either the Legislature or the Alaska Department of Fish and Game.

Question 4 contains five parts, each of which hypothetically eliminates the enhancement program ^{in a facility} for one species while holding the production of all other species at their currently permitted level. The results question 4, together with the results to questions 1 and 3, will be used to calculate the "zero" point on the "production cost curves" for each species.

Total 4a. The *pink* salmon portion of the salmon enhancement program ^{in a facility} is eliminated while all other components of the program remain at their currently permitted capacity. Please estimate how this would change the annual costs (fiscal year) of your facility and the allocation of these costs between commercial and sport/personal use fisheries.

4b. The *chum* salmon portion of the salmon enhancement program is eliminated while all other components of the program remain at their currently permitted capacity. Please estimate how this would change the annual costs (fiscal year) of your facility and the allocation of these costs between commercial and sport/personal use fisheries.

4c. *Salmon*
4d. *Salmon*
4e. *King*

Question 5 also contains five parts. In this question, however, each part hypothetically increases by 15 percent the production level of one species while holding the production of all other species at their currently permitted level. The results of question 5, together with the results to questions 1, 3, and 4 will be used to finish calculating the "production cost curves" for each species.

5a. The *pink* salmon portion of the salmon enhancement program is increased by 15 percent while all other components of the program remain at their currently permitted capacity. Please ^{at} estimate how this would change the annual costs (fiscal year) of your facility and the allocation of these costs between commercial and sport/personal use fisheries.

5b. The *chum* salmon portion of the salmon enhancement program is increased by 15 percent while all other components of the

②

program remain at their currently permitted capacity^{ies}. Please^{get} estimate how this would change the annual costs (fiscal year) of your facility and the allocation of these costs between commercial and sport/personal use fisheries.

5c same package
5d same/also
5e same/also

(3)

Post-It™ brand fax transmittal memo 7671		# of pages > 3
To	Jeff Hartman	
Co.	FRED	
Dept.	ADFEG	
Fax #	4168	
From	g-fay	
Co.	Cotton	
Phone #	3711	
Fax #	4979	

PROJECT SURVEY

salmon production at your facility.

This second set of production surveys is different from the first set. It contains fewer questions and is directed to different species and projects. We would like this information on a "project" basis. In this survey, a project is also defined as one species and life stage of salmon released at one location. All fish released in one project should have approximately the same assumed survival rate, migration, and exploitation through major fishing districts. For example, if you release chum and pink salmon fry directly from your hatchery, then you have two different projects. Alternatively, if you release coho and chinook smolts from your hatchery and coho smolts to two different unrelated lake and river drainages, then you have four projects. We are requesting that you complete one survey for each project. Thank you!!!!!!

1. Please provide information about your project such as the location and when the project was initiated.

PROJECT DESCRIPTION: _____

2. What is the name of the hatchery involved with this particular project.

FACILITY NAME: _____

3. Region (circle one): SE PWS CI KOD/AK PEN INT/AYK

4. Please enter the project species--pink, chum, sockeye, coho, or chinook.

SPECIES: _____

5. LIFE STAGE OF RELEASE (e.g., emergent fry, fed fry, fingerling, age-0 smolt, age-1 smolt):
- _____

6. Please provide your estimated survival rate from the green-egg life stage to release. We are looking for your estimation of the most likely survival rate over the 30-year projected time period, 1992-2022.

HATCHERY SURVIVAL:

Green Egg to Release _____ percent

7. Enter the expected percentage of total marine survival of releases to returning adult. Include in your survival estimate those returning adults harvested in the common property fishery--both commercial and personal use/sport fisheries.

TOTAL SURVIVAL TO ADULT:

- A. Release to adult _____ percent
- B. Survival is estimated by:
- a. coded wire tags _____
- b. minimal estimate based on return to hatchery and terminal harvest

- c. guess based on hatchery return, terminal harvest, and guess of mixed-stock harvest

8. Please provide information on your PROJECT'S current and planned operating capacity and the years in which each of these will be in effect. Planned capacity refers to possible future increases in capacity that you expect to occur. If your current capacity is the same as planned or expected operating capacity, indicate "same" in the planned capacity response space. Please remember that a different form is used for each species and lifestage release. Under the "number released" column, enter the number of fish to be released. The number of fish to be released should be based on the survival percentage listed in question number 6.

PROJECT CAPACITY:

CURRENT/PERMITTED			PLANNED/EXPECTED FUTURE PERMITTED PROD.		
Calendar Years	# Eggs	# Releases	Calendar Years	# Eggs	# Releases
1992 to _____	_____	_____	1992 to _____	_____	_____
_____ to _____	_____	_____	_____ to _____	_____	_____
_____ to _____	_____	_____	_____ to _____	_____	_____
_____ to _____	_____	_____	_____ to _____	_____	_____
_____ to _____	_____	_____	_____ to _____	_____	_____
_____ to _____	_____	_____	_____ to _____	_____	_____
_____ to _____	_____	_____	_____ to _____	_____	_____
_____ to _____	_____	_____	_____ to _____	_____	_____
_____ to 2021	_____	_____	_____ to 2021	_____	_____

9. Please provide information on the number of returning adults to your enhancement project for both your current production capacity and your planned production. As in question 8, planned production refers to the production levels expected to occur in the future that are different than current production capacity.

ADULT RETURNS:

CURRENT		PLANNED	
Calendar Years	Number of Fish	Calendar Years	Number of Fish
1992 to _____	_____	1992 to _____	_____
_____ to _____	_____	_____ to _____	_____
_____ to _____	_____	_____ to _____	_____
_____ to _____	_____	_____ to _____	_____
_____ to _____	_____	_____ to _____	_____
_____ to 2021	_____	_____ to 2021	_____

10. MEAN WEIGHT OF RETURNING ADULT MALES: _____ pounds
11. MEAN WEIGHT OF RETURNING ADULT FEMALES: _____ pounds
12. ADULTS HARVESTED IN COMMERCIAL FISHERY:

CURRENT		PLANNED	
Calendar Years	Number of Fish	Calendar Years	Number of Fish
1992 to _____	_____	1992 to _____	_____
_____ to _____	_____	_____ to _____	_____
_____ to _____	_____	_____ to _____	_____
_____ to _____	_____	_____ to _____	_____
_____ to 2021	_____	_____ to 2021	_____

13. ADULTS HARVESTED IN SPORT/PERSONAL USE FISHERIES:

CURRENT		PLANNED	
Calendar Years	Number of Fish	Calendar Years	Number of Fish
1992 to _____	_____	1992 to _____	_____
_____ to _____	_____	_____ to _____	_____
_____ to _____	_____	_____ to _____	_____
_____ to _____	_____	_____ to _____	_____
_____ to 2021	_____	_____ to 2021	_____

Name of Person Completing Survey: _____

Phone Number: _____

14. Cost Recovery Fisheries

FROM: *ginny fay*SENATOR SAM COTTEN
Juneau Office:PO Box V, MS 3100
Room 11, Capitol Bldg
Juneau, AK 99811
FAX: (907) 465-4979
Phone: (907) 465-3711

DATE:

4/9/92

TO:

Jeff Hartman
*FRED*FAX # *4168*

MESSAGE:

*P/S - review this language to go
ahead with the econ survey questions
id like to get the forms done today because
the econ rep. person is going today &
you are next week*

Number of Pages:

7

(not counting cover sheet)

*draft econ survey for
review*

potential change in costs of the salmon enhancement program as a result of increases or decreases in production. The scenarios used to estimate costs changes are completely hypothetical and are not being proposed by either the Legislature or the Alaska Department of Fish and Game.

Question 4 contains five parts, each of which hypothetically eliminates the enhancement program for one species while holding the production of all other species at their currently permitted level. The results of question 4, together with the results of questions 1 and 3, will be used to calculate the "zero" point on the "production cost curves" for each species.

\$ 1,000,000 250K SPORT Harvest
250K Commercial

- 4a. The *pink* salmon portion of the salmon enhancement program is eliminated while all other components of the program remain at their currently permitted capacity. Please estimate how this would change the annual costs (fiscal year) of your facility and the allocation of those costs between commercial and sport/personal use fisheries.

Fiscal Year		Costs		Percentage of Total Annual Costs	
From	To	Operating	Construction	Commercial	Sport/Personal
1992				50%	50%

Management Costs
(ADF&G Use Only)

- 4b. The *chum* salmon portion of the salmon enhancement program is eliminated while all other components of the program remain at their currently permitted capacity. Please estimate how this would change the annual costs (fiscal year) of your facility and the allocation of those costs between commercial and sport/personal use fisheries.

Fiscal Year		Costs		Percentage of Total Annual Costs	
From	To	Operating	Construction	Commercial	Sport/Personal
1992					

Management Costs
(ADF&G Use Only)

- 4c. The *sockeye* salmon portion of the salmon enhancement program is eliminated while all other components of the program remain at their currently permitted capacity. Please estimate how this would change the annual costs (fiscal year) of your facility and the allocation of those costs between commercial and sport/personal use fisheries.

Fiscal Year		Costs		Percentage of Total Annual Costs	
From	To	Operating	Construction	Commercial	Sport/Personal
1992					

Management Costs
(A&G Use Only)

- 4d. The *coho* salmon portion of the salmon enhancement program is eliminated while all other components of the program remain at their currently permitted capacity. Please estimate how this would change the annual costs (fiscal year) of your facility and the allocation of those costs between commercial and sport/personal use fisheries.

Fiscal Year		Costs		Percentage of Total Annual Costs	
From	To	Operating	Construction	Commercial	Sport/Personal
1992					

Management Costs
(A&G Use Only)

- 4e. The *chinook* salmon portion of the salmon enhancement program is eliminated while all other components of the program remain at their currently permitted capacity. Please estimate how this would change the annual costs (fiscal year) of your facility and the allocation of those costs between commercial and sport/personal use fisheries.

Fiscal Year		Costs		Percentage of Total Annual Costs	
From	To	Operating	Construction	Commercial	Sport/Personal
1992					

Management Costs
(ADF&G Use Only)

Question 5 also contains five parts. In this questions, however, each part hypothetically *increases* by 15 percent the production level of one species while holding the production of all other species at their currently permitted level. The results of question 5, together with the results of questions 1, 3, and 4, will be used to finish calculating the "production cost curves" for each species.

- 5a. The *pink* salmon portion of the salmon enhancement program is increased by 15 percent while all other components of the program remain at their currently permitted capacity. Please estimate how this would change the annual costs (fiscal year) of your facility and the allocation of those costs between commercial and sport/personal use fisheries.

Fiscal Year		Costs		Percentage of Total Annual Costs	
From	To	Operating	Construction	Commercial	Sport/Personal
1992					

Management Costs
(ADF&G Use Only)

SALMON ENHANCEMENT FACILITY
OPERATING, CONSTRUCTION, AND MANAGEMENT COSTS

Please describe the annual operating and construction costs for your facility. Your cost estimates should be for fiscal years and for all salmon produced by your facility rather than on a project basis (as the production surveys). For each fiscal year or series of years, provide your estimated total annual costs, as well as how costs can be allocated between commercial and sport/personal use fisheries. The percentage of total annual costs allocated between commercial and sport/personal use fisheries should account for the "TOTAL ANNUAL COSTS." The "management costs" column is to be completed by Alaska Department of Fish and Game fisheries managers.

The results of the survey will be strictly confidential. No results will be reported on an individual facility basis. Instead the results will be used collectively to calculate an average incremental or "marginal" cost of increases or decreases in enhanced salmon production.

1. This first question refers to the annual operating and construction costs of your facility's *currently permitted production*. For each fiscal year or series of years, please include the costs of all salmon production by your facility, and how these costs are allocated between commercial and sport/personal use fisheries production. *100%*
2. Please provide information on the source of funds for your facility production costs listed in question one. The information should be reported in percentages that add up to 100 percent for each year.
3. This question refers to the annual costs of your facility's *future expected permitted production*. For each fiscal year or series of years, please include the expected operating and construction costs of all salmon production by your facility, and how you expect these costs to be allocated between commercial and sport/personal use fisheries. *100%*

The next series of questions are intended to provide information to determine the potential change in costs of the salmon enhancement program as a result of increases or decreases in production. The scenarios used to estimate cost changes are completely

①

a. Pink
by [unclear]

hypothetical and are not being proposed by either the
Legislature or the Alaska Department of Fish and Game.

Question 4 contains five parts, each of which hypothetically eliminates the enhancement program for one species while holding the production of all other species at their currently permitted level. The results question 4, together with the results to questions 1 and 3, will be used to calculate the "zero" point on the "production cost curves" for each species.

4a. The *pink* salmon portion of the salmon enhancement program is eliminated while all othre components of the program remain at their currently permitted capacity. Please estimate how this would change the annual costs (fiscal year) of your facility and the allocation of these costs between commercial and sport/personal use fisheries.

4b. The *chum* salmon portion of the salmon enhancement program is eliminated while all othre components of the program remain at their currently permitted capacity. Please estimate how this would change the annual costs (fiscal year) of your facility and the allocation of these costs between commercial and sport/personal use fisheries.

Question 5 also contains five parts. In this question, however, each part hypothetically **increases** by 15 percent the production level of one species while holding the production of all other species at their currently permitted level. The results of question 5, together with the results to questions 1, 3, and 4 will be used to finish calculating the "production cost curves" for each species.

5a. The *pink* salmon portion of the salmon enhancement program is **increased by 15 percent** while all other components of the program remain at their currently permitted capacity. Please estimate how this would change the annual costs (fiscal year) of your facility and the allocation of these costs between commercial and sport/personal use fisheries.

5b. The *chum* salmon portion of the salmon enhancement program is **increased by 15 percent** while all other components of the

program remain at their currently permitted capacity. Please estimate how this would change the annual costs (fiscal year) of your facility and the allocation of these costs between commercial and sport/personal use fisheries.

Some suggestions for the letter to PNP operators.

I would like to thank you for the work that you invested the hatchery survey of intensely modeled enhancement projects for the Hatchery Research Project. The contractor for population modeling portion of the project is now using the survey data.

This is the last portion of the surveying for the project, and again we would like to request your help completing 2 forms.

The first form is the SALMON ENHANCEMENT PROJECT survey for the non-intensively modeled projects. It is shorter and simpler than the intensively modeled site form. A sperate form for each project is included. If you have corrections to the project name or to other identifying data, or if there are additional projects not included in the surveys provided, please make the appropriate corrections or additions. Blank forms are attached.

The second form is a cost of production survey for each facility, identified under FACILITY NAME field in the SALMON ENHANCEMENT PROJECT survey. This form, called the FACILITY OPERATING, CONSTRUCTION, AND MANAGEMENT COST SURVEY, is designed to be similar to the type of budget forecasting that you might do for any upcoming fiscal year. One of these forms must be filled out for each facility associated with INTENSELY or NON-INTENSELY modeled projects. There are, however, some special production cost cases, that will require you to project costs for production levels that may never be feasible for you to operate in. These cases are necessary to create a mathematical model of operating and construction costs for the statewide enhancement program, which allows the computation of costs of production levels not included in the survey. These other cases are to be very aggregate in scale, and will not be used to determine benefits and costs of individual hatchery outputs.

Ginny: Some of the following could be put in the instructions if it is too wordy here.

Operating and construction costs for some increased production scenarios are requested in the survey form. These production increases are aggregated by species while production survey forms are filled out for each project. Since some facilities will have more than 1 project and release location for a given species, this may cause some confusion in determining how to apportion these costs between projects. In these cases, the incremental production costs (for the 15% increase scenario) should be estimated for the most likely and efficient combination of production from each project that you have.

Example: Two sockeye projects are carried out at Facility 2. Together they produce 20,000 sockeye harvests in 1994, and are projected to produce 30,000 harvests in 1999 to 2021.

Increased production of project 1 for sockeye salmon (producing

harvests of 10,000 fish in 1996 from smolt releases in previous years) would be difficult to increase by 15% without some radical changes in management, or new construction.

Project 2 also produces 10,000 harvested fish in 1996 but, fry releases could easily be increased to 15% of the total sockeye production of 20,000 harvested fish ($20,000 \times 1.15 = 23,000$ fish from project 2).

Thus, costs for the increase production should be estimated for project 2, the most likely source of increased production.

For the 15% incremental increased production scenario, it may not be practical to increase production for this species at all in your facility. If there is simply no way to do this, without adding a new project, leave the associated 15% production case blank for that species, but note why you could not carry it out on the form.

Finally, the cost projections for the 15% production level increase should be based upon obtaining the increased harvests in one single salmon life cycle, or as nearly as possible to that time interval.

There will undoubtedly be questions about how to fill out the survey, please address these to Steve McGee.



FROM: *ginny fay*

SENATOR SAM COTTEN

Juneau Office:

PO Box V, MS 3100

Room 11, Capitol Bldg

Juneau, AK 99811

FAX: (907) 465-4979

Phone: (907) 465-3711

DATE:

4/9/92

TO:

Jeff Hartman
FRED

FAX #

4/68

MESSAGE:

*Pls. review this language to go
about with the ECA survey questions
id like to get the forms done today because
the leg. rep. person is going away &
you are next week*

Number of Pages:

7

(not counting cover sheet)

*draft ECA survey for
review*

to: Ginny
fr: Jeff Hartman

Here are some ideas for the simplified survey.

Major Changes include:

1. Eliminating all of the data on source of funds.
2. Aggregating by species/facility instead of by project.
3. Eliminating many of the cases, except for current production, planned production, +15% for each species, and -100% for all species.
4. Including management costs (though this gets filled out by comm fish later).
5. Each case constitutes a record, (or Observation in SAS lingo).

System of equations for a production function for enhanced fish.

Background

Data from the Legislatures production and cost survey would be used to develop a function for each of five salmon species that would project the marginal cost of a fish at various production levels.

The Data

Two separate surveys produce a time series on:

- (1) production costs for fish produced at a facility.
- and (2) production harvests that correspond with the projected costs.

The time series is 30 years

For the production harvest model the variables are:
harvest by species/ facility/ year, cases.

Dependent variable is ~~price~~
cost per harvested fish/species/facility.

The Model

Species 5
Regions 5
Facilities 40
Year 30
cases 4

data= #fish/species/facility
and total costs/facility
System of equation such as:

$$SP_i = f(SP_j, tc) \quad i \neq j$$

[illegible][illegible]

Operating, ^{Construction} Capital and Management Costs Survey For projects in both yellow & green surveys for State

Fiscal Years	Operating Costs	Construction	% Sport plus	% Comm	Mo Management
1992 to _____	_____	_____	_____	_____	_____
_____ " _____	_____	_____	_____	_____	_____
_____ " _____	_____	_____	_____	_____	_____
_____ " _____	_____	_____	_____	_____	_____
_____ " _____	_____	_____	_____	_____	_____
_____ " _____	_____	_____	_____	_____	_____
_____ " 2001	_____	_____	_____	_____	_____

Portrait

Optional
 Source of funds
 from State & Fed
 Sources

ay
artman

Ginny:

We did receive your faxed memo and it got things rolling. Thanks. List of the PNP projects that you requested for the non-intensively modeled sites in the economic analysis is attached. Will carry over a clean copy when we meet.

We are reviewing the PNP production survey form and should have final comments on this promptly.

The Wednesday meeting would be very helpful to revise cost survey form. It would be a bit difficult to discuss and test ideas in a memo. Changes you have already made are similar to concept I had in mind.

I am working on a database in Paradox, to summarize the final project names, species/locations and review status of all of the State and PNP projects. By adding additional fields it could house all of the production information. A second database and form for the cost model could be developed. Paradox is relational, so the two files can be combined to display production/cost combinations for any species/facility combination. Form entry makes it easy for clerical people to do data entry. Making the full database and form entry would be a bit of work. I think I would be willing and able to do the database part of this.

The data entry is another problem, that would be very difficult to load onto our clerical staff. What do you think about Leg Research doing data entry from forms? They would need to either purchase a copy of Paradox, (about \$300 to \$500) or temporarily pirate copy from FRED. I'd have to check on the latter.

I am flexible this week for a meeting. Wednesday sounds fine am or pm.

Post-It™ brand fax transmittal memo 7671 # of pages 3

Left Hartman
ERED
-cg

From g-fay
Co. 1046
Phone # 3711
Fax # 4979

SPECIES LIFESTAGE RELEASE SITE REGION HATCHERY PROJECT OPERATOR

Project List for PNP Hatcheries

Southeast Chinook
PWS Pink and Chum
Cook Inlet Sockeye

(INTENSIVELY MODELED PROJECTS)

SPECIES	LIFESTAGE	RELEASE SITE	REGION	HATCHERY	TYPE	PROJECT	OPERATOR
Chinook	smolt	Herring Cove	SE	Whitman Lake	Stocking	SSRAA	
Chinook	smolt	Carroll Inlet	SE	Whitman Lake	Stocking	SSRAA	
Chinook	0-smolt	Carroll Inlet	SE	Beaver Falls	Stocking	SSRAA	
Chinook	smolt	Neets Bay	SE	Neets Bay	Stocking	SSRAA	
Chinook	smolt	Bear Cove	SE	Medveje Creek	Stocking	NSRAA	
Chinook	smolt	Kasnyku Bay	SE	Hidden Falls	Stocking	NSRAA	
Chinook	smolt	Sitka Sound	SE	Sheldon Jackson College	Stocking	SJC	
Chinook	smolt	Burnett Inlet	SE	Burnett Inlet	Stocking	AK AQUA	
Chinook	smolt	Port Armstrong	SE	Port Armstrong	Stocking	AKI	
Chinook	smolt	Gastineau Channel	SE	Gastineau	Stocking	DIPAC	
Chinook	fry	Chilkat River	SE	Gastineau	Stocking	DIPAC	
Chinook	smolt	Taiya Inlet	SE	Burro Creek	Stocking	BCF	
Pink	fry	Port San Juan	PWS	Armin F. Koernig	Stocking	PWSAC	
Pink	fry	Lake Bay	PWS	Esther Lake	Stocking	PWSAC	
Pink	fry	Unukwik Inlet	PWS	Cannery Creek	Stocking	PWSAC	
Pink	fry	Port Valdez	PWS	Solomon Gulch	Stocking	VFDA	
Pink	fry	Boulder Bay	PWS	Solomon Gulch	Stocking	VFDA	
Pink	fry	Naked Island	PWS	Solomon Gulch	Stocking	VFDA	
Chum	fry	Port San Juan	PWS	Armin F. Koernig	Stocking	PWSAC	
Chum	fry	Lake Bay	PWS	Esther Lake	Stocking	PWSAC	
Chum	fry	Unukwik Inlet	PWS	Cannery Creek	Stocking	PWSAC	
Chum	fry	Port Valdez	PWS	Solomon Gulch	Stocking	VFDA	
Sockeye		Packers Lake	CI	Trail Lakes	Stocking	CIAA	
Sockeye		Hidden Lake	CI	Trail Lakes	Stocking	CIAA	
Sockeye	fry	Trail Lake	CI	Trail Lakes	Stocking	CIAA	
Sockeye	fry	Trail Lake	CI	Trail Lakes	Stocking	CIAA	
Sockeye	fry	Paint River Lake	CI	Trail Lakes	Stocking	CIAA	
Sockeye	0-smolt	Coal Creek	CI	Trail Lakes	Stocking	CIAA	
Sockeye	0-smolt	Thumb Cove	CI	Trail Lakes	Stocking	CIAA	

(NON-INTENSIVELY MODELED PROJECTS)

SE - Pink, Chum, Coho, Sockeye

PWS - Coho, Chinook, Sockeye

CI - Pink, Chum, Chinook, Coho

SPECIES	LIFE	RELEASE SITE	REGION	HATCHERY	TYPE	PROJECT	OPERATOR
Chum	fry	Naked Inlet	SE	Whitman Lake	Stocking	SSRAA	

SPECIES	LIFESTAGE	RELEASE SITE	REGION	HATCHERY	TYPE PROJECT	OPERATOR
Chum F	fry	Naket Inlet	SE	Whitman Lake	Stocking	SSRAA
Chum S	fry	Kendrick Bay	SE	Whitman Lake	Stocking	SSRAA
Chum S	fry	Earl West Cove	SE	Whitman Lake	Stocking	SSRAA
Coho	smolt	Naket Inlet	SE	Whitman Lake	Stocking	SSRAA
Coho	smolt	Neets Bay	SE	Whitman Lake	Stocking	SSRAA
Coho	smolt	Earl West Cove	SE	Whitman Lake	Stocking	SSRAA
Coho	smolt	Herring Cove	SE	Whitman Lake	Stocking	SSRAA
Chum S	fry	Neets Bay	SE	Neets Bay	Stocking	SSRAA
Chum F	fry	Neets Bay	SE	Neets Bay	Stocking	SSRAA
Coho	smolt	Neets Bay	SE	Neets Bay	Stocking	SSRAA
Sockeye	0-smolt	George Inlet	SE	Beaver Falls	Stocking	SSRAA
Sockeye	0-smolt	Shrimp Bay	SE	Beaver Falls	Stocking	SSRAA
Pink	fry	Burnett Inlet	SE	Burnett Inlet	Stocking	AAI
Pink	fry	Anita Bay	SE	Burnett Inlet	Stocking	AAI
Chum S	fry	Burnett Inlet	SE	Burnett Inlet	Stocking	AAI
Chum S	fry	Anita Bay	SE	Burnett Inlet	Stocking	AAI
Coho	smolt	Burnett Inlet	SE	Burnett Inlet	Stocking	AAI
Coho	smolt	Bell Island	SE	Bell Island	Stocking	AMERAQUA
Coho	smolt	Bailey Bay	SE	Bell Island	Stocking	AMERAQUA
Steelhead	smolt	Bell Island	SE	Bell Island	Stocking	AMERAQUA
Chum S	fry	Bear Cove	SE	Medvejie Creek	Stocking	NSRAA
Chum S	fry	Deep Inlet	SE	Medvejie Creek	Stocking	NSRAA
Coho	fry	Deer Lake	SE	Medvejie Creek	Stocking	NSRAA
Coho	fry	Patterson Bay Lakes	SE	Medvejie Creek	Stocking	NSRAA
Coho	fry	Kruzof Lakes	SE	Medvejie Creek	Stocking	NSRAA
Coho	smolt	Bear Cove	SE	Medvejie Creek	Stocking	NSRAA
Coho	smolt	Deep Inlet	SE	Medvejie Creek	Stocking	NSRAA
Coho	smolt	Shamrock Bay	SE	Medvejie Creek	Stocking	NSRAA
Chum S	fry	Kasnyku Bay	SE	Hidden Falls	Stocking	NSRAA
Chum S	fry	Takatz Bay	SE	Hidden Falls	Stocking	NSRAA
Coho	fry	Kasnyku Bay	SE	Hidden Falls	Stocking	NSRAA
Chum F	fry	East Camden	SE	Port Camden	Stocking	NSRAA
Chum F	fry	West Camden	SE	Port Camden	Stocking	NSRAA
Pink	fry	Sitka Sound	SE	Sheldon Jackson	Stocking	SJC
Chum S	fry	Sitka Sound	SE	Sheldon Jackson	Stocking	SJC
Coho	smolt	Sitka Sound	SE	Sheldon Jackson	Stocking	SJC
Pink	fry	Sheep Creek	SE	Sheep Creek	Stocking	DIPAC
Chum S	fry	Sheep Creek	SE	Sheep Creek	Stocking	DIPAC
Coho	smolt	Sheep Creek	SE	Sheep Creek	Stocking	DIPAC
Pink	fry	Sheep Creek	SE	Gastineau	Stocking	DIPAC
Pink	fry	Gastineau Channel	SE	Gastineau	Stocking	DIPAC

SPECIES	LIFESTAGE	RELEASE SITE	REGION	HATCHERY	TYPE PROJECT	OPERATOR
Chum S	fry	Sheep Creek	SE	Gastineau	Stocking	DIPAC
Chum S	fry	Gastineau	SE	Gastineau	Stocking	DIPAC
Chum S	fry	Amalga Harbor	SE	Gastineau	Stocking	DIPAC
Chum S	fry	Boat Harbor	SE	Gastineau	Stocking	DIPAC
Chum S	fry	Limestone Inlet	SE	Gastineau	Stocking	DIPAC
Chum S	fry	Sullivan Island	SE	Gastineau	Stocking	DIPAC
Chum S	fry	William Henry Bay	SE	Gastineau	Stocking	DIPAC
Coho	smolt	Gastineau Channel	SE	Gastineau	Stocking	DIPAC
Coho	smolt	Sheep Creek	SE	Gastineau	Stocking	DIPAC
Coho	catchables	Twin Lakes	SE	Gastineau	Stocking	DIPAC
Pink	fry	Gunnuk Creek	SE	Gunnuk Creek	Stocking	KNFC
Pink	fry	Southeast Cove	SE	Gunnuk Creek	Stocking	KNFC
Chum S	fry	Gunnuk Creek	SE	Gunnuk Creek	Stocking	KNFC
Chum S	fry	Southeast Cove	SE	Gunnuk Creek	Stocking	KNFC
Pink	fry	Taiya Inlet	SE	Burro Creek	Stocking	BCF
Chum S	fry	Taiya Inlet	SE	Burro Creek	Stocking	BCF
Coho	smolt	Taiya Inlet	SE	Burro Creek	Stocking	BCF
Pink	fry	Port Armstrong	SE	Port Armstrong	Stocking	AKI
Chum S	fry	Port Armstrong	SE	Port Armstrong	Stocking	AKI
Chum S	smolt	Port Armstrong	SE	Port Armstrong	Stocking	AKI
Chum S	smolt	Quillian Bay	PWS	Esther Lake	Stocking	PWSAC
Chum S	smolt	Whittier	PWS	Esther Lake	Stocking	PWSAC
Chum S	smolt	Fleming Spit	PWS	Esther Lake	Stocking	PWSAC
Chum S	smolt	Fleming Spit	PWS	Esther Lake	Stocking	PWSAC
Chum S	smolt	Whittier	PWS	Esther Lake	Stocking	PWSAC
Chum S	smolt	Port Valdez	PWS	Esther Lake	Stocking	PWSAC
Chum S	smolt	Quillian Bay	PWS	Esther Lake	Stocking	PWSAC
Sockeye	fry	Shoestring Lake	PWS	Esther Lake	Stocking	PWSAC
Sockeye	fry	Solf Lake	PWS	Esther Lake	Stocking	PWSAC
Sockeye	smolt	Main Bay (Eshamy)	PWS	Main Bay	Stocking	PWSAC
Sockeye	smolt	Main Bay (Eyak)	PWS	Main Bay	Stocking	PWSAC
Sockeye	smolt	Main Bay (Coghill)	PWS	Main Bay	Stocking	PWSAC
Sockeye	smolt	Eshamy Lake	PWS	Main Bay	Stocking	PWSAC
Coho	smolt	Port Valdez	PWS	Solomon Gulch	Stocking	VFDA
Coho	smolt	Tatitlek Creek	PWS	Solomon Gulch	Stocking	VFDA
Chinook	smolt	Port Valdez	PWS	Solomon Gulch	Stocking	VFDA
Sockeye	fry	Summit Lake	PWS	Gulkana I	Stocking	PWSAC
Sockeye	fry	Cross Wind Lake	PWS	Gulkana I	Stocking	PWSAC
Sockeye	fry	Gulkana River	PWS	Gulkana I	Stocking	PWSAC
Sockeye	fry	Gulkana River	PWS	Gulkana II	Stocking	PWSAC
Chinook	fry	Monsoon Lake	PWS	Gulkana II	Stocking	PWSAC

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SPECIES	LIFESTAGE	RELEASE SITE	REGION	HATCHERY	TYPE PROJECT	OPERATOR
Pink	fry	Eklutna	CI	Eklutna	Stocking	CIAA
Chum	fry	Eklutna	CI	Eklutna	Stocking	CIAA
Coho	smolt	Eklutna	CI	Eklutna	Stocking	CIAA
Chinook	smolt	Eklutna	CI	Eklutna	Stocking	CIAA
Coho	smolt	Bear lake	CI	Trail Lakes	Stocking	CIAA
Chinook	smolt	?	CI	Trail Lakes	Stocking	CIAA
Pink	fry	Tutka Lagoon	CI	Tutka	Stocking	CIAA
Pink	fry	Ingram Creek	CI	Tutka	Stocking	CIAA
Pink	fry	Homer Spit	CI	Tutka	Stocking	CIAA
Pink	fry	Halibut Cove	CI	Tutka	Stocking	CIAA
Chum	fry	Tutka Lagoon	CI	Tutka	Stocking	CIAA

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Project List for PNP Hatcheries

Southeast Chinook
PWS Pink and Chum
Cook Inlet Sockeye

(INTENSIVELY MODELED PROJECTS)

SPECIES	LIFESTAGE	RELEASE SITE	REGION	HATCHERY	TYPE PROJECT	OPERATOR
Chinook	smolt ✓	Herring Cove ✓	SE	Whitman Lake ✓	Stocking	SSRAA
Chinook	smolt ✓	Carroll Inlet ✓	SE	Whitman Lake ✓	Stocking	SSRAA
Chinook	0-smolt ✓	Carroll Inlet ✓	SE	Beaver Falls ✓	Stocking	SSRAA
Chinook	smolt ✓	Neets Bay ✓	SE	Neets Bay ✓	Stocking	SSRAA
Chinook	smolt ✓	Bear Cove ✓	SE	Medvejie Creek ✓	Stocking	NSRAA
Chinook	smolt ✓	Kasnyku Bay ✓	SE	Hidden Falls ✓	Stocking	NSRAA
Chinook	smolt ✓	Sitka Sound ✓	SE	Sheldon Jackson College ✓	Stocking	SJC
Chinook	smolt ✓	Burnett Inlet ✓	SE	Burnett Inlet ✓	Stocking	AK AQUA
Chinook	smolt ✓	Port Armstrong ✓	SE	Port Armstrong ✓	Stocking	AKI
Chinook	smolt ✓	Gastineau Channel ✓	SE	Gastineau ✓	Stocking	DIPAC
Chinook	fry ✓	Chilkat River ✓	SE	Gastineau ✓	Stocking	DIPAC
Chinook	smolt ✓	Taiya Inlet ✓	SE	Burro Creek ✓	Stocking	BCF
Pink	fry ✓	Port San Juan ✓	PWS	Armin F. Koernig ✓	Stocking	PWSAC
Pink	fry ✓	Lake Bay ✓	PWS	Esther Lake ✓	Stocking	PWSAC
Pink	fry ✓	Unakwik Inlet ✓	PWS	Cannery Creek ✓	Stocking	PWSAC
Pink	fry ✓	Port Valdez ✓	PWS	Solomon Gulch ✓	Stocking	VFDA
Pink	fry ✓	Boulder Bay ✓	PWS	Solomon Gulch ✓	Stocking	VFDA
Pink	fry ✓	Naked Island ✓	PWS	Solomon Gulch ✓	Stocking	VFDA
Chum	fry ✓	Port San Juan ✓	PWS	Armin F. Koernig ✓	Stocking	PWSAC
Chum	fry ✓	Lake Bay ✓	PWS	Esther Lake ✓	Stocking	PWSAC
Chum	fry ✓	Unakwik Inlet ✓	PWS	Cannery Creek ✓	Stocking	PWSAC
Chum	fry ✓	Port Valdez ✓	PWS	Solomon Gulch ✓	Stocking	VFDA
Sockeye	fry ✓	Packers Lake ✓	CI	Trail Lakes ✓	Stocking	CIAA
Sockeye	fry ✓	Hidden Lake ✓	CI	Trail Lakes ✓	Stocking	CIAA
Sockeye	fry ✓	Bear Lake ✓	CI	Trail Lakes ✓	Stocking	CIAA
Sockeye	fry ✓	Chelatna Lake ✓	CI	Trail Lakes ✓	Stocking	CIAA
Sockeye	fry ✓	Paint River Lakes ✓	CI	Trail Lakes ✓	Stocking	CIAA
Sockeye	0-smolt ✓	Coal Creek ✓	CI	Trail Lakes ✓	Stocking	CIAA
Sockeye	0-smolt	Thumb Cove	CI	Trail Lakes	Stocking	CIAA

Survey responses for State and/or PNP salmon salmon enhancement Projects

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Species	Lifestage at release	Release location	Region of Production	Hatchery Involved	Type of Project	Intense Modeled	Filled out by:	Comple	Error chKFRED	Valid Proj	PNP/ STATE
BEAVER FALLS HATCHERY											
RED	FRY	BADGER/BAKEWELL	SE	BEAVER FALLS HATCHERY	STOCK/LIMN	N	MIKE HADDIX	Y	Y	Y	S
RED	FRY	HUGH SMITH	SE	BEAVER FALLS HATCHERY	STOCK/LIMN	N	MIKE HADDIX	Y	Y	Y	S
RED	FRY	MARGARET LAKE	SE	BEAVER FALLS HATCHERY	STOCK/LIMN	N	MIKE HADDIX	Y	Y	Y	S
RED	FRY	MCDONALD LAKE	SE	BEAVER FALLS HATCHERY	STOCK/LIMN	N	MIKE HADDIX	Y	Y	N	S
RED	FRY	SALMON LK/KARTA	SE	BEAVER FALLS HATCHERY	STOCK/LIMN	N	MIKE HADDIX	Y	Y	Y	S
RED	FRY	VIRGINIA LAKE	SE	BEAVER FALLS HATCHERY	STOCK/LIMN	N	MIKE HADDIX	Y	Y	Y	S
BIG LAKE HATCHERY											
COHO	1-AG SMOLT	COTTONWOOD CR	CI	BIG LAKE HATCHERY	STOCK	N	BILL HAUSER	Y	Y	Y	S
COHO	1-AG SMOLT	WASILLA CREEK	CI	BIG LAKE HATCHERY	STOCK	N	BILL HAUSER	Y	Y	Y	S
COHO	SMOLT	FISH CREEK SMOLT	CI	BIG LAKE HATCHERY	STOCK	N	BILL HAUSER	Y	Y	Y	S
RED	FRY	ENGLISH BAY	CI	BIG LAKE HATCHERY	STOCK	Y	BILL HAUSER	Y	Y	Y	S
RED	FRY	MEADOW CR. BIG LK, & NCI	CI	BIG LAKE HATCHERY	STOCK	Y	BILL HAUSER	Y	Y	Y	S

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Species	Lifestage at release	Release location	Region of Production	Hatchery Involved	Type of Project	Intense Modeled	Filled out by:	Completeness	Error checked	Valid Proj	PNP/STATE
BIG LAKE HATCHERY											
RED	FRY	NORTH COOK INLET PROPOSED	CI	BIG LAKE HATCHERY	STOCK	Y	BILL HAUSER	Y	Y	Y	S
RED	SMOLT	WEST COOK INLET	CI	BIG LAKE HATCHERY	STOCK	Y	BILL HAUSER	Y	Y	Y	S
CROOKED CR HATCHERY											
COHO	1-AG SMOLT	CROOKED CREEK	CI	CROOKED CR HATCHERY	STOCK	N	BILL HAUSER	Y	Y	Y	S
COHO	FINGERLING	CARIBOU LAKE	CI	CROOKED CR HATCHERY	STOCK	N	BILL HAUSER	Y	Y	N	S
COHO	FINGERLING	SELDOVIA LAKE	CI	CROOKED CR HATCHERY	STOCK	N	BILL HAUSER	Y	Y	N	S
KING	1-AG SMOLT	HOMER SPIT (LATE)	CI	CROOKED CR HATCHERY	STOCK	N	BILL HAUSER	Y	Y	N	S
KING	1-AG SMOLT	SEWARD (LATE)	CI	CROOKED CR HATCHERY	STOCK	N	BILL HAUSER	Y	Y	N	S
RED	FRY	BRUIN LAKE	CI	CROOKED CR HATCHERY	STOCK/LIMN	Y	BILL HAUSER	Y	Y	Y	S
RED	FRY	CHENIK LAKE	CI	CROOKED CR HATCHERY	STOCK/LIMN	Y	BILL HAUSER	Y	Y	Y	S
RED	FRY	HAZEL LAKE	CI	CROOKED CR HATCHERY	STOCK/LIMN	Y	BILL HAUSER	Y	Y	Y	S
RED	FRY	KATCH BAY LAKS (LEISURE)	CI	CROOKED CR HATCHERY	STOCK	Y	BILL HAUSER	Y	Y	Y	S
RED	FRY	KIRSCHNER LAKE SOCK	CI	CROOKED CR HATCHERY	STOCK/LIMN	Y	BILL HAUSER	Y	Y	Y	S

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Species	Lifestage at release	Release location	Region of Production	Hatchery Involved	Type of Project	Intense Modeled	Filled out by:	Comple	Error chk	Valid FRED	PNP/ STATE
CROOKED CR HATCHERY											
RED	FRY	PORT DICK LAKE	CI	CROOKED CR HATCHERY	STOCK	Y	BILL HAUSER	Y	Y	Y	S
RED	FRY	TUSTUMENA LAKE	CI	CROOKED CR HATCHERY	STOCK/LIMN	Y	BILL HAUSER	Y	Y	Y	S
CRYSTAL LAKE HATCHERY											
COHO	1-AG SMOLT	CRYSTAL CREEK	SE	CRYSTAL LAKE HATCHERY	STOCK	N	BOB ZORICH	Y	Y	Y	S
COHO	FRY	CRYSTAL LAKE F PASS REMT.	SE	CRYSTAL LAKE HATCHERY	FPASS	N	BOB ZORICH	Y	Y	Y	S
KING	1-AG SMOLT	CRYSTAL CREEK	SE	CRYSTAL LAKE HATCHERY	STOCK	Y	BOB ZORICH	Y	Y	Y	S
KING	1-AG SMOLT	EARL WEST-TRANS SMOLT	SE	CRYSTAL LAKE HATCHERY	STOCK	Y	BOB ZORICH	Y	Y	Y	S
KING	1-AG SMOLT	OHMER CR	SE	CRYSTAL LAKE HATCHERY	STOCK	Y	BOB ZORICH	Y	Y	Y	S
KING	FED FRY	FARRAGUT RIVER	SE	CRYSTAL LAKE HATCHERY	STOCK	Y	BOB ZORICH	Y	Y	Y	S
KING	FED FRY	HARDING RIVER	SE	CRYSTAL LAKE HATCHERY	STOCK	Y	BOB ZORICH	Y	Y	Y	S
DEER MOUNTAIN HATCHERY											
KING	1-AG SMOLT	B.SALT,KLA,THORNE BAY	SE	DEER MOUNTAIN HATCHERY	STOCK	Y	CAROL DENTON	Y	Y	Y	S

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Species	Lifestage at release	Release location	Region of Production	Hatchery Involved	Type of Project	Intense Modeled	Filled out by:	Comple	Error ch	Valid FRED	PNP/ Proj	STATE
DEER MOUNTAIN HATCHERY												
DEER MOUNTAIN HATCHERY												
COHO	1-AG SMOLT	KETCHIKAN CR	SE	DEER MOUNTAIN HATCHERY	STOCK	N	CAROL DENTON	Y	Y	Y	S	
COHO	1-AG SMOLT	MARGARET LAKE	SE	DEER MOUNTAIN HATCHERY	STOCK	N	CAROL DENTON	Y	Y	Y	S	
COHO	FINGERLING	REFLECTION LAKE	SE	DEER MOUNTAIN HATCHERY	STOCK	N	CAROL DENTON	Y	Y	Y	S	
COHO	PRE-SMOLT	WARD LAKE	SE	DEER MOUNTAIN HATCHERY	STOCK	N	CAROL DENTON	Y	Y	Y	S	
KING	1-AG SMOLT	KETCHIKAN CR	SE	DEER MOUNTAIN HATCHERY	STOCK	Y	CAROL DENTON	Y	Y	Y	S	
ELMENDORF HATCHERY												
COHO	1-AG SMOLT	HOMER SPIT RELEASE	CI	ELMENDORF HATCHERY	STOCK	N	BILL HAUSER	Y	Y	(N)	S	
COHO	1-AG SMOLT	LOWELL CR RELEASE	CI	ELMENDORF HATCHERY	STOCK	N	BILL HAUSER	Y	Y	(N)	S	
COHO	1-AG SMOLT	SEWARD LAGOON RELEASE	CI	ELMENDORF HATCHERY	STOCK	N	BILL HAUSER	Y	Y	(N)	S	
COHO	1-AG SMOLT	SHIP CREEK	CI	ELMENDORF HATCHERY	STOCK	N	BILL HAUSER	Y	Y	Y	S	
KING	0-AG SMOLT	CROOKED CREEK	CI	ELMENDORF HATCHERY	STOCK	N	BILL HAUSER	Y	Y	(N)	S	

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Species	Lifestage at release	Release location	Region of Production	Hatchery Involved	Type of Project	Intense Modeled	Filled out by:	Completeness	Error checked	Valid PROJ	PNP/STATE
ELMENDORF HATCHERY											
KING	0-AG SMOLT	EAGLE RIVER	CI	ELMENDORF HATCHERY	STOCK	N	BILL HAUSER	Y	Y	Y	S ✓
KING	0-AG SMOLT	HALIBUT COVE	CI	ELMENDORF HATCHERY	STOCK	N	BILL HAUSER	Y	Y	Y	S ✓
KING	0-AG SMOLT	HOMER (EARLY)	CI	ELMENDORF HATCHERY	STOCK	N	BILL HAUSER	Y	Y	(N)	S
KING	0-AG SMOLT	LOWELL CR (SEWARD EARLY)	CI	ELMENDORF HATCHERY	STOCK	N	BILL HAUSER	Y	Y	(N)	S
KING	0-AG SMOLT	SELDOVIA BAY	CI	ELMENDORF HATCHERY	STOCK	N	BILL HAUSER	Y	Y	Y	S ✓
KING	0-AG SMOLT	SEWARD (EARLY)	CI	ELMENDORF HATCHERY	STOCK	N	BILL HAUSER	Y	Y	(N)	S
KING	0-AG SMOLT	SHIP CREEK	CI	ELMENDORF HATCHERY	STOCK	N	BILL HAUSER	Y	Y	Y	S ✓
KING	SMOLT	ISLAND LAKE	KOD	ELMENDORF HATCHERY	STOCK	N	BILL HAUSER	Y	Y	(N)	S
FT RICHARDSON											
COHO	1-AG SMOLT	CASWELL CREEK	CI	FT RICHARDSON	STOCK	N	BILL HAUSER	N	N	Y	S
COHO	1-AG SMOLT	L SUSITNA RIVER	CI	FT RICHARDSON	STOCK	N	BILL HAUSER	Y	Y	Y	S
COHO	SMOLT	CORDOVA	PWS	FT RICHARDSON	STOCK	N	BILL HAUSER	N	N	Y	S
COHO	SMOLT	COVE CREEK (WHITTIER)	PWS	FT RICHARDSON	STOCK	N	BILL HAUSER	N	N	Y	S

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Species	Lifestage at release	Release location	Region of Production	Hatchery Involved	Type of Project	Intense Modeled	Filled out by:	Comple	Error chk	Valid FRED	PNP/ Proj	STATE
FT RICHARDSON												
KING	0-AG SMOLT	NINILCHICK RIVER	CI	FT RICHARDSON	STOCK	N	BILL HAUSER	Y	Y	N	S	✓
KING	0-AG SMOLT	WILLOW CREEK	CI	FT RICHARDSON	STOCK	N	BILL HAUSER	Y	Y	N	S	✓
GULKANA												
KING	FRY	MONSOON LAKE	PWS	GULKANA	STOCK	N	PWS KEN ROBERSON	Y	Y	Y	S	} ✓
RED	FRY	CROSSWIND LAKE	PWS	GULKANA	STOCK	N	PWS KEN ROBERSON	Y	Y	Y	S	
RED	FRY	GULKANA I HATCHERY(PAXON)	PWS	GULKANA	STOCK	N	PWS KEN ROBERSON	Y	Y	Y	S	
RED	FRY	GULKANA II	PWS	GULKANA	STOCK	N	PWS KEN ROBERSON	Y	Y	Y	S	
RED	FRY	SUMMIT LAKE	PWS	GULKANA	STOCK	N	PWS KEN ROBERSON	Y	Y	Y	S	
KITOI BAY HATCHERY												
CHUM	FINGERLING	KITOI BAY	KOD	KITOI BAY HATCHERY	STOCK	N	LONNIE WHITE	Y	Y	Y	S	} ✓
COHO	FINGERLING	CRESCENT/HIDDEN LAKE	KOD	KITOI BAY HATCHERY	STOCK	N	LONNIE WHITE	Y	Y	Y	S	
COHO	FINGERLING	KODIAK LAKES	KOD	KITOI BAY HATCHERY	STOCK	N	LONNIE WHITE	Y	Y	Y	S	

no adult harvest data

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Species	Lifestage at release	Release location	Region of Production	Hatchery Involved	Type of Project	Intense Modeled	Filled out by:	Completeness	Error checked	Valid Proj	PNP/STATE
KITOI BAY HATCHERY											
PINK	FED FRY	KITOI BAY FED	KOD	KITOI BAY HATCHERY	STOCK	Y	LONNIE WHITE	Y	Y	(Y)	S
RED	0-AG SMOLT	KITOI BAY	KOD	KITOI BAY HATCHERY	STOCK	Y	LONNIE WHITE	Y	Y	(Y)	S
RED	FRY	KITOI BAY RELS (REMOTE)	KOD	KITOI BAY HATCHERY	STOCK	Y	LONNIE WHITE	Y	Y	(Y)	S
KLAWOCK											
COHO	FINGERLING	CABLE CR	SE	KLAWOCK	STOCK	N	CAROL DENTON	Y	Y	Y	S
COHO	FINGERLING	OLD FRANK'S LAKE	SE	KLAWOCK	STOCK	N	CAROL DENTON	Y	Y	Y	S
COHO	FINGERLING	THORNE R.	SE	KLAWOCK	STOCK	N	CAROL DENTON	Y	Y	Y	S
COHO	PRE-SMOLT	KLAWOCK LAKE	SE	KLAWOCK	STOCK	N	CAROL DENTON	Y	Y	Y	S
RED	FED FRY	KLAWOCK LAKE FED	SE	KLAWOCK	STOCK	N	CAROL DENTON	Y	Y	Y	S
RED	FRY	KLAWOCK LAKE FRY	SE	KLAWOCK	STOCK	N	CAROL DENTON	Y	Y	Y	S
KODIAK OFFICE											
RED	REHAB	AFOGNAK REHAB	KOD	KODIAK OFFICE	REHAB	Y	LONNIE WHITE	Y	Y	Y	S

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Species	Lifestage at release	Release location	Region of Production	Hatchery Involved	Type of Project	Intense Modeled	Filled out by:	Comple	Error chxFRED	Valid Proj	PNP/ STATE
KOOTIAK OFFICE											
MAIN BAY HATCHERY											
RED	SMOLT	ESHAMY RELEASE	PWS	MAIN BAY HATCHERY	STOCK	N	PWS JOHN MCMULLEN	N	N	Y	P
RED	SMOLT	MAIN BAY RELS (COGHILL)	PWS	MAIN BAY HATCHERY	STOCK	N	PWS JOHN MCMULLEN	N	N	Y	P
RED	SMOLT	MAIN BAY RELS (ESHAMY)	PWS	MAIN BAY HATCHERY	STOCK	N	PWS JOHN MCMULLEN	N	N	Y	P
RED	SMOLT	MAIN BAY RELS (EYAK)	PWS	MAIN BAY HATCHERY	STOCK	N	PWS JOHN MCMULLEN	N	N	Y	P
METLAKATLA											
KING	0-AG SMOLT	TAMGAS CR.	SE	METLAKATLA	STOCK	Y	DAVE HOUSEWORTH	N	N	Y	P
KING	1-AG SMOLT	TAMGAS CR.	SE	METLAKATLA		Y	DAVE HOUSEWORTH		N	Y	P
PILLAR CR HATCHERY											
RED	FED FRY	PILLAR CR RELEASE	KOD	PILLAR CR HATCHERY	STOCK	Y	LONNIE WHITE	Y	Y	Y	S
RED	FED FRY	SPIRIDON L (KOD) RELEASE	KOD	PILLAR CR HATCHERY	STOCK	Y	LONNIE WHITE	Y	Y	Y	S

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Species	Lifestage at release	Release location	Region of Production	Hatchery Involved	Type of Project	Intense Modeled	Filled out by:	Comple	Error chk	Valid FRED	PNP/ Proj	STATE
PILLAR CR HATCHERY												
RED	FRY	MALINA LAKE REHAB	KOD	PILLAR CR HATCHERY	STOCK/LIMN	Y	LONNIE WHITE	Y	Y	Y	S	✓
RUSSELL CR HATCHERY												
CHUM	FED FRY	RUSSELL CR CHUM	KOD	RUSSELL CR HATCHERY	STOCK	N	BUTCH COBB	Y	Y	Y	S	} ✓
COHO	SMOLT	RUSSELL CR RELEASE COHO	KOD	RUSSELL CR HATCHERY	STOCK	N	BUTCH COBB	Y	Y	Y	S	
PINK	FRY	RUSSELL CR PINK	KOD	RUSSELL CR HATCHERY	STOCK	N	BUTCH COBB	Y	Y	Y	S	
RED	FED FRY	RUSS. CR MORTENSENS L RED	KOD	RUSSELL CR HATCHERY	STOCK	N	BUTCH COBB	Y	Y	Y	S	
SIKUSUILAQ HATCHERY												
CHUM	FRY	NOAKAK RIVER	I/AYK	SIKUSUILAQ HATCHERY	STOCK	N	BILL HAUSER	Y	Y	Y	S	3 ✓
SNETTISHAM												
KING	1-AG SMOLT	DEEP COVE	SE	SNETTISHAM	STOCK	Y	RON JOSEPHSON	Y	Y	Y	S	} ✓
KING	1-AG SMOLT	JUNEAU (REMOTE)	SE	SNETTISHAM	STOCK	Y	RON JOSEPHSON	Y	Y	Y	S	

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Species	Lifestage at release	Release location	Region of Production	Hatchery Involved	Type of Project	Intense Modeled	Filled out by:	Comple	Error chKFRED	Valid Proj	PMP/ STATE
SNETTISHAM											
RED	1-AG SMOLT	GILBERT BAY	SE	SNETTISHAM	STOCK	N	RON JOSEPHSON	Y	Y	Y	S
RED	1-AG SMOLT	SNETT HATCH BROOD	SE	SNETTISHAM	STOCK	N	RON JOSEPHSON	Y	Y	Y	S
RED	EMERG FRY	CRESENT LAKE/PORT SNETT	SE	SNETTISHAM	STOCK	N	RON JOSEPHSON	Y	Y	Y	S
RED	EMERG FRY	SWEETHEART LAKE	SE	SNETTISHAM	STOCK	N	RON JOSEPHSON	Y	Y	Y	S
RED	EMERG FRY	TATSAMENIE LAKE (TAKU)	SE	SNETTISHAM	STOCK	N	RON JOSEPHSON	Y	Y	Y	S
RED	EMERG FRY	TRAPPER	SE	SNETTISHAM	STOCK	N	RON JOSEPHSON	Y	Y	Y	S
RED	EMERG FRY	TUYA LAKE/STIKINE	SE	SNETTISHAM	STOCK	N	RON JOSEPHSON	Y	Y	Y	S
RED	FRY	SPEEL LAKE	SE	SNETTISHAM	STOCK	N	RON JOSEPHSON	N	N	Y	S
RED	FRY	TAHLTAN	SE	SNETTISHAM	STOCK	N	RON JOSEPHSON	Y	Y	Y	S
TUTKA BAY HATCHERY											
COHO	FRY	TUTKA	CI	TUTKA BAY HATCHERY	STOCK	N	BILL HAUSER	N	N	Y	P
PINK	FRY	FED IN HALIBUT COVE	CI	TUTKA BAY HATCHERY	STOCK	N	BILL HAUSER	N	N	Y	P
PINK	FRY	FED IN HOMER SPIT	CI	TUTKA BAY HATCHERY	STOCK	N	BILL HAUSER	N	N	Y	P

CIAA

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Species	Lifestage at release	Release location	Region of Production	Hatchery Involved	Type of Project	Intense Modeled	Filled out by:	Comple	Error chkFRED	Valid Proj	PNP/ STATE
TUTKA BAY HATCHERY											
PINK	FRY	INGRAM CREEK	CI	TUTKA BAY HATCHERY	STOCK	N	BILL HAUSER	N	N	Y	P
PINK	FRY	TUTKA BAY FED	CI	TUTKA BAY HATCHERY	STOCK	N	BILL HAUSER	N	N	Y	P
PINK	FRY	TUTKA BAY UNFED	CI	TUTKA BAY HATCHERY	STOCK	N	BILL HAUSER	N	N	Y	P

CIAA

Cost Survey Name	Project Number
PWSAC	49-61, 125-127
SSRAA	1-10, 114-116
Burro Creek	43-45, 124
CIAA-Tutka	65-66
CIAA-Eklutna	64, 140
CIAA-Trails Lake	133-139
NSRAA-Port Camden	28-29
NSRAA-Medvejie Creek	19-24, 117
NSRAA-Hidden Falls	25-27, 118
KNFC	39-42
AK Aqua	11-15, 120
Dipac	33-38, 122-123
Gulkana I & II	88-92
I/AYK	105
Kitoi	93-94, 157-160
Ft. Richardson	87
Deer Mountain	78-81, 156
Snettisham	106-113, 166-167
Crooked Creek	75, 145-150
Port Armstrong/Armstrong-Keta	46-48, 121
Sheldon Jackson	30-32, 119
Klawock	35-100
Big Lake	72-74, 141-144
Elmendorf	82-86
Pillar Creek	160, 163-165

PROJECT #	SPECIES	LIFESTAGE	RELEASE SITE	REGION	HATCHERY	PROJECT	OPERATOR
Project List for PNP Hatcheries							

(NON-INTENSIVELY MODELED PROJECTS)

SE - Pink, Chum, Coho, Sockeye PWS - Coho, Chinook, Sockeye

CI - Pink, Chum, Chinook, Coho

TYPE

PROJECT #	SPECIES	LIFESTAGE	RELEASE SITE	REGION	HATCHERY	PROJECT	OPERATOR
1	Chum S	fry	Naket Inlet	SE	Whitman Lake	Stocking	SSRAA
2	Chum F	fry	Naket Inlet	SE	Whitman Lake	Stocking	SSRAA
3	Chum S	fry	Kendrick Bay	SE	Whitman Lake	Stocking	SSRAA
4	Chum S	fry	Earl West Cove	SE	Whitman Lake	Stocking	SSRAA
5	Coho	smolt	Naket Inlet	SE	Whitman Lake	Stocking	SSRAA
6	Coho	smolt	Neets Bay	SE	Whitman Lake	Stocking	SSRAA
7	Coho	smolt	Earl West Cove	SE	Whitman Lake	Stocking	SSRAA
8	Coho	smolt	Herring Cove	SE	Whitman Lake	Stocking	SSRAA
9	Chum S	fry	Neets Bay	SE	Neets Bay	Stocking	SSRAA
10	Chum F	fry	Neets Bay	SE	Neets Bay	Stocking	SSRAA
	Coho	smolt	Neets Bay	SE	Neets Bay	Stocking	SSRAA
	Sockeye	0-smolt	George Inlet	SE	Beaver Falls	Stocking	SSRAA
	Sockeye	0-smolt	Shrimp Bay	SE	Beaver Falls	Stocking	SSRAA
11	Pink	fry	Burnett Inlet	SE	Burnett Inlet	Stocking	AAI
12	Pink	fry	Anita Bay	SE	Burnett Inlet	Stocking	AAI
13	Chum S	fry	Burnett Inlet	SE	Burnett Inlet	Stocking	AAI
14	Chum S	fry	Anita Bay	SE	Burnett Inlet	Stocking	AAI
15	Coho	smolt	Burnett Inlet	SE	Burnett Inlet	Stocking	AAI
16	Coho	smolt	Bell Island	SE	Bell Island	Stocking	AMERAQUA
17	Coho	smolt	Elley Bay	SE	Bell Island	Stocking	AMERAQUA
18	Steelhead	smolt	Bell Island	SE	Bell Island	Stocking	AMERAQUA
19	Chum S	fry	Bear Cove	SE	Medvejie Creek	Stocking	NSRAA
20	Chum S	fry	Deep Inlet	SE	Medvejie Creek	Stocking	NSRAA
21	Coho	fry	Deer Lake	SE	Medvejie Creek	Stocking	NSRAA
22	Coho	smolt	Bear Cove	SE	Medvejie Creek	Stocking	NSRAA
23	Coho	smolt	Deep Inlet	SE	Medvejie Creek	Stocking	NSRAA
24	Coho	smolt	Shamrock Bay	SE	Medvejie Creek	Stocking	NSRAA
25	Chum S	fry	Kasnyku Bay	SE	Hidden Falls	Stocking	NSRAA
26	Chum S	fry	Takatz Bay	SE	Hidden Falls	Stocking	NSRAA
27	Coho	fry	Kasnyku Bay	SE	Hidden Falls	Stocking	NSRAA
28	Chum F	fry	East Camden	SE	Port Camden	Stocking	NSRAA
29	Chum F	fry	West Camden	SE	Port Camden	Stocking	NSRAA
30	Pink	fry	Sitka Sound	SE	Sheldon Jackson	Stocking	SJC
31	Chum S	fry	Sitka Sound	SE	Sheldon Jackson	Stocking	SJC
32	Coho	smolt	Sitka Sound	SE	Sheldon Jackson	Stocking	SJC
33	Chum S	fry	Boat Harbor	SE	Gastineau	Stocking	DIPAC
34	Chum S	fry	Limestone Inlet	SE	Gastineau	Stocking	DIPAC
37	Coho	smolt	Gastineau Channel	SE	Gastineau	Stocking	DIPAC
38	Coho	smolt	Sheep Creek	SE	Gastineau	Stocking	DIPAC
39	Pink	fry	Gunnuk Creek	SE	Gunnuk Creek	Stocking	KNFC
40	Pink	fry	Southeast Cove	SE	Gunnuk Creek	Stocking	KNFC
41	Chum S	fry	Gunnuk Creek	SE	Gunnuk Creek	Stocking	KNFC
42	Chum S	fry	Southeast Cove	SE	Gunnuk Creek	Stocking	KNFC
43	Pink	fry	Taiya Inlet	SE	Burro Creek	Stocking	BCF
44	Chum S	fry	Taiya Inlet	SE	Burro Creek	Stocking	BCF
45	Coho	smolt	Taiya Inlet	SE	Burro Creek	Stocking	BCF
46	Pink	fry	Port Armstrong	SE	Port Armstrong	Stocking	AKI
47	Chum F	fry	Port Armstrong	SE	Port Armstrong	Stocking	AKI
48	Coho	smolt	Port Armstrong	SE	Port Armstrong	Stocking	AKI
49	Coho	smolt	Quillian Bay	PWS	Esther Lake	Stocking	PWSAC
50	Coho	smolt	Whittier	PWS	Esther Lake	Stocking	PWSAC
51	Coho	smolt	Fleming Spit	PWS	Esther Lake	Stocking	PWSAC
52	Chinook	smolt	Fleming Spit	PWS	Esther Lake	Stocking	PWSAC
53	Chinook	smolt	Whittier	PWS	Esther Lake	Stocking	PWSAC
54	Chinook	smolt	Port Valdez	PWS	Esther Lake	Stocking	PWSAC
55	Chinook	smolt	Quillian Bay	PWS	Esther Lake	Stocking	PWSAC
56	Chum	fry	Lake Bay	PWS	Esther Lake	Stocking	PWSAC

PROJECT #	SPECIES	LIFESTAGE	RELEASE SITE	REGION	HATCHERY	PROJECT	OPERATOR
57	Sockeye	smolt	Coghill River/Lake	PWS	Main Bay	Stocking	PWSAC
58	Sockeye	smolt	Main Bay (Eshamy)	PWS	Main Bay	Stocking	PWSAC
59	Sockeye	smolt	Main Bay (Eyak)	PWS	Main Bay	Stocking	PWSAC
60	Sockeye	smolt	Main Bay (Coghill)	PWS	Main Bay	Stocking	PWSAC
61	Sockeye	smolt	Eshamy Lake	PWS	Main Bay	Stocking	PWSAC
62	Coho	smolt	Port Valdez	PWS	Solomon Gulch	Stocking	VFDA
	Coho	smolt	Tatitlek Creek	PWS	Solomon Gulch	Stocking	VFDA
	Sockeye	fry	Summit Lake	PWS	Gulkana I	Stocking	PWSAC
	Sockeye	fry	Cross Wind Lake	PWS	Gulkana I	Stocking	PWSAC
	Sockeye	fry	Gulkana River	PWS	Gulkana I	Stocking	PWSAC
	Sockeye	fry	Gulkana River	PWS	Gulkana II	Stocking	PWSAC
	Chinook	fry	Monsoon Lake	PWS	Gulkana II	Stocking	PWSAC
64	Coho	smolt	Eklutna	CI	Eklutna	Stocking	CIAA
65	Pink	fry	Tutka Lagoon	CI	Tutka	Stocking	CIAA
66	Pink	fry	Halibut Cove	CI	Tutka	Stocking	CIAA

Southeast Chinook
PWS Pink and Chum
Cook Inlet Sockeye

(INTENSIVELY MODELED PROJECTS)

114	Chinook	smolt	Herring Cove	SE	Whitman Lake	Stocking	SSRAA
115	Chinook	smolt	Carroll Inlet	SE	Whitman Lake	Stocking	SSRAA
116	Chinook	smolt	Neets Bay	SE	Neets Bay	Stocking	SSRAA
117	Chinook	smolt	Bear Cove	SE	Medvejie Creek	Stocking	NSRAA
118	Chinook	smolt	Kasnyku Bay	SE	Hidden Falls	Stocking	NSRAA
119	Chinook	smolt	Sitka Sound	SE	Sheldon Jackson	Stocking	SJC
120	Chinook	smolt	Burnett Inlet	SE	Burnett Inlet	Stocking	AK AQUA
121	Chinook	smolt	Port Armstrong	SE	Port Armstrong	Stocking	AKI
122	Chinook	smolt	Gastineau Channel	SE	Gastineau	Stocking	DIPAC
123	Chinook	fry	Chilkat River	SE	Gastineau	Stocking	DIPAC
124	Chinook	smolt	Taiya Inlet	SE	Burro Creek	Stocking	BCF
125	Pink	fry	Port San Juan	PWS	Armin F. Koernig	Stocking	PWSAC
126	Pink	fry	Lake Bay	PWS	Esther Lake	Stocking	PWSAC
127	Pink	fry	Unakwik Inlet	PWS	Cannery Creek	Stocking	PWSAC
128	Pink	fry	Port Valdez	PWS	Solomon Gulch	Stocking	VFDA
129	Pink	fry	Boulder Bay	PWS	Solomon Gulch	Stocking	VFDA
130	Pink	fry	Naked Island	PWS	Solomon Gulch	Stocking	VFDA
131	Chum	fry	Lake Bay	PWS	Esther Lake	Stocking	PWSAC
132	Chum	fry	Port Valdez	PWS	Solomon Gulch	Stocking	VFDA
133	Sockeye	fry	Packers Lake	CI	Trail Lakes	Stocking	CIAA
134	Sockeye	fry	Hidden Lake	CI	Trail Lakes	Stocking	CIAA
135	Sockeye	fry	Bear Lake	CI	Trail Lakes	Stocking	CIAA
136	Sockeye	smolt	Bear Lake	CI	Trail Lakes	Stocking	CIAA
137	Sockeye	fry	Chelatna Lake	CI	Trail Lakes	Stocking	CIAA
138	Sockeye	0-smolt	Coal Creek	CI	Trail Lakes	Stocking	CIAA
139	Sockeye	0-smolt	Thumb Cove	CI	Trail Lakes	Stocking	CIAA
140	Sockeye	1-smolt	Eklutna	CI	Eklutna	Stocking	CIAA

STATE INTENSE AND NON-INTENSELY MODELLED PROJECTS

PROJECT #	Species	Lifestage at RELEASE	Release location	Prod. Region	Hatchery involved	Intensely Modeled	Filled out by:	State/ PNP
67	RED	FRY	HUGH SMITH	SE	BEAVER FALLS HATCHERY	N	MIKE HADDIX	
68	RED	FRY	MARGARET LAKE	SE	BEAVER FALLS HATCHERY	N	MIKE HADDIX	S
69	RED	FRY	VIRGINIA LAKE	SE	BEAVER FALLS HATCHERY	N	MIKE HADDIX	S
70	RED	FRY	SALMON LK/KARTA	SE	BEAVER FALLS HATCHERY	N	MIKE HADDIX	S
71	RED	FRY	BADGER/BAKEWELL	SE	BEAVER FALLS HATCHERY	N	MIKE HADDIX	S
72	COHO	1-AG SMOLT	WASILLA CREEK	CI	BIG LAKE HATCHERY	N	BILL HAUSER	S
73	COHO	1-AG SMOLT	COTTONWOOD CR	CI	BIG LAKE HATCHERY	N	BILL HAUSER	S
74	COHO	SMOLT	FISH CREEK SMOLT	CI	BIG LAKE HATCHERY	N	BILL HAUSER	S
75	COHO	1-AG SMOLT	CROOKED CREEK	CI	CROOKED CR HATCHERY	N	BILL HAUSER	S
76	COHO	FRY	CRYSTAL LAKE F PASS REMT.	SE	CRYSTAL LAKE HATCHERY	N	BOB ZORICH	S
77	COHO	1-AG SMOLT	CRYSTAL CREEK	SE	CRYSTAL LAKE HATCHERY	N	BOB ZORICH	S
78	COHO	1-AG SMOLT	KETCHIKAN CR	SE	DEER MOUNTAIN HATCHERY	N	CAROL DENTON	S
79	COHO	FINGERLING	REFLECTION LAKE	SE	DEER MOUNTAIN HATCHERY	N	CAROL DENTON	S
80	COHO	PRE-SMOLT	WARD LAKE	SE	DEER MOUNTAIN HATCHERY	N	CAROL DENTON	S
81	COHO	1-AG SMOLT	MARGARET LAKE	SE	DEER MOUNTAIN HATCHERY	N	CAROL DENTON	S
82	KING	0-AG SMOLT	SHIP CREEK	CI	ELMENDORF HATCHERY	N	BILL HAUSER	S
83	COHO	1-AG SMOLT	SHIP CREEK	CI	ELMENDORF HATCHERY	N	BILL HAUSER	S
84	KING	0-AG SMOLT	EAGLE RIVER	CI	ELMENDORF HATCHERY	N	BILL HAUSER	S
85	KING	0-AG SMOLT	HALIBUT COVE	CI	ELMENDORF HATCHERY	N	BILL HAUSER	S
86	KING	0-AG SMOLT	SELDOVIA BAY	CI	ELMENDORF HATCHERY	N	BILL HAUSER	S
87	COHO	1-AG SMOLT	L SUSITNA RIVER	CI	FT RICHARDSON	N	BILL HAUSER	S
88	RED	FRY	GULKANA II	PWS	GULKANA	N	PWS KEN ROBERSON	S
89	RED	FRY	SUMMIT LAKE	PWS	GULKANA	N	PWS KEN ROBERSON	S
90	RED	FRY	CROSSWIND LAKE	PWS	GULKANA	N	PWS KEN ROBERSON	S
91	KING	FRY	MONSOON LAKE	PWS	GULKANA	N	PWS KEN ROBERSON	S
92	RED	FRY	GULKANA I HATCHERY(PAXON)	PWS	GULKANA	N	PWS KEN ROBERSON	S
93	COHO	FINGERLING	CRESCENT/HIDDEN LAKE	KOD	KITOI BAY HATCHERY	N	LONNIE WHITE	S
94	CHUM	FINGERLING	KITOI BAY	KOD	KITOI BAY HATCHERY	N	LONNIE WHITE	S
95	RED	FED FRY	KLAUOCK LAKE FED	SE	KLAUOCK	N	CAROL DENTON	S
96	COHO	PRE-SMOLT	KLAUOCK LAKE	SE	KLAUOCK	N	CAROL DENTON	S
97	COHO	FINGERLING	CABLE CR	SE	KLAUOCK	N	CAROL DENTON	S
98	COHO	FINGERLING	OLD FRANK'S LAKE	SE	KLAUOCK	N	CAROL DENTON	S
99	COHO	FINGERLING	THORNE R.	SE	KLAUOCK	N	CAROL DENTON	S
100	RED	FRY	KLAUOCK LAKE FRY	SE	KLAUOCK	N	CAROL DENTON	S
PWSAC	RED	SMOLT	MAIN BAY RELS (ZYAK)	PWS	MAIN BAY HATCHERY	N	PWS JOHN MCMULLEN	P
PWSAC	RED	SMOLT	ESHAMY RELEASE	PWS	MAIN BAY HATCHERY	N	PWS JOHN MCMULLEN	P
PWSAC	RED	SMOLT	MAIN BAY RELS (ESHAMY)	PWS	MAIN BAY HATCHERY	N	PWS JOHN MCMULLEN	P
PWSAC	RED	SMOLT	MAIN BAY RELS (COGHILL)	PWS	MAIN BAY HATCHERY	N	PWS JOHN MCMULLEN	P
101	CHUM	FED FRY	RUSSELL CR CHUM	KOD	RUSSELL CR HATCHERY	N	BUTCH COBB	S
102	COHO	SMOLT	RUSSELL CR RELEASE COHO	KOD	RUSSELL CR HATCHERY	N	BUTCH COBB	S
103	RED	FED FRY	RUSS. CR MORTENSENS ' RED	KOD	RUSSELL CR HATCHERY	N	BUTCH COBB	S
104	PINK	FRY	RUSSELL CR PINK	KOD	RUSSELL CR HATCHERY	N	BUTCH COBB	S
105	CHUM	FRY	NOAKAK RIVER	I/AYK	SIKUSUILAQ HATCHERY	N	BILL HAUSER	S
106	RED	EMERG FRY	TUYA LAKE/STIKINE	SE	SNETTISHAM	N	RON JOSEPHSON	S

CORRECTION

**THIS DOCUMENT
HAS BEEN REPHOTOGRAPHED
TO ASSURE LEGIBILITY**

**SALMON ENHANCEMENT FACILITY
OPERATING, CONSTRUCTION, AND MANAGEMENT COSTS**

Please describe the annual operating and construction costs for your facility. Your cost estimates should be for fiscal years and for all salmon produced by your facility rather than on a project basis (as the production surveys). For each fiscal year or series of years, provide your estimated total annual costs, as well as how costs can be allocated between commercial and sport/personal use fisheries. The percentage of total annual costs allocated between commercial and sport/personal use fisheries should account for the "TOTAL ANNUAL COSTS." The "management costs" column is to be completed by Alaska Department of Fish and Game fisheries managers.

The results of the survey will be strictly confidential. No results will be reported on an individual facility basis. Instead the results will be used collectively to calculate an average incremental or "marginal" cost of increases or decreases in enhanced salmon production.

1. This first question refers to the annual operating and construction costs of your facility's *currently permitted production*. For each fiscal year or series of years, please include the costs of all salmon production by your facility, and how these costs are allocated between commercial and sport/personal use fisheries production. 
2. Please provide information on the source of funds for your facility production costs listed in question one. The information should be reported in percentages that add up to 100 percent for each year. 
3. This question refers to the annual costs of your facility's *future expected permitted production*. For each fiscal year or series of years, please include the expected operating and construction costs of all salmon production by your facility, and how you expect these costs to be allocated between commercial and sport/personal use fisheries. 

The next series of questions are intended to provide information to determine the potential change in costs of the salmon enhancement program as a result of increases or decreases in production. The scenarios used to estimate cost changes are completely

hypothetical and are not being proposed by either the Legislature or the Alaska Department of Fish and Game.

a. pink
b. chum
c. change
d. 10000

Question 4 contains five parts, each of which hypothetically eliminates the enhancement program for one species while holding the production of all other species at their currently permitted level. The results question 4, together with the results to questions 1 and 3, will be used to calculate the "zero" point on the "production cost curves" for each species.

4a. The *pink* salmon portion of the salmon enhancement program is eliminated while all othre components of the program remain at their currently permitted capacity. Please estimate how this would change the annual costs (fiscal year) of your facility and the allocation of these costs between commercial and sport/personal use fisheries.

4b. The *chum* salmon portion of the salmon enhancement program is eliminated while all othre components of the program remain at their currently permitted capacity. Please estimate how this would change the annual costs (fiscal year) of your facility and the allocation of these costs between commercial and sport/personal use fisheries.

Question 5 also contains five parts. In this question, however, each part hypothetically **increases** by 15 percent the production level of one species while holding the production of all other species at their currently permitted level. The results of question 5, together with the results to questions 1, 3, and 4 will be used to finish calculating the "production cost curves" for each species.

5a. The *pink* salmon portion of the salmon enhancement program is **increased by 15 percent** while all other components of the program remain at their currently permitted capacity. Please estimate how this would change the annual costs (fiscal year) of your facility and the allocation of these costs between commercial and sport/personal use fisheries.

5b. The *chum* salmon portion of the salmon enhancement program is **increased by 15 percent** while all other components of the

program remain at their currently permitted capacity. Please estimate how this would change the annual costs (fiscal year) of your facility and the allocation of these costs between commercial and sport/personal use fisheries.

Some suggestions for the letter to PNP operators.

I would like to thank you for the work that you invested the hatchery survey of intensely modeled enhancement projects for the Hatchery Research Project. The contractor for population modeling portion of the project is now using the survey data.

This is the last portion of the surveying for the project, and again we would like to request your help completing 2 forms.

The first form is the SALMON ENHANCEMENT PROJECT survey for the non-intensively modeled projects. It is shorter and simpler than the intensively modeled site form. A sperate form for each project is included. If you have corrections to the project name or to other identifying data, or if there are additional projects not included in the surveys provided, please make the appropriate corrections or additions. Blank forms are attached.

The second form is a cost of production survey for each facility, identified under FACILITY NAME field in the SALMON ENHANCEMENT PROJECT survey. This form, called the FACILITY OPERATING, CONSTRUCTION, AND MANAGEMENT COST SURVEY, is designed to be similar to the type of budget forecasting that you might do for any upcoming fiscal year. One of these forms must be filled out for each facility associated with INTENSELY or NON-INTENSELY modeled projects. There are, however, some special production cost cases, that will require you to project costs for production levels that may never be feasible for you to operate in. These cases are necessary to create a mathematical model of operating and construction costs for the statewide enhancement program, which allows the computation of costs of production levels not included in the survey. These other cases are to be very aggregate in scale, and will not be used to determine benefits and costs of individual hatchery outputs.

Ginny: Some of the following could be put in the instructions if it is too wordy here.

Operating and construction costs for some increased production scenarios are requested in the survey form. These production increases are aggregated by species while production survey forms are filled out for each project. Since some facilities will have more than 1 project and release location for a given species, this may cause some confusion in determining how to apportion these costs between projects. In these cases, the incremental production costs (for the 15% increase scenario) should be estimated for the most likely and efficient combination of production from each project that you have.

Example: Two sockeye projects are carried out at Facility 2. Together they produce 20,000 sockeye harvests in 1994, and are projected to produce 30,000 harvests in 1999 to 2021.

Increased production of project 1 for sockeye salmon (pr ducing

harvests of 10,000 fish in 1996 from smolt releases in previous years) would be difficult to increase by 15% without some radical changes in management, or new construction.

Project 2 also produces 10,000 harvested fish in 1996 but, fry releases could easily be increased to 15% of the total sockeye production of 20,000 harvested fish ($20,000 \times 1.15 = 23,000$ fish from project 2).

Thus, costs for the increase production should be estimated for project 2, the most likely source of increased production.

For the 15% incremental increased production scenario, it may not be practical to increase production for this species at all in your ability. If there is simply no way to do this, without adding a new project, leave the associated 15% production case blank for that species, but note why you could not carry it out on the form.

Finally, the cost projections for the 15% production level increase should be based upon obtaining the increased harvests in one single salmon life cycle, or as nearly as possible to that time interval.

There will undoubtedly be questions about how to fill out the survey, please address these to Steve McGee.



FROM:

ginny fay

SENATOR SAM COTTEN

Juneau Office:

PO Box V, MS 3100

Room 11, Capitol Bldg

Juneau, AK 99811

FAX: (907) 465-4979

Phone: (907) 465-3711

DATE:

4/9/92

TO:

jeff hartman
FRED

FAX #

4/68

MESSAGE:

*Pls. review this language to go
about with the econ survey questions
id like to get the forms done today because
the leg. rep. person is gone today &
you are next week*

Number of Pages:

7

(not counting cover sheet)

*draft econ survey for
review*

to: Ginny
fr: Jeff Hartman

Here are some ideas for the simplified survey.

Major Changes include:

1. Eliminating all of the data on source of funds.
2. Aggregating by species/facility instead of by project.
3. Eliminating many of the cases, except for current production, planned production, +15% for each species, and -100% for all species.
4. Including management costs (though this gets filled out by comm fish later).
5. Each case constitutes a record, (or Observation in SAS lingo).

System of equations for a production function for enhanced fish.

Background

Data from the Legislatures production and cost survey would be used to develop a function for each of five salmon species that would project the marginal cost of a fish at various production levels.

The Data

Two separate surveys produce a time series on:

- (1) production costs for fish produced at a facility.
- and (2) production harvests that correspond with the projected costs.

The time series is 30 years

For the production harvest model the variables are:
harvest by species/ facility/ year, cases.

Dependent variable is ~~price~~^{cost} per harvested fish/species/facility.

The Model

Species 5
Regions 5
Facilities 40
Year 30
cases 4

data= #fish/species/facility
and total costs/facility
System of equation such as:

$$SP_i = f(SP_j, t_c) \quad i \neq j$$

Operating, Capital and Management Costs Survey

For projects in both yellow & green surveys for State

Fiscal Years	Operating Costs	Construction	% Sport plus	% Comm	Mo Management
1992 to					
" "					
" "					
" "					
" "					
" 2001					

Poutrant

Optional
Source of funds
from State & Fed
Sources

ay
artman

Ginny:

We did receive your faxed memo and it got things rolling. Thanks. List of the PNP projects that you requested for the non-intensively modeled sites in the economic analysis is attached. Will carry over a clean copy when we meet.

We are reviewing the PNP production survey form and should have final comments on this promptly.

The Wednesday meeting would be very helpful to revise cost survey form. It would be a bit difficult to discuss and test ideas in a memo. Changes you have already made are similar to concept I had in mind.

I am working on a database in Paradox, to summarize the final project names, species/locations and review status of all of the State and PNP projects. By adding additional fields it could house all of the production information. A second database and form for the cost model could be developed. Paradox is relational, so the two files can be combined to display production/cost combinations for any species/facility combination. Form entry makes it easy for clerical people to do data entry. Making the full database and form entry would be a bit of work. I think I would be willing and able to do the database part of this.

The data entry is another problem, that would be very difficult to load onto our clerical staff. What do you think about Leg Research doing data entry from forms? They would need to either purchase a copy of Paradox, (about \$300 to \$500) or temporarily pirate copy from FRED. I'd have to check on the latter.

I am flexible this week for a meeting. Wednesday sounds fine am or pm.

From <i>Jeff Hartman</i>	To <i>g. fay</i>
Co. <i>CRFD</i>	Co. <i>coffer</i>
Phone # <i>cg</i>	Phone # <i>3711</i>
Fax # <i>cg</i>	Fax # <i>4979</i>

SPECIES LIFESTAGE RELEASE SITE REGION HATCHERY PROJECT OPERATOR

Project List for PNP Hatcheries

Southeast Chinook
PWS Pink and Chum
Cook Inlet Sockeye

(INTENSIVELY MODELED PROJECTS)

TYPE
PROJECT OPERATOR

SPECIES	LIFESTAGE	RELEASE SITE	REGION	HATCHERY	TYPE	PROJECT OPERATOR
Chinook	smolt	Herring Cove	SE	Whitman Lake	Stocking	SSRAA
Chinook	smolt	Carroll Inlet	SE	Whitman Lake	Stocking	SSRAA
Chinook	0-smolt	Carroll Inlet	SE	Beaver Falls	Stocking	SSRAA
Chinook	smolt	Neets Bay	SE	Neets Bay	Stocking	SSRAA
Chinook	smolt	Bear Cove	SE	Medveje Creek	Stocking	NSRAA
Chinook	smolt	Kasnyku Bay	SE	Hidden Falls	Stocking	NSRAA
Chinook	smolt	Sitka Sound	SE	Sheldon Jackson College	Stocking	SJC
Chinook	smolt	Burnett Inlet	SE	Burnett Inlet	Stocking	AK AQUA
Chinook	smolt	Port Armstrong	SE	Port Armstrong	Stocking	AKI
Chinook	smolt	Gastineau Channel	SE	Gastineau	Stocking	DIPAC
Chinook	fry	Chilkat River	SE	Gastineau	Stocking	DIPAC
Chinook	smolt	Taiya Inlet	SE	Burro Creek	Stocking	BCF
Pink	fry	Port San Juan	PWS	Armin F. Koernig	Stocking	PWSAC
Pink	fry	Lake Bay	PWS	Esther Lake	Stocking	PWSAC
Pink	fry	Unakwik Inlet	PWS	Cannery Creek	Stocking	PWSAC
Pink	fry	Port Valdez	PWS	Solomon Gulch	Stocking	VFDA
Pink	fry	Boulder Bay	PWS	Solomon Gulch	Stocking	VFDA
Pink	fry	Naked Island	PWS	Solomon Gulch	Stocking	VFDA
Chum	fry	Port San Juan	PWS	Armin F. Koernig	Stocking	PWSAC
Chum	fry	Lake Bay	PWS	Esther Lake	Stocking	PWSAC
Chum	fry	Unakwik Inlet	PWS	Cannery Creek	Stocking	PWSAC
Chum	fry	Port Valdez	PWS	Solomon Gulch	Stocking	VFDA
Sockeye		Packers Lake	CI	Trail Lakes	Stocking	CIAA
Sockeye		Hidden Lake	CI	Trail Lakes	Stocking	CIAA
Sockeye	fry	Packers Lake	CI	Trail Lakes	Stocking	CIAA
Sockeye	fry	Ja Lake	CI	Trail Lakes	Stocking	CIAA
Sockeye	fry	Paint River Lake	CI	Trail Lakes	Stocking	CIAA
Sockeye	0-smolt	Coal Creek	CI	Trail Lakes	Stocking	CIAA
Sockeye	0-smolt	Thumb Cove	CI	Trail Lakes	Stocking	CIAA

(NON INTENSIVELY MODELED PROJECTS)

SE - Pink Chum, Coho, Sockeye

PWS - Coho, Chinook, Sockeye

CI - Pink, Chum, Chinook, Coho

SPECIES	LIFES	RELEASE SITE	REGION	HATCHERY	TYPE	PROJECT OPERATOR
Chum	fry	Naked Inlet	SE	Whitman Lake	Stocking	SSRAA

SPECIES	LIFESTAGE	RELEASE SITE	REGION	HATCHERY	TYPE PROJECT	OPERATOR
Chum F	fry	Naket Inlet	SE	Whitman Lake	Stocking	SSRAA
Chum S	fry	Kendrick Bay	SE	Whitman Lake	Stocking	SSRAA
Chum S	fry	Earl West Cove	SE	Whitman Lake	Stocking	SSRAA
Coho	smolt	Naket Inlet	SE	Whitman Lake	Stocking	SSRAA
Coho	smolt	Neets Bay	SE	Whitman Lake	Stocking	SSRAA
Coho	smolt	Earl West Cove	SE	Whitman Lake	Stocking	SSRAA
Coho	sn.	Herring Cove	SE	Whitman Lake	Stocking	SSRAA
Chum S	fry	Neets Bay	SE	Neets Bay	Stocking	SSRAA
Chum F	fry	Neets Bay	SE	Neets Bay	Stocking	SSRAA
Coho	smolt	Neets Bay	SE	Neets Bay	Stocking	SSRAA
Sockeye	0-smolt	George Inlet	SE	Beaver Falls	Stocking	SSRAA
Sockeye	0-smolt	Shrimp Bay	SE	Beaver Falls	Stocking	SSRAA
Pink	fry	Burnett Inlet	SE	Burnett Inlet	Stocking	AAI
Pink	fry	Anita Bay	SE	Burnett Inlet	Stocking	AAI
Chum S	fry	Burnett Inlet	SE	Burnett Inlet	Stocking	AAI
Chum S	fry	Anita Bay	SE	Burnett Inlet	Stocking	AAI
Coho	smolt	Burnett Inlet	SE	Burnett Inlet	Stocking	AAI
Coho	smolt	Bell Island	SE	Bell Island	Stocking	AMERAQUA
Coho	smolt	Bailey Bay	SE	Bell Island	Stocking	AMERAQUA
Steelhead	smolt	Bell Island	SE	Bell Island	Stocking	AMERAQUA
Chum S	fry	Bear Cove	SE	Medvejie Creek	Stocking	NSRAA
Chum S	fry	Deep Inlet	SE	Medvejie Creek	Stocking	NSRAA
Coho	fry	Deer Lake	SE	Medvejie Creek	Stocking	NSRAA
Coho	fry	Patterson Bay Lakes	SE	Medvejie Creek	Stocking	NSRAA
Coho	fry	Kruzof Lakes	SE	Medvejie Creek	Stocking	NSRAA
Coho	smolt	Bear Cove	SE	Medvejie Creek	Stocking	NSRAA
Coho	smolt	Deep Inlet	SE	Medvejie Creek	Stocking	NSRAA
Coho	smolt	Shamrock Bay	SE	Medvejie Creek	Stocking	NSRAA
Chum S	fry	Kasnyku Bay	SE	Hidden Falls	Stocking	NSRAA
Chum S	fry	Tukatz Bay	SE	Hidden Falls	Stocking	NSRAA
Coho	fry	Kasnyku Bay	SE	Hidden Falls	Stocking	NSRAA
Chum F	fry	East Camden	SE	Port Camden	Stocking	NSRAA
Chum F	fry	West Camden	SE	Port Camden	Stocking	NSRAA
Pink	fry	Sitka Sound	SE	Sheldon Jackson	Stocking	SJC
Chum S	fry	Sitka Sound	SE	Sheldon Jackson	Stocking	SJC
Coho	smolt	Sitka Sound	SE	Sheldon Jackson	Stocking	SJC
Pink	fry	Sheep Creek	SE	Sheep Creek	Stocking	DIPAC
Chum S	fry	Sheep Creek	SE	Sheep Creek	Stocking	DIPAC
Coho	smolt	Sheep Creek	SE	Sheep Creek	Stocking	DIPAC
Pink	fry	Sheep Creek	SE	Gastineau	Stocking	DIPAC
Pink	fry	Gastineau Channel	SE	Gastineau	Stocking	DIPAC

SPECIES	LIFESTAGE	RELEASE SITE	REGION	HATCHERY	TYPE PROJECT	OPERATOR
Chum S	fry	Sheep Creek	SE	Gastineau	Stocking	DIPAC
Chum S	fry	Gastineau	SE	Gastineau	Stocking	DIPAC
Chum S	fry	Amalga Harbor	SE	Gastineau	Stocking	DIPAC
Chum S	fry	Boat Harbor	SE	Gastineau	Stocking	DIPAC
Chum S	fry	Limestone Inlet	SE	Gastineau	Stocking	DIPAC
Chum S	fry	Sullivan Island	SE	Gastineau	Stocking	DIPAC
Chum S	fry	William Henry Bay	SE	Gastineau	Stocking	DIPAC
Coho	smolt	Gastineau Channel	SE	Gastineau	Stocking	DIPAC
Coho	smolt	Sheep Creek	SE	Gastineau	Stocking	DIPAC
Coho	catchables	Twin Lakes	SE	Gastineau	Stocking	DIPAC
Pink	fry	Gunnuk Creek	SE	Gunnuk Creek	Stocking	KNFC
Pink	fry	Southeast Cove	SE	Gunnuk Creek	Stocking	KNFC
Chum S	fry	Gunnuk Creek	SE	Gunnuk Creek	Stocking	KNFC
Chum S	fry	Southeast Cove	SE	Gunnuk Creek	Stocking	KNFC
Pink	fry	Taiya Inlet	SE	Burro Creek	Stocking	BCF
Chum S	fry	Taiya Inlet	SE	Burro Creek	Stocking	BCF
Coho	smolt	Taiya Inlet	SE	Burro Creek	Stocking	BCF
Pink	fry	Port Armstrong	SE	Port Armstrong	Stocking	AKI
Chum S	fry	Port Armstrong	SE	Port Armstrong	Stocking	AKI
Coho	smolt	Port Armstrong	SE	Port Armstrong	Stocking	AKI
Chum S	smolt	Quillian Bay	PWS	Esther Lake	Stocking	PWSAC
Coho	smolt	Whittier	PWS	Esther Lake	Stocking	PWSAC
Coho	smolt	Fleming Spit	PWS	Esther Lake	Stocking	PWSAC
Chinook	smolt	Fleming Spit	PWS	Esther Lake	Stocking	PWSAC
Chinook	smolt	Whittier	PWS	Esther Lake	Stocking	PWSAC
Chinook	smolt	Port Valdez	PWS	Esther Lake	Stocking	PWSAC
Chinook	smolt	Quillian Bay	PWS	Esther Lake	Stocking	PWSAC
Sockeye	fry	Shoestring Lake	PWS	Esther Lake	Stocking	PWSAC
Sockeye	fry	Solf Lake	PWS	Esther Lake	Stocking	PWSAC
Sockeye	smolt	Main Bay (Eshamy)	PWS	Main Bay	Stocking	PWSAC
Sockeye	smolt	Main Bay (Eyak)	PWS	Main Bay	Stocking	PWSAC
Sockeye	smolt	Main Bay (Coghill)	PWS	Main Bay	Stocking	PWSAC
Sockeye	smolt	Eshamy Lake	PWS	Main Bay	Stocking	PWSAC
Coho	smolt	Port Valdez	PWS	Solomon Gulch	Stocking	VFDA
Coho	smolt	Tatitlek Creek	PWS	Solomon Gulch	Stocking	VFDA
Chinook	smolt	Port Valdez	PWS	Solomon Gulch	Stocking	VFDA
Sockeye	fry	Summit Lake	PWS	Gulkana I	Stocking	PWSAC
Sockeye	fry	Cross Wind Lake	PWS	Gulkana I	Stocking	PWSAC
Sockeye	fry	Gulkana River	PWS	Gulkana I	Stocking	PWSAC
Sockeye	fry	Gulkana River	PWS	Gulkana II	Stocking	PWSAC
Chinook	fry	Monsoon Lake	PWS	Gulkana II	Stocking	PWSAC

HMR-51-02-102-10-01 HMR-51-02-102-10-01 HMR-51-02-102-10-01 HMR-51-02-102-10-01
 HMR-51-02-102-10-01 HMR-51-02-102-10-01 HMR-51-02-102-10-01 HMR-51-02-102-10-01

SPECIES	LIFESTAGE	RELEASE SITE	REGION	HATCHERY	TYPE PROJECT	OPERATOR
Pink	fry	Eklutna	CI	Eklutna	Stocking	CIAA
Chum	fry	Eklutna	CI	Eklutna	Stocking	CIAA
Coho	smolt	Eklutna	CI	Eklutna	Stocking	CIAA
Chinook	smolt	Eklutna	CI	Eklutna	Stocking	CIAA
Coho	smolt	Bear lake	CI	Trail Lakes	Stocking	CIAA
Chinook	smolt	?	CI	Trail Lakes	Stocking	CIAA
Pink	fry	Tutka Lagoon	CI	Tutka	Stocking	CIAA
Pink	fry	Ingram Creek	CI	Tutka	Stocking	CIAA
Pink	fry	Homer Spit	CI	Tutka	Stocking	CIAA
Pink	fry	Halibut Cove	CI	Tutka	Stocking	CIAA
Chum	fry	Tutka Lagoon	CI	Tutka	Stocking	CIAA

DRAFT

Project List for PNP Hatcheries

Southeast Chinook
PWS Pink and Chum
Cook Inlet Sockeye

(INTENSIVELY MODELED PROJECTS)

SPECIES	LIFESTAGE	RELEASE SITE	REGION	HATCHERY	TYPE PROJECT	OPERATOR
Chinook	✓ smolt ✓	Herring Cove ✓	SE	Whitman Lake ✓	Stocking	SSRAA
Chinook	✓ smolt ✓	Carroll Inlet ✓	SE	Whitman Lake ✓	Stocking	SSRAA
Chinook	0-smolt ✓	Carroll Inlet ✓	SE	Beaver Falls ✓	Stocking	SSRAA
Chinook	✓ smolt ✓	Neets Bay ✓	SE	Neets Bay ✓	Stocking	SSRAA
Chinook	✓ smolt ✓	Bear Cove ✓	SE	Medvejie Creek ✓	Stocking	NSRAA
Chinook	✓ smolt ✓	Kasnyku Bay ✓	SE	Hidden Falls ✓	Stocking	NSRAA
Chinook	✓ smolt ✓	Sitka Sound ✓	SE	Sheldon Jackson College ✓	Stocking	SJC
Chinook	✓ smolt ✓	Burnett Inlet ✓	SE	Burnett Inlet ✓	Stocking	AK AQUA
Chinook	✓ smolt ✓	Port Armstrong ✓	SE	Port Armstrong ✓	Stocking	AKI
Chinook	✓ smolt ✓	Gastineau Channel ✓	SE	Gastineau ✓	Stocking	DIPAC
Chinook	✓ fry ✓	Chilkat River ✓	SE	Gastineau ✓	Stocking	DIPAC
Chinook	✓ smolt ✓	Taiya Inlet ✓	SE	Burro Creek ✓	Stocking	BCF
Pink	✓ fry ✓	Port San Juan ✓	PWS	Armin F. Koernig ✓	Stocking	PWSAC
Pink	✓ fry ✓	Lake Bay ✓	PWS	Esther Lake ✓	Stocking	PWSAC
Pink	✓ fry ✓	Unakwik Inlet ✓	PWS	Cannery Creek ✓	Stocking	PWSAC
Pink	✓ fry ✓	Port Valdez ✓	PWS	Solomon Gulch ✓	Stocking	VFDA
Pink	✓ fry ✓	Boulder Bay ✓	PWS	Solomon Gulch ✓	Stocking	VFDA
Pink	✓ fry ✓	Naked Island ✓	PWS	Solomon Gulch ✓	Stocking	VFDA
Chum	✓ fry ✓	Port San Juan ✓	PWS	Armin F. Koernig ✓	Stocking	PWSAC
Chum	✓ fry ✓	Lake Bay ✓	PWS	Esther Lake ✓	Stocking	PWSAC
Chum	✓ fry ✓	Unakwik Inlet ✓	PWS	Cannery Creek ✓	Stocking	PWSAC
Chum	✓ fry ✓	Port Valdez ✓	PWS	Solomon Gulch ✓	Stocking	VFDA
Sockeye	✓ fry ✓	Packers Lake ✓	CI	Trail Lakes ✓	Stocking	CIAA
Sockeye	✓ fry ✓	Hidden Lake ✓	CI	Trail Lakes ✓	Stocking	CIAA
Sockeye	✓ fry ✓	Bear Lake ✓	CI	Trail Lakes ✓	Stocking	CIAA
Sockeye	✓ fry ✓	Chelatna Lake ✓	CI	Trail Lakes ✓	Stocking	CIAA
Sockeye	✓ fry ✓	Paint River Lakes ✓	CI	Trail Lakes ✓	Stocking	CIAA
Sockeye	✓ 0-smolt ✓	Coal Creek ✓	CI	Trail Lakes ✓	Stocking	CIAA
Sockeye	0-smolt	Thumb Cove	CI	Trail Lakes	Stocking	CIAA

Survey responses for State and/or PNP salmon salmon enhancement Projects

6/19/92

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Species	Lifestage at release	Release location	Region of Production	Hatchery Involved	Type of Project	Intense Modeled	Filled out by:	Comple	Error ch	Valid FRED	PNP/ Proj	STATE
BEAVER FALLS HATCHERY												
RED	FRY	BADGER/BAKEWELL	SE	BEAVER FALLS HATCHERY	STOCK/LIMN	N	MIKE HADDIX	Y	Y	Y	S	}
RED	FRY	HUGH SMITH	SE	BEAVER FALLS HATCHERY	STOCK/LIMN	N	MIKE HADDIX	Y	Y	Y	S	
RED	FRY	MARGARET LAKE	SE	BEAVER FALLS HATCHERY	STOCK/LIMN	N	MIKE HADDIX	Y	Y	Y	S	
RED	FRY	MCDONALD LAKE	SE	BEAVER FALLS HATCHERY	STOCK/LIMN	N	MIKE HADDIX	Y	Y	N	S	
RED	FRY	SALMON LK/KARTA	SE	BEAVER FALLS HATCHERY	STOCK/LIMN	N	MIKE HADDIX	Y	Y	Y	S	
RED	FRY	VIRGINIA LAKE	SE	BEAVER FALLS HATCHERY	STOCK/LIMN	N	MIKE HADDIX	Y	Y	Y	S	
BIG LAKE HATCHERY												
COHO	1-AG SMOLT	COTTONWOOD CR	CI	BIG LAKE HATCHERY	STOCK	N	BILL HAUSER	Y	Y	Y	S	}
COHO	1-AG SMOLT	WASILLA CREEK	CI	BIG LAKE HATCHERY	STOCK	N	BILL HAUSER	Y	Y	Y	S	
COHO	SMOLT	FISH CREEK SMOLT	CI	BIG LAKE HATCHERY	STOCK	N	BILL HAUSER	Y	Y	Y	S	
RED	FRY	ENGLISH BAY	CI	BIG LAKE HATCHERY	STOCK	Y	BILL HAUSER	Y	Y	Y	S	}
RED	FRY	MEADOW CR. BIG LK, & NCI	CI	BIG LAKE HATCHERY	STOCK	Y	BILL HAUSER	Y	Y	Y	S	

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Species	Lifestage at release	Release location	Region of Production	Hatchery Involved	Type of Project	Intense Modeled	Filled out by:	Comple	Error ch	Valid FRED	PMP/ Proj	STATE
BIG LAKE HATCHERY												
RED	FRY	NORTH COOK INLET PROPOSED	CI	BIG LAKE HATCHERY	STOCK	Y	BILL HAUSER	Y	Y	Y	S	3✓
RED	SMOLT	WEST COOK INLET	CI	BIG LAKE HATCHERY	STOCK	Y	BILL HAUSER	Y	Y	Y	S	
CROOKED CR HATCHERY												
COHO	1-AG SMOLT	CROOKED CREEK	CI	CROOKED CR HATCHERY	STOCK	N	BILL HAUSER	Y	Y	Y	S	✓
COHO	FINGERLING	CARIBOU LAKE	CI	CROOKED CR HATCHERY	STOCK	N	BILL HAUSER	Y	Y	N	S	} ✓
COHO	FINGERLING	SELDOVIA LAKE	CI	CROOKED CR HATCHERY	STOCK	N	BILL HAUSER	Y	Y	N	S	
KING	1-AG SMOLT	HOMER SPIT (LATE)	CI	CROOKED CR HATCHERY	STOCK	N	BILL HAUSER	Y	Y	N	S	
KING	1-AG SMOLT	SEWARD (LATE)	CI	CROOKED CR HATCHERY	STOCK	N	BILL HAUSER	Y	Y	N	S	
RED	FRY	BRUIN LAKE	CI	CROOKED CR HATCHERY	STOCK/LIMN	Y	BILL HAUSER	Y	Y	Y	S	
RED	FRY	CHENIK LAKE	CI	CROOKED CR HATCHERY	STOCK/LIMN	Y	BILL HAUSER	Y	Y	Y	S	} ✓
RED	FRY	HAZEL LAKE	CI	CROOKED CR HATCHERY	STOCK/LIMN	Y	BILL HAUSER	Y	Y	Y	S	
RED	FRY	KATCH BAY LAKS (LEISURE)	CI	CROOKED CR HATCHERY	STOCK	Y	BILL HAUSER	Y	Y	Y	S	
RED	FRY	KIRSCHNER LAKE SOCK	CI	CROOKED CR HATCHERY	STOCK/LIMN	Y	BILL HAUSER	Y	Y	Y	S	

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Species	Lifestage at release	Release location	Region of Production	Hatchery Involved	Type of Project	Intense Modeled	Filled out by:	Comple	Error chkf	Valid FRED Proj	PNP/ STATE
CROOKED CR HATCHERY											
RED	FRY	PORT DICK LAKE	CI	CROOKED CR HATCHERY	STOCK	Y	BILL HAUSER	Y	Y	Y	S
RED	FRY	TUSTUMENA LAKE	CI	CROOKED CR HATCHERY	STOCK/LIMN	Y	BILL HAUSER	Y	Y	Y	S
CRYSTAL LAKE HATCHERY											
COHO	1-AG SMOLT	CRYSTAL CREEK	SE	CRYSTAL LAKE HATCHERY	STOCK	N	BOB ZORICH	Y	Y	Y	S
COHO	FRY	CRYSTAL LAKE F PASS REMT.	SE	CRYSTAL LAKE HATCHERY	FPASS	N	BOB ZORICH	Y	Y	Y	S
KING	1-AG SMOLT	CRYSTAL CREEK	SE	CRYSTAL LAKE HATCHERY	STOCK	Y	BOB ZORICH	Y	Y	Y	S
KING	1-AG SMOLT	EARL WEST-TRANS SMOLT	SE	CRYSTAL LAKE HATCHERY	STOCK	Y	BOB ZORICH	Y	Y	Y	S
KING	1-AG SMOLT	OHMER CR	SE	CRYSTAL LAKE HATCHERY	STOCK	Y	BOB ZORICH	Y	Y	Y	S
KING	FED FRY	FARRAGUT RIVER	SE	CRYSTAL LAKE HATCHERY	STOCK	Y	BOB ZORICH	Y	Y	Y	S
KING	FED FRY	HARDING RIVER	SE	CRYSTAL LAKE HATCHERY	STOCK	Y	BOB ZORICH	Y	Y	Y	S
DEER MOUNTAIN HATCHERY											
KING	1-AG SMOLT	B.SALT,KLA,THORNE BAY	SE	DEER MOUNTAIN HATCHERY	STOCK	Y	CAROL DENTON	Y	Y	Y	S

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Species	Lifestage at release	Release location	Region of Production	Hatchery Involved	Type of Project	Intense Modeled	Filled out by:	Comple	Error chk	Valid FRED	PNP/ Proj	STATE
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DEER MOUNTAIN HATCHERY

DEER MOUNTIAN HATCHERY

COHO	1-AG SMOLT	KETCHIKAN CR	SE	DEER MOUNTIAN HATCHERY	STOCK	N	CAROL DENTON	Y	Y	Y	S
COHO	1-AG SMOLT	MARGARET LAKE	SE	DEER MOUNTIAN HATCHERY	STOCK	N	CAROL DENTON	Y	Y	Y	S
COHO	FINGERLING	REFLECTION LAKE	SE	DEER MOUNTIAN HATCHERY	STOCK	N	CAROL DENTON	Y	Y	Y	S
COHO	PRE-SMOLT	WARD LAKE	SE	DEER MOUNTIAN HATCHERY	STOCK	N	CAROL DENTON	Y	Y	Y	S
KING	1-AG SMOLT	KETCHIKAN CR	SE	DEER MOUNTIAN HATCHERY	STOCK	Y	CAROL DENTON	Y	Y	Y	S

ELMENDORF HATCHERY

COHO	1-AG SMOLT	HOMER SPIT RELEASE	CI	ELMENDORF HATCHERY	STOCK	N	BILL HAUSER	Y	Y	(N)	S
COHO	1-AG SMOLT	LOMELL CR RELEASE	CI	ELMENDORF HATCHERY	STOCK	N	BILL HAUSER	Y	Y	(N)	S
COHO	1-AG SMOLT	SEWARD LAGOON RELEASE	CI	ELMENDORF HATCHERY	STOCK	N	BILL HAUSER	Y	Y	(N)	S
COHO	1-AG SMOLT	SHIP CREEK	CI	ELMENDORF HATCHERY	STOCK	N	BILL HAUSER	Y	Y	Y	S
KING	0-AG SMOLT	CROOKED CREEK	CI	ELMENDORF HATCHERY	STOCK	N	BILL HAUSER	Y	Y	(N)	S

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Species	Lifestage at release	Release location	Region of Production	Hatchery Involved	Type of Project	Intense Modeled	Filled out by:	Comple	Error ch	Valid FRED	PNP/ Proj	STATE
ELMENDORF HATCHERY												
KING	0-AG SMOLT	EAGLE RIVER	CI	ELMENDORF HATCHERY	STOCK	N	BILL HAUSER	Y	Y	Y	S	✓
KING	0-AG SMOLT	HALIBUT COVE	CI	ELMENDORF HATCHERY	STOCK	N	BILL HAUSER	Y	Y	Y	S	✓
KING	0-AG SMOLT	HOMER (EARLY)	CI	ELMENDORF HATCHERY	STOCK	N	BILL HAUSER	Y	Y	(N)	S	
KING	0-AG SMOLT	LOWELL CR (SEWARD EARLY)	CI	ELMENDORF HATCHERY	STOCK	N	BILL HAUSER	Y	Y	(N)	S	
KING	0-AG SMOLT	SELDOVIA BAY	CI	ELMENDORF HATCHERY	STOCK	N	BILL HAUSER	Y	Y	Y	S	✓
KING	0-AG SMOLT	SEWARD (EARLY)	CI	ELMENDORF HATCHERY	STOCK	N	BILL HAUSER	Y	Y	(N)	S	
KING	0-AG SMOLT	SHIP CREEK	CI	ELMENDORF HATCHERY	STOCK	N	BILL HAUSER	Y	Y	Y	S	✓
KING	SMOLT	ISLAND LAKE	KOD	ELMENDORF HATCHERY	STOCK	N	BILL HAUSER	Y	Y	(N)	S	
FT RICHARDSON												
COHO	1-AG SMOLT	CASWELL CREEK	CI	FT RICHARDSON	STOCK	N	BILL HAUSER	N	N	Y	S	
COHO	1-AG SMOLT	L SUSITNA RIVER	CI	FT RICHARDSON	STOCK	N	BILL HAUSER	Y	Y	Y	S	
COHO	SMOLT	CORDOVA	PWS	FT RICHARDSON	STOCK	N	BILL HAUSER	N	N	Y	S	
COHO	SMOLT	COVE CREEK (WHITTIER)	PWS	FT RICHARDSON	STOCK	N	BILL HAUSER	N	N	Y	S	

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Species	Lifestage at release	Release location	Region of Production	Hatchery Involved	Type of Project	Intense Modeled	Filled out by:	Comple	Error ch	Valid FRED	PNP/ Proj	STATE
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FT RICHARDSON

KING	0-AG SMOLT	NINILCHICK RIVER	CI	FT RICHARDSON	STOCK	N	BILL HAUSER	Y	Y	N	S	✓
KING	0-AG SMOLT	WILLOW CREEK	CI	FT RICHARDSON	STOCK	N	BILL HAUSER	Y	Y	N	S	✓

GULKANA

KING	FRY	MONSOON LAKE	PWS	GULKANA	STOCK	N	PWS KEN ROBERSON	Y	Y	Y	S	} ✓
RED	FRY	CROSSWIND LAKE	PWS	GULKANA	STOCK	N	PWS KEN ROBERSON	Y	Y	Y	S	
RED	FRY	GULKANA I HATCHERY(PAXON)	PWS	GULKANA	STOCK	N	PWS KEN ROBERSON	Y	Y	Y	S	
RED	FRY	GULKANA II	PWS	GULKANA	STOCK	N	PWS KEN ROBERSON	Y	Y	Y	S	
RED	FRY	SUMMIT LAKE	PWS	GULKANA	STOCK	N	PWS KEN ROBERSON	Y	Y	Y	S	

KITOI BAY HATCHERY

no adult harvest data

CHUM	FINGERLING	KITOI BAY	KOD	KITOI BAY HATCHERY	STOCK	N	LONNIE WHITE	Y	Y	Y	S	} ✓
CHUM	FINGERLING	CRESCENT/HIDDEN LAKE	KOD	KITOI BAY HATCHERY	STOCK	N	LONNIE WHITE	Y	Y	Y	S	
CHUM	FINGERLING	KODIAK LAKES	KOD	KITOI BAY HATCHERY	STOCK	N	LONNIE WHITE	Y	Y	Y	S	

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Species	Lifestage at release	Release location	Region of Production	Hatchery Involved	Type of Project	Intense Modeled	Filled out by:	Comple	Error ch	Valid FRED	PNP/ Proj	STATE
KITOI BAY HATCHERY												
PINK	FED FRY	KITOI BAY FED	KOD	KITOI BAY HATCHERY	STOCK	Y	LONNIE WHITE	Y	Y	(Y)	S	} ✓
RED	0-AG SMOLT	KITOI BAY	KOD	KITOI BAY HATCHERY	STOCK	Y	LONNIE WHITE	Y	Y	(Y)	S	
RED	FRY	KITOI BAY RELS (REMOTE)	KOD	KITOI BAY HATCHERY	STOCK	Y	LONNIE WHITE	Y	Y	(Y)	S	
KLAUOCK												
COHO	FINGERLING	CABLE CR	SE	KLAUOCK	STOCK	N	CAROL DENTON	Y	Y	Y	S	} ✓
COHO	FINGERLING	OLD FRANK'S LAKE	SE	KLAUOCK	STOCK	N	CAROL DENTON	Y	Y	Y	S	
COHO	FINGERLING	THORNE R.	SE	KLAUOCK	STOCK	N	CAROL DENTON	Y	Y	Y	S	
COHO	PRE-SMOLT	KLAUOCK LAKE	SE	KLAUOCK	STOCK	N	CAROL DENTON	Y	Y	Y	S	
RED	FED FRY	KLAUOCK LAKE FED	SE	KLAUOCK	STOCK	N	CAROL DENTON	Y	Y	Y	S	
RED	FRY	KLAUOCK LAKE FRY	SE	KLAUOCK	STOCK	N	CAROL DENTON	Y	Y	Y	S	
KODIAK OFFICE												
RED	REHAB	AFDGNAB REHAB	KOD	KODIAK OFFICE	REHAB	Y	LONNIE WHITE	Y	Y	Y	S	

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Species	Lifestage at release	Release location	Region of Production	Hatchery Involved	Type of Project	Intense Modeled	Filled out by:	Completeness	Error chk	Valid FRED Proj	PNP/ STATE
KODIAK OFFICE											
MAIN BAY HATCHERY											
RED	SMOLT	ESHAMY RELEASE	PWS	MAIN BAY HATCHERY	STOCK	N	PWS JOHN MCMULLEN	N	N	Y	P
RED	SMOLT	MAIN BAY RELS (COGHILL)	PWS	MAIN BAY HATCHERY	STOCK	N	PWS JOHN MCMULLEN	N	N	Y	P
RED	SMOLT	MAIN BAY RELS (ESHAMY)	PWS	MAIN BAY HATCHERY	STOCK	N	PWS JOHN MCMULLEN	N	N	Y	P
RED	SMOLT	MAIN BAY RELS (EYAK)	PWS	MAIN BAY HATCHERY	STOCK	N	PWS JOHN MCMULLEN	N	N	Y	P
METLAKATLA											
KING	0-AG SMOLT	TAMGAS CR.	SE	METLAKATLA	STOCK	Y	DAVE HOUSEWORTH	N	N	Y	P
KING	1-AG SMOLT	TAMGAS CR.	SE	METLAKATLA		Y	DAVE HOUSEWORTH		N	Y	P
PILLAR CR HATCHERY											
RED	FED FRY	PILLAR CR RELEASE	KOD	PILLAR CR HATCHERY	STOCK	Y	LONNIE WHITE	Y	Y	Y	S
RED	FED FRY	SPIRIDON L (KOD) RELEASE	KOD	PILLAR CR HATCHERY	STOCK	Y	LONNIE WHITE	Y	Y	Y	S

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Species	Lifestage at release	Release location	Region of Production	Hatchery Involved	Type of Project	Intense Modeled	Filled out by:	Comple	Error chxFRED	Valid Proj	PNP/ STATE
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PILLAR CR HATCHERY

RED	FRY	MALINA LAKE REHAB	KOD	PILLAR CR HATCHERY	STOCK/LIMN	Y	LONNIE WHITE	Y	Y	Y	S	✓
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RUSSELL CR HATCHERY

CHUM	FED FRY	RUSSELL CR CHUM	KOD	RUSSELL CR HATCHERY	STOCK	N	BUTCH COBB	Y	Y	Y	S	} ✓
COHO	SMOLT	RUSSELL CR RELEASE COHO	KOD	RUSSELL CR HATCHERY	STOCK	N	BUTCH COBB	Y	Y	Y	S	
PINK	FRY	RUSSELL CR PINK	KOD	RUSSELL CR HATCHERY	STOCK	N	BUTCH COBB	Y	Y	Y	S	
RED	FED FRY	RUSS. CR MORTENSENS L RED	KOD	RUSSELL CR HATCHERY	STOCK	N	BUTCH COBB	Y	Y	Y	S	

SIKUSUILAQ HATCHERY

CHUM	FRY	NOAKAK RIVER	I/AYK	SIKUSUILAQ HATCHERY	STOCK	N	BILL HAUSER	Y	Y	Y	S	3 ✓
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SNETTISHAM

KING	1-AG SMOLT	DEEP COVE	SE	SNETTISHAM	STOCK	Y	RON JOSEPHSON	Y	Y	Y	S	} ✓
KING	1-AG SMOLT	JUNEAU (REMOTE)	SE	SNETTISHAM	STOCK	Y	RON JOSEPHSON	Y	Y	Y	S	

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Species	Lifestage at release	Release location	Region of Production	Hatchery Involved	Type of Project	Intense Modeled	Filled out by:	Comple	Error chkFRED	Valid Proj	PNP/ STATE
SNETTISHAM											
RED	1-AG SMOLT	GILBERT BAY	SE	SNETTISHAM	STOCK	N	RON JOSEPHSON	Y	Y	Y	S
RED	1-AG SMOLT	SNETT HATCH BROOD	SE	SNETTISHAM	STOCK	N	RON JOSEPHSON	Y	Y	Y	S
RED	EMERG FRY	CRESENT LAKE/PORT SNETT	SE	SNETTISHAM	STOCK	N	RON JOSEPHSON	Y	Y	Y	S
RED	EMERG FRY	SWEETHEART LAKE	SE	SNETTISHAM	STOCK	N	RON JOSEPHSON	Y	Y	Y	S
RED	EMERG FRY	TATSAMENIE LAKE (TAKU)	SE	SNETTISHAM	STOCK	N	RON JOSEPHSON	Y	Y	Y	S
RED	EMERG FRY	TRAPPER	SE	SNETTISHAM	STOCK	N	RON JOSEPHSON	Y	Y	Y	S
RED	EMERG FRY	TUYA LAKE/STIKINE	SE	SNETTISHAM	STOCK	N	RON JOSEPHSON	Y	Y	Y	S
RED	FRY	SPEEL LAKE	SE	SNETTISHAM	STOCK	N	RON JOSEPHSON	N	N	Y	S
RED	FRY	TANLTAN	SE	SNETTISHAM	STOCK	N	RON JOSEPHSON	Y	Y	Y	S

TUTKA BAY HATCHERY

COHO	FRY	TUTKA	CI	TUTKA BAY HATCHERY	STOCK	N	BILL HAUSER	N	N	Y	P
PINK	FRY	FED IN HALIBUT COVE	CI	TUTKA BAY HATCHERY	STOCK	N	BILL HAUSER	N	N	Y	P
PINK	FRY	FED IN HOMER SPIT	CI	TUTKA BAY HATCHERY	STOCK	N	BILL HAUSER	N	N	Y	P

CIAA

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Species	Lifestage at release	Release location	Region of Production	Hatchery Involved	Type of Project	Intense Modeled	Filled out by:	Comple	Error chkFRED	Valid Proj	PNP/ STATE
TUTKA BAY HATCHERY											
PINK	FRY	INGRAM CREEK	CI	TUTKA BAY HATCHERY	STOCK	N	BILL HAUSER	N	N	Y	P
PINK	FRY	TUTKA BAY FED	CI	TUTKA BAY HATCHERY	STOCK	N	BILL HAUSER	N	N	Y	P
PINK	FRY	TUTKA BAY UNFED	CI	TUTKA BAY HATCHERY	STOCK	N	BILL HAUSER	N	N	Y	P

CIAA

Cost Survey Name	Project Number
PWSAC	49-61, 125-127
SSRAA	1-10, 114-116
Burro Creek	43-45, 124
CIAA-Tutka	65-66
CIAA-Eklutna	64, 140
CIAA-Trails Lake	133-139
NSRAA-Port Camden	28-29
NSRAA-Medvejie Creek	19-24, 117
NSRAA-Hidden Falls	25-27, 118
KNFC	39-42
AK Aqua	11-15, 120
Dipac	33-38, 122-123
Gulkana I & II	88-92
I/AYK	105
Kitoi	93-94, 157-160
Ft. Richardson	87
Deer Mountain	78-81, 156
Snettisham	106-113, 166-167
Crooked Creek	75, 145-150
Port Armstrong/Armstrong-Keta	46-48, 121
Sheldon Jackson	30-32, 119
Klawock	95-100
Big Lake	72-74, 141-144
Elmendorf	82-86
Pillar Creek	160, 163-165

PROJECT #	SPECIES	LIFESTAGE	RELEASE SITE	REGION	HATCHERY	PROJECT	OPERATOR
Project List for PNP Hatcheries							
(NON-INTENSIVELY MODELED PROJECTS)							
SE - Pink, Chum, Coho, Sockeye							
PWS - Coho, Chinook, Sockeye							
CI - Pink, Chum, Chinook, Coho							
						TYPE	
PROJECT #	SPECIES	LIFESTAGE	RELEASE SITE	REGION	HATCHERY	PROJECT	OPERATOR
1	Chum S	fry	Naket Inlet	SE	Whitman Lake	Stocking	SSRAA
2	Chum F	fry	Naket Inlet	SE	Whitman Lake	Stocking	SSRAA
3	Chum S	fry	Kendrick Bay	SE	Whitman Lake	Stocking	SSRAA
4	Chum S	fry	Earl West Cove	SE	Whitman Lake	Stocking	SSRAA
5	Coho	smolt	Naket Inlet	SE	Whitman Lake	Stocking	SSRAA
6	Coho	smolt	Neets Bay	SE	Whitman Lake	Stocking	SSRAA
7	Coho	smolt	Earl West Cove	SE	Whitman Lake	Stocking	SSRAA
8	Coho	smolt	Herring Cove	SE	Whitman Lake	Stocking	SSRAA
9	Chum S	fry	Neets Bay	SE	Neets Bay	Stocking	SSRAA
10	Chum F	fry	Neets Bay	SE	Neets Bay	Stocking	SSRAA
	Coho	smolt	Neets Bay	SE	Neets Bay	Stocking	SSRAA
	Sockeye	0-smolt	George Inlet	SE	Beaver Falls	Stocking	SSRAA
	Sockeye	0-smolt	Shrimp Bay	SE	Beaver Falls	Stocking	SSRAA
11	Pink	fry	Burnett Inlet	SE	Burnett Inlet	Stocking	AAI
12	Pink	fry	Anita Bay	SE	Burnett Inlet	Stocking	AAI
13	Chum S	fry	Burnett Inlet	SE	Burnett Inlet	Stocking	AAI
14	Chum S	fry	Anita Bay	SE	Burnett Inlet	Stocking	AAI
15	Coho	smolt	Burnett Inlet	SE	Burnett Inlet	Stocking	AAI
16	Coho	smolt	Bell Island	SE	Bell Island	Stocking	AMERAQUA
17	Coho	smolt	Bailey Bay	SE	Bell Island	Stocking	AMERAQUA
18	Steelhead	smolt	Bell Island	SE	Bell Island	Stocking	AMERAQUA
19	Chum S	fry	Bear Cove	SE	Medvejie Creek	Stocking	NSRAA
20	Chum S	fry	Deep Inlet	SE	Medvejie Creek	Stocking	NSRAA
21	Coho	fry	Deer Lake	SE	Medvejie Creek	Stocking	NSRAA
22	Coho	smolt	Bear Cove	SE	Medvejie Creek	Stocking	NSRAA
23	Coho	smolt	Deep Inlet	SE	Medvejie Creek	Stocking	NSRAA
24	Coho	smolt	Shamrock Bay	SE	Medvejie Creek	Stocking	NSRAA
25	Chum S	fry	Kasnyku Bay	SE	Hidden Falls	Stocking	NSRAA
26	Chum S	fry	Takatz Bay	SE	Hidden Falls	Stocking	NSRAA
27	Coho	fry	Kasnyku Bay	SE	Hidden Falls	Stocking	NSRAA
28	Chum F	fry	East Camden	SE	Port Camden	Stocking	NSRAA
29	Chum F	fry	West Camden	SE	Port Camden	Stocking	NSRAA
30	Pink	fry	Sitka Sound	SE	Sheldon Jackson	Stocking	SJC
31	Chum S	fry	Sitka Sound	SE	Sheldon Jackson	Stocking	SJC
32	Coho	smolt	Sitka Sound	SE	Sheldon Jackson	Stocking	SJC
33	Chum S	fry	Boat Harbor	SE	Gastineau	Stocking	DIPAC
34	Chum S	fry	Limestone Inlet	SE	Gastineau	Stocking	DIPAC
37	Coho	smolt	Gastineau Channel	SE	Gastineau	Stocking	DIPAC
38	Coho	smolt	Sheep Creek	SE	Gastineau	Stocking	DIPAC
39	Pink	fry	Gunnuk Creek	SE	Gunnuk Creek	Stocking	KNFC
40	Pink	fry	Southeast Cove	SE	Gunnuk Creek	Stocking	KNFC
41	Chum S	fry	Gunnuk Creek	SE	Gunnuk Creek	Stocking	KNFC
42	Chum S	fry	Southeast Cove	SE	Gunnuk Creek	Stocking	KNFC
43	Pink	fry	Taiya Inlet	SE	Burro Creek	Stocking	BCF
44	Chum S	fry	Taiya Inlet	SE	Burro Creek	Stocking	BCF
45	Coho	smolt	Taiya Inlet	SE	Burro Creek	Stocking	BCF
46	Pink	fry	Port Armstrong	SE	Port Armstrong	Stocking	AKI
47	Chum F	fry	Port Armstrong	SE	Port Armstrong	Stocking	AKI
48	Coho	smolt	Port Armstrong	SE	Port Armstrong	Stocking	AKI
49	Coho	smolt	Quillian Bay	PWS	Esther Lake	Stocking	PWSAC
50	Coho	smolt	Whittier	PWS	Esther Lake	Stocking	PWSAC
51	Coho	smolt	Fleming Spit	PWS	Esther Lake	Stocking	PWSAC
52	Chinook	smolt	Fleming Spit	PWS	Esther Lake	Stocking	PWSAC
53	Chinook	smolt	Whittier	PWS	Esther Lake	Stocking	PWSAC
54	Chinook	smolt	Port Valdez	PWS	Esther Lake	Stocking	PWSAC
55	Chinook	smolt	Quillian Bay	PWS	Esther Lake	Stocking	PWSAC
56	Chum	fry	Lake Bay	PWS	Esther Lake	Stocking	PWSAC

PROJECT #	SPECIES	LIFESTAGE	RELEASE SITE	REGION	HATCHERY	PROJECT	OPERATOR
57	Sockeye	smolt	Coghill River/Lake	PWS	Main Bay	Stocking	PWSAC
58	Sockeye	smolt	Main Bay (Eshamy)	PWS	Main Bay	Stocking	PWSAC
59	Sockeye	smolt	Main Bay (Eyak)	PWS	Main Bay	Stocking	PWSAC
60	Sockeye	smolt	Main Bay (Coghill)	PWS	Main Bay	Stocking	PWSAC
61	Sockeye	smolt	Eshamy Lake	PWS	Main Bay	Stocking	PWSAC
62	Coho	smolt	Port Valdez	PWS	Solomon Gulch	Stocking	VFDA
	Coho	smolt	Tatitlek Creek	PWS	Solomon Gulch	Stocking	VFDA
	Sockeye	fry	Summit Lake	PWS	Gulkana I	Stocking	PWSAC
	Sockeye	fry	Cross Wind Lake	PWS	Gulkana I	Stocking	PWSAC
	Sockeye	fry	Gulkana River	PWS	Gulkana I	Stocking	PWSAC
	Sockeye	fry	Gulkana River	PWS	Gulkana II	Stocking	PWSAC
	Chinook	fry	Monsoon Lake	PWS	Gulkana II	Stocking	PWSAC
64	Coho	smolt	Eklutna	CI	Eklutna	Stocking	CIAA
65	Pink	fry	Tutka Lagoon	CI	Tutka	Stocking	CIAA
66	Pink	fry	Halibut Cove	CI	Tutka	Stocking	CIAA

Southeast Chinook
PWS Pink and Chum
Cook Inlet Sockeye

(INTENSIVELY MODELED PROJECTS)

114	Chinook	smolt	Herring Cove	SE	Whitman Lake	Stocking	SSRAA
115	Chinook	smolt	Carroll Inlet	SE	Whitman Lake	Stocking	SSRAA
116	Chinook	smolt	Neets Bay	SE	Neets Bay	Stocking	SSRAA
117	Chinook	smolt	Bear Cove	SE	Medvejie Creek	Stocking	NSRAA
118	Chinook	smolt	Kasnyku Bay	SE	Hidden Falls	Stocking	NSRAA
119	Chinook	smolt	Sitka Sound	SE	Sheldon Jackson	Stocking	SJC
120	Chinook	smolt	Burnett Inlet	SE	Burnett Inlet	Stocking	AK AQUA
121	Chinook	smolt	Port Armstrong	SE	Port Armstrong	Stocking	AKI
122	Chinook	smolt	Gastineau Channel	SE	Gastineau	Stocking	DIPAC
123	Chinook	fry	Chilkat River	SE	Gastineau	Stocking	DIPAC
124	Chinook	smolt	Taiya Inlet	SE	Burro Creek	Stocking	BCF
125	Pink	fry	Port San Juan	PWS	Armin F. Koernig	Stocking	PWSAC
126	Pink	fry	Lake Bay	PWS	Esther Lake	Stocking	PWSAC
127	Pink	fry	Unakwik Inlet	PWS	Cannery Creek	Stocking	PWSAC
128	Pink	fry	Port Valdez	PWS	Solomon Gulch	Stocking	VFDA
129	Pink	fry	Boulder Bay	PWS	Solomon Gulch	Stocking	VFDA
130	Pink	fry	Naked Island	PWS	Solomon Gulch	Stocking	VFDA
131	Chum	fry	Lake Bay	PWS	Esther Lake	Stocking	PWSAC
132	Chum	fry	Port Valdez	PWS	Solomon Gulch	Stocking	VFDA
133	Sockeye	fry	Packers Lake	CI	Trail Lakes	Stocking	CIAA
134	Sockeye	fry	Hidden Lake	CI	Trail Lakes	Stocking	CIAA
135	Sockeye	fry	Bear Lake	CI	Trail Lakes	Stocking	CIAA
136	Sockeye	smolt	Bear Lake	CI	Trail Lakes	Stocking	CIAA
137	Sockeye	fry	Chelatna Lake	CI	Trail Lakes	Stocking	CIAA
138	Sockeye	0-smolt	Coal Creek	CI	Trail Lakes	Stocking	CIAA
139	Sockeye	0-smolt	Thumb Cove	CI	Trail Lakes	Stocking	CIAA
140	Sockeye	1-smolt	Eklutna	CI	Eklutna	Stocking	CIAA

STATE INTENSE AND

SELY MODELLED PROJECTS

PROJECT #	Species	Lifestage at RELEASE	Release location	Prod. Region	Hatchery Involved	Intensely Modeled	Filled out by:	State/ PNP
67	RED	FRY	HUGH SMITH	SE	BEAVER FALLS HATCHERY	N	MIKE HADDIX	
68	RED	FRY	MARGARET LAKE	SE	BEAVER FALLS HATCHERY	N	MIKE HADDIX	S
69	RED	FRY	VIRGINIA LAKE	SE	BEAVER FALLS HATCHERY	N	MIKE HADDIX	S
70	RED	FRY	SALMON LK/KARTA	SE	BEAVER FALLS HATCHERY	N	MIKE HADDIX	S
71	RED	FRY	BADGER/BAKEWELL	SE	BEAVER FALLS HATCHERY	N	MIKE HADDIX	S
72	COHO	1-AG SMOLT	WASSILA CREEK	CI	BIG LAKE HATCHERY	N	BILL HAUSER	S
73	COHO	1-AG SMOLT	COTTONWOOD CR	CI	BIG LAKE HATCHERY	N	BILL HAUSER	S
74	COHO	SMOLT	FISH CREEK SMOLT	CI	BIG LAKE HATCHERY	N	BILL HAUSER	S
75	COHO	1-AG SMOLT	CROOKED CREEK	CI	CROOKED CR HATCHERY	N	BILL HAUSER	S
76	COHO	FRY	CRYSTAL LAKE F PASS REMT.	SE	CRYSTAL LAKE HATCHERY	N	BOB ZORICH	S
77	COHO	1-AG SMOLT	CRYSTAL CREEK	SE	CRYSTAL LAKE HATCHERY	N	BOB ZORICH	S
78	COHO	1-AG SMOLT	KETCHIKAN CR	SE	DEER MOUNTIAN HATCHERY	N	CAROL DENTON	S
79	COHO	FINGERLING	REFLECTION LAKE	SE	DEER MOUNTIAN HATCHERY	N	CAROL DENTON	S
80	COHO	PRE-SMOLT	WARD LAKE	SE	DEER MOUNTIAN HATCHERY	N	CAROL DENTON	S
81	COHO	1-AG SMOLT	MARGARET LAKE	SE	DEER MOUNTIAN HATCHERY	N	CAROL DENTON	S
82	KING	0-AG SMOLT	SHIP CREEK	CI	ELMENDORF HATCHERY	N	BILL HAUSER	S
83	COHO	1-AG SMOLT	SHIP CREEK	CI	ELMENDORF HATCHERY	N	BILL HAUSER	S
84	KING	0-AG SMOLT	EAGLE RIVER	CI	ELMENDORF HATCHERY	N	BILL HAUSER	S
85	KING	0-AG SMOLT	HALIBUT COVE	CI	ELMENDORF HATCHERY	N	BILL HAUSER	S
86	KING	0-AG SMOLT	SELDOVIA BAY	CI	ELMENDORF HATCHERY	N	BILL HAUSER	S
87	COHO	1-AG SMOLT	L SUSITNA RIVER	CI	FT RICHARDSON	N	BILL HAUSER	S
88	RED	FRY	GULKANA II	PWS	GULKANA	N	PWS KEN ROBERSON	S
89	RED	FRY	SUMMIT LAKE	PWS	GULKANA	N	PWS KEN ROBERSON	S
90	RED	FRY	CROSSWIND LAKE	PWS	GULKANA	N	PWS KEN ROBERSON	S
91	KING	FRY	MONSOON LAKE	PWS	GULKANA	N	PWS KEN ROBERSON	S
92	RED	FRY	GULKANA I HATCHERY(PAXON)	PWS	GULKANA	N	PWS KEN ROBERSON	S
93	COHO	FINGERLING	CRESCENT/HIDDEN LAKE	KOD	KITOI BAY HATCHERY	N	LONNIE WHITE	S
94	CHUM	FINGERLING	KITOI BAY	KOD	KITOI BAY HATCHERY	N	LONNIE WHITE	S
95	RED	FED FRY	KLAWOCK LAKE FED	SE	KLAWOCK	N	CAROL DENTON	S
96	COHO	PRE-SMOLT	KLAWOCK LAKE	SE	KLAWOCK	N	CAROL DENTON	S
97	COHO	FINGERLING	CABLE CR	SE	KLAWOCK	N	CAROL DENTON	S
98	COHO	FINGERLING	OLD FRANK'S LAKE	SE	KLAWOCK	N	CAROL DENTON	S
99	COHO	FINGERLING	THORNE R.	SE	KLAWOCK	N	CAROL DENTON	S
100	RED	FRY	KLAWOCK LAKE FRY	SE	KLAWOCK	N	CAROL DENTON	S
PWSAC	RED	SMOLT	MAIN BAY RELS (EYAK)	PWS	MAIN BAY HATCHERY	N	PWS JOHN MCMULLEN	P
PWSAC	RED	SMOLT	ESHAMY RELEASE	PWS	MAIN BAY HATCHERY	N	PWS JOHN MCMULLEN	P
PWSAC	RED	SMOLT	MAIN BAY RELS (ESHAMY)	PWS	MAIN BAY HATCHERY	N	PWS JOHN MCMULLEN	P
PWSAC	RED	SMOLT	MAIN BAY RELS (COGHILL)	PWS	MAIN BAY HATCHERY	N	PWS JOHN MCMULLEN	P
101	CHUM	FED FRY	RUSSELL CR CHUM	KOD	RUSSELL CR HATCHERY	N	BUTCH COBB	S
102	COHO	SMOLT	RUSSELL CR RELEASE COHO	KOD	RUSSELL CR HATCHERY	N	BUTCH COBB	S
103	RED	FED FRY	RUSS. CR MORTENSENS L RED	KOD	RUSSELL CR HATCHERY	N	BUTCH COBB	S
104	PINK	FRY	RUSSELL CR PINK	KOD	RUSSELL CR HATCHERY	N	BUTCH COBB	S
105	CHUM	FRY	NOAKAK RIVER	I/AYK	SIKUSUILAQ HATCHERY	N	BILL HAUSER	S
106	RED	EMERG FRY	TUYA LAKE/STIKINE	SE	SNETTISHAM	N	RON JOSEPHSON	S

STATE INTENSE AND NON-INTENSELY MODELLED PROJECTS

PROJECT #	Species	Lifestage at RELEASE	Release location	Prod. Region	Hatchery Involved	Intensely Modeled	Filled out by:	State/ PNP
107	RED	EMERG FRY	SWEETHEART LAKE	SE	SNETTISHAM	N	RON JOSEPHSON	S
108	RED	FRY	TAHLTAN	SE	SNETTISHAM	N	RON JOSEPHSON	S
109	RED	EMERG FRY	TATSAMENIE LAKE (TAKU)	SE	SNETTISHAM	N	RON JOSEPHSON	S
110	RED	EMERG FRY	CRESENT LAKE/PORT SNETT	SE	SNETTISHAM	N	RON JOSEPHSON	S
111	RED	1-AG SMOLT	SNETT HATCH BROOD	SE	SNETTISHAM	N	RON JOSEPHSON	S
112	RED	EMERG FRY	TRAPPER	SE	SNETTISHAM	N	RON JOSEPHSON	S
113	RED	1-AG SMOLT	GILBERT BAY	SE	SNETTISHAM	N	RON JOSEPHSON	S
CIAA	PINK	FRY	TUTKA BAY UNFED	CI	TUTKA BAY HATCHERY	N	BILL HAUSER	P
CIAA	COHO	FRY	TUTKA	CI	TUTKA BAY HATCHERY	N	BILL HAUSER	P
CIAA	PINK	FRY	FED IN HALIBUT COVE	CI	TUTKA BAY HATCHERY	N	BILL HAUSER	P
CIAA	PINK	FRY	INGRAM CREEK	CI	TUTKA BAY HATCHERY	N	BILL HAUSER	P
CIAA	PINK	FRY	FED IN HOMER SPIT	CI	TUTKA BAY HATCHERY	N	BILL HAUSER	P
CIAA	PINK	FRY	TUTKA BAY FED	CI	TUTKA BAY HATCHERY	N	BILL HAUSER	P
141	RED	SMOLT	WEST COOK INLET	CI	BIG LAKE HATCHERY	Y	BILL HAUSER	S
142	RED	FRY	MEADOW CR. BIG LK, & NCI	CI	BIG LAKE HATCHERY	Y	BILL HAUSER	S
143	RED	FRY	ENGLISH BAY	CI	BIG LAKE HATCHERY	Y	BILL HAUSER	S
144	RED	FRY	NORTH COOK INLET PROPOSED	CI	BIG LAKE HATCHERY	Y	BILL HAUSER	S
145	RED	FRY	BRUIN LAKE	CI	CROOKED CR HATCHERY	Y	BILL HAUSER	S
146	RED	FRY	CHENIK LAKE	CI	CROOKED CR HATCHERY	Y	BILL HAUSER	S
147	RED	FRY	KATCH BAY LAKS (LEISURE)	CI	CROOKED CR HATCHERY	Y	BILL HAUSER	S
148	RED	FRY	KIRSCHNER LAKE SOCK	CI	CROOKED CR HATCHERY	Y	BILL HAUSER	S
149	RED	FRY	TUSTUMENA LAKE	CI	CROOKED CR HATCHERY	Y	BILL HAUSER	S
150	RED	FRY	HAZEL LAKE	CI	CROOKED CR HATCHERY	Y	BILL HAUSER	S
151	KING	1-AG SMOLT	CRYSTAL CREEK	SE	CRYSTAL LAKE HATCHERY	Y	BOB ZORICH	S
152	KING	1-AG SMOLT	EARL WEST-TRANS SMOLT	SE	CRYSTAL LAKE HATCHERY	Y	BOB ZORICH	S
153	KING	FED FRY	FARRAGUT RIVER	SE	CRYSTAL LAKE HATCHERY	Y	BOB ZORICH	S
154	KING	FED FRY	HARDING RIVER	SE	CRYSTAL LAKE HATCHERY	Y	BOB ZORICH	S
155	KING	1-AG SMOLT	OHMER CR	SE	CRYSTAL LAKE HATCHERY	Y	BOB ZORICH	S
156	KING	1-AG SMOLT	KETCHIKAN CR	SE	DEER MOUNTAIN HATCHERY	Y	CAROL DENTON	S
157	RED	0-AG SMOLT	KITOI BAY	KOD	KITOI BAY HATCHERY	Y	LONNIE WHITE	S
158	PINK	FED FRY	KITOI BAY FED	KOD	KITOI BAY HATCHERY	Y	LONNIE WHITE	S
159	RED	FRY	KITOI BAY RELS (REMOTE)	KOD	KITOI BAY HATCHERY	Y	LONNIE WHITE	S
160	RED	REHAB	AFOGNAK REHAB	KOD	KODIAK OFFICE	Y	LONNIE WHITE	S
161	KING	1-AG SMOLT	TAMGAS CR.	SE	METLAKATLA	Y	DAVE HOUSEWORTH	P
162	KING	0-AG SMOLT	TAMGAS CR.	SE	METLAKATLA	Y	DAVE HOUSEWORTH	P
163	RED	FED FRY	SPIRIDON L (KOD) RELEASE	KOD	PILLAR CR HATCHERY	Y	LONNIE WHITE	S
164	RED	FRY	MALINA LAKE REHAB	KOD	PILLAR CR HATCHERY	Y	LONNIE WHITE	S
165	RED	FED FRY	PILLAR CR RELEASE	KOD	PILLAR CR HATCHERY	Y	LONNIE WHITE	S
166	KING	1-AG SMOLT	DEEP COVE	SE	SNETTISHAM	Y	RON JOSEPHSON	S
167	KING	1-AG SMOLT	JUNEAU (REMOTE)	SE	SNETTISHAM	Y	RON JOSEPHSON	S

PNP COST DATA

PNP COST DATA

FACILITY	FISCAL YEAR	FACILITY	FISCAL YEAR	C OPERATING	C CONSTRUCT	C % COMM.	C % SPORT	C % COST RECOV.
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Enhance A

" B

" C

PNP COST DATA

FACILITY	FISCAL YEAR	C MGMT COST	P OPERATING	P CONSTRUCT	P % COMM.	P % SPORT	P % COST RECOV.	P MGMT COST
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PNP COST DATA

FACILITY	FISCAL YEAR	-PINK OPERATING	-PINK CONSTRUCT	-PINK % COMM.	-PINK % SPORT	-PINK % COST RECOV.	-PINK MGMT COST
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PNP COST DATA

FACILITY	FISCAL YEAR	-CHUM OPERATING	-CHUM CONSTRUCT	-CHUM % COMM.	-CHUM % SPORT	-CHUM % COST RECOV.
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PNP COST DATA

FACILITY	FISCAL YEAR	-CHUM MGMT COST	-SOCKEYE OPERATING	-SOCKEYE CONSTRUCT	-SOCKEYE % COMM.	-SOCKEYE % SPORT
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PNP COST DATA

FACILITY	FISCAL YEAR	- SOCKEYE % COST RECOV.	- SOCKEYE MGMT COST	- COHO OPERATING	- COHO CONSTRUCT	- COHO % COMM.
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PNP COST DATA

FACILITY	FISCAL YEAR	-COHO % SPORT	-COHO % COST RECOV.	-COHO MGMT COST	-CHIN OPERATING	-CHIN CONSTRUCT
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PNP COST DATA

FACILITY	FISCAL YEAR	-CHIN % COMM.	-CHIN % SPORT	-CHIN % COST RECOV.	-CHIN MGMT COST	+PINK OPERATING
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PNP COST DATA

FACILITY	FISCAL YEAR	+PINK CONSTRUCT	+PINK % COMM.	+PINK % SPORT	+PINK % COST RECOV.	+PINK MGMT COST
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PNP COST DATA

FACILITY	FISCAL YEAR	+CHUM OPERATING	+CHUM CONSTRUCT	+CHUM % COMM.	+CHUM % SPORT	+CHUM % COST RECOV.
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PNP COST DATA

FACILITY	FISCAL YEAR	+CHUM MGMT COST	+SOCKEYE OPERATING	+SOCKEYE CONSTRUCT	+SOCKEYE % COMM.	+SOCKEYE % SPORT
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PNP COST DATA

FACILITY	FISCAL YEAR	+SCKEYE % COST RECOV.	+SCKEYE MGMT COST	+COHO OPERATING	+COHO CONSTRUCT	+COHO % COMM.
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PNP COST DATA

FACILITY	FISCAL YEAR	+COHO % SPORT	+COHO % COST RECOV.	+COHO MGMT COST	+CHIN OPERATING	+CHIN CONSTRUCT
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PNP COST DATA

FACILITY	FISCAL YEAR	+CHIN % COMM.	+CHIN % SPORT	+CHIN % COST RECOV.	+CHIN MGMT COST
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INTENSE PRODUCTION

PROJECT YEAR PNP	C#EGGS (MILLIONS)	P#EGGS (MILLIONS)	C#RELEASES (MILLIONS)	P#RELEASES (MILLIONS)	C ADULT RETURNS	P ADULT RETURNS	C DISTRICT1#
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intense	A
"	B
"	C
"	D
"	E
"	F

(intensely modeled
enhance production)

C#FISH 1

C DISTRICT2#

C#FISH 2

C DISTRICT3#

C#FISH 3

C MAY

C JUNE

C JULY

C AUG

C SEPT

C OCT

C NOV+

P DISTRICT1#

P#FISH 1

P DISTRICT2#

P#FISH 2

P DISTRICT3#

P#FISH 3

P MAY

P JUNE

P JULY

P AUG

P SEPT

P OCT

P NOV+

C SPORT HARV

P SPORT HARV

C COST RECOV

P COST RECOV

NON-INTENSE PRODUCTION

PROJECT	YEAR	C#EGGS (MILLIONS)	P#EGGS (MILLIONS)	C#RELEASES (MILLIONS)	P#RELEASES (MILLIONS)	C ADULT RETURNS	P ADULT RETURNS	C COMM HARV	P COMM HARV
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nonintense A
 " B
 " C
 " D
 " E

C SPORT HARV P SPORT HARV C COST RECOV P COST RECOV

received

SPECIES	LIFESTAGE	RELEASE SITE	REGION	HATCHERY	TYPE PROJECT	OPERATOR
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Project List for PNP Hatcheries

Southeast Chinook
PWS Pink and Chum
Cook Inlet Sockeye

(INTENSIVELY MODELED PROJECTS)

SPECIES	LIFESTAGE	RELEASE SITE	REGION	HATCHERY	TYPE PROJECT	OPERATOR
Chinook	age-1 smolt	Little port walter	SE	L. Hue port walter		
5 Chinook	smolt	Herring Cove	SE	Whitman Lake	Stocking	SSRAA
5 Chinook	smolt	Carroll Inlet	SE	Whitman Lake	Stocking	SSRAA
5 Chinook	0-smolt	Carroll Inlet	SE	Beaver Falls	Stocking	SSRAA
5 Chinook	smolt	Neets Bay	SE	Neets Bay	Stocking	SSRAA
Chinook	smolt	Bear Cove	SE	Medvejie Creek	Stocking	NSRAA
Chinook	smolt	Kasnyku Bay	SE	Hidden Falls	Stocking	NSRAA
Chinook	smolt	Sitka Sound	SE	Sheldon Jackson College	Stocking	SJC
Chinook	smolt	Burnett Inlet	SE	Burnett Inlet	Stocking	AK AQUA
Chinook	smolt	Port Armstrong	SE	Port Armstrong	Stocking	AKI
Chinook	smolt	Gastineau Channel	SE	Gastineau	Stocking	DIPAC
Chinook	fry	Chilkat River	SE	Gastineau	Stocking	DIPAC
Chinook	smolt	Taiya Inlet	SE	Burro Creek	Stocking	BCF
P Pink	fry	Port San Juan	PWS	Armin F. Koernig	Stocking	PWSAC
P Pink	fry	Lake Bay	PWS	Esther Lake	Stocking	PWSAC
P Pink	fry	Unakwik Inlet	PWS	Cannery Creek	Stocking	PWSAC
P Pink	fry	Port Valdez	PWS	Solomon Gulch	Stocking	VFDA
P Pink	fry	Boulder Bay	PWS	Solomon Gulch	Stocking	VFDA
P Pink	fry	Naked Island	PWS	Solomon Gulch	Stocking	VFDA
not p/f Chum	fry	Port San Juan	PWS	Armin F. Koernig	Stocking	PWSAC
not p/f Chum	fry	Lake Bay	PWS	Esther Lake	Stocking	PWSAC
not p/f Chum	fry	Unakwik Inlet	PWS	Cannery Creek	Stocking	PWSAC
Chum	fry	Port Valdez	PWS	Solomon Gulch	Stocking	VFDA
Sockeye	fry	Packers Lake ✓	CI	Trail Lakes	Stocking	CIAA
Sockeye	fry	Hidden Lake ✓	CI	Trail Lakes	Stocking	CIAA
Sockeye	fry	Bear Lake ✓	CI	Trail Lakes	Stocking	CIAA
93 Sockeye	smolt	Chelona Lake ✓	CI	Trail Lakes	Stocking	CIAA
Sockeye	fry	Paint River Lakes	CI	Trail Lakes	Stocking	CIAA
Sockeye	0-smolt	Coal Creek ✓	CI	Trail Lakes	Stocking	CIAA
Sockeye	0-smolt	st ✓ Thumb Cove	CI	Trail Lakes	Stocking	CIAA
"	"	Eklutna	"	Eklutna	"	"

(NON-INTENSIVELY MODELED PROJECTS)

SE - Pink, Chum, Coho, Sockeye
PWS - Coho, Chinook, Sockeye
CI - Pink, Chum, Chinook, Coho

SPECIES	LIFESTAGE	RELEASE SITE	REGION	HATCHERY	TYPE PROJECT	OPERATOR
15 Chum S	fry	Naket Inlet	SE	Whitman Lake	Stocking	SSRAA

SPECIES	LIFESTAGE	RELEASE SITE	REGION	HATCHERY	TYPE PROJECT	OPERATOR
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2/5	Chum F	fry	Naket Inlet	SE	Whitman Lake	Stocking	SSRAA
3/5	Chum S	fry	Kendrick Bay	SE	Whitman Lake	Stocking	SSRAA
4/5	Chum S	fry	Earl West Cove	SE	Whitman Lake	Stocking	SSRAA
5/5	Coho	smolt	Naket Inlet	SE	Whitman Lake	Stocking	SSRAA
6/5	Coho	smolt	Neets Bay	SE	Whitman Lake	Stocking	SSRAA
7/5	Coho	smolt	Earl West Cove	SE	Whitman Lake	Stocking	SSRAA
8/5	Coho	smolt	Herring Cove	SE	Whitman Lake	Stocking	SSRAA
9/5	Chum S	fry	Neets Bay	SE	Neets Bay	Stocking	SSRAA
10/5	Chum F	fry	Neets Bay	SE	Neets Bay	Stocking	SSRAA
11/5	Coho	smolt	Neets Bay	SE	Neets Bay	Stocking	SSRAA
12/5	Sockeye	0-smolt	George Inlet	SE	Beaver Falls	Stocking	SSRAA
13/5	Sockeye	0-smolt	Shrimp Bay	SE	Beaver Falls	Stocking	SSRAA
14	Pink	fry	Burnett Inlet	SE	Burnett Inlet	Stocking	AAI
15	Pink	fry	Anita Bay	SE	Burnett Inlet	Stocking	AAI
16	Chum S	fry	Burnett Inlet	SE	Burnett Inlet	Stocking	AAI
17	Chum S	fry	Anita Bay	SE	Burnett Inlet	Stocking	AAI
18	Coho	smolt	Burnett Inlet	SE	Burnett Inlet	Stocking	AAI
19	Coho	smolt	Bell Island	SE	Bell Island	Stocking	AMERAQUA
20	Coho	smolt	Bailey Bay	SE	Bell Island	Stocking	AMERAQUA
21	Steelhead	smolt	Bell Island	SE	Bell Island	Stocking	AMERAQUA
22	Chum S	fry	Bear Cove	SE	Medvejie Creek	Stocking	NSRAA
23	Chum S	fry	Deep Inlet	SE	Medvejie Creek	Stocking	NSRAA
24	Coho	fry	Deer Lake	SE	Medvejie Creek	Stocking	NSRAA
25	Coho	fry	Patterson Bay Lakes	SE	Medvejie Creek	Stocking	NSRAA
26	Coho	fry	Kruzof Lakes	SE	Medvejie Creek	Stocking	NSRAA
27	Coho	smolt	Bear Cove	SE	Medvejie Creek	Stocking	NSRAA
28	Coho	smolt	Deep Inlet	SE	Medvejie Creek	Stocking	NSRAA
29	Coho	smolt	Shamrock Bay	SE	Medvejie Creek	Stocking	NSRAA
30	Chum S	fry	Kasnyku Bay	SE	Hidden Falls	Stocking	NSRAA
31	Chum S	fry	Takatz Bay	SE	Hidden Falls	Stocking	NSRAA
32	Coho	fry	Kasnyku Bay	SE	Hidden Falls	Stocking	NSRAA
33	Chum F	fry	East Camden	SE	Port Camden	Stocking	NSRAA
34	Chum F	fry	West Camden	SE	Port Camden	Stocking	NSRAA
35	Pink	fry	Sitka Sound	SE	Sheldon Jackson	Stocking	SJC
36	Chum S	fry	Sitka Sound	SE	Sheldon Jackson	Stocking	SJC
37	Coho	smolt	Sitka Sound	SE	Sheldon Jackson	Stocking	SJC
38	Pink	fry	Sheep Creek	SE	Sheep Creek	Stocking	DIPAC
39	Chum S	fry	Sheep Creek	SE	Sheep Creek	Stocking	DIPAC
40	Coho	smolt	Sheep Creek	SE	Sheep Creek	Stocking	DIPAC
41	Pink	fry	Sheep Creek	SE	Gastineau	Stocking	DIPAC
42	Pink	fry	Gastineau Channel	SE	Gastineau	Stocking	DIPAC

	SPECIES	LIFESTAGE	RELEASE SITE	REGION	HATCHERY	TYPE PROJECT	OPERATOR
C.R.	Chum S	fry	Sheep Creek	SE	Gastineau	Stocking	DIPAC
C.R.	Chum S	fry	Gastineau	SE	Gastineau	Stocking	DIPAC
C.R.	Chum S	fry	Amalga Harbor	SE	Gastineau	Stocking	DIPAC
33	Chum S	fry	Boat Harbor	SE	Gastineau	Stocking	DIPAC
34	Chum S	fry	Limestone Inlet	SE	Gastineau	Stocking	DIPAC
35	Chum S	fry	Sullivan Island	SE	Gastineau	Stocking	DIPAC
36	Chum S	fry	William Henry Bay	SE	Gastineau	Stocking	DIPAC
38	Coho	smolt	Gastineau Channel	SE	Gastineau	Stocking	DIPAC
38	Coho	smolt	Sheep Creek	SE	Gastineau	Stocking	DIPAC
40	Coho	catchables	Twin Lakes	SE	Gastineau	Stocking	DIPAC
37	Pink	fry	Gunnuk Creek	SE	Gunnuk Creek	Stocking	KNFC
40	Pink	fry	Southeast Cove	SE	Gunnuk Creek	Stocking	KNFC
41	Chum S	fry	Gunnuk Creek	SE	Gunnuk Creek	Stocking	KNFC
42	Chum S	fry	Southeast Cove	SE	Gunnuk Creek	Stocking	KNFC
43	Pink	fry	Taiya Inlet	SE	Burro Creek	Stocking	BCF
44	Chum S	fry	Taiya Inlet	SE	Burro Creek	Stocking	BCF
45	Coho	smolt	Taiya Inlet	SE	Burro Creek	Stocking	BCF
	Pink	fry	Port Armstrong	SE	Port Armstrong	Stocking	AKI
	Chum F	fry	Port Armstrong	SE	Port Armstrong	Stocking	AKI
	Coho	smolt	Port Armstrong	SE	Port Armstrong	Stocking	AKI
✓	Coho	smolt	Quillian Bay	PWS	Esther Lake	Stocking	PWSAC
✓	Coho	smolt	Whittier	PWS	Esther Lake	Stocking	PWSAC
✓	Coho	smolt	Fleming Spit	PWS	Esther Lake	Stocking	PWSAC
✓	Chinook	smolt	Fleming Spit	PWS	Esther Lake	Stocking	PWSAC
✓	Chinook	smolt	Whittier	PWS	Esther Lake	Stocking	PWSAC
✓	Chinook	smolt	Port Valdez	PWS	Esther Lake	Stocking	PWSAC
✓	Chinook	smolt	Quillian Bay	PWS	Esther Lake	Stocking	PWSAC
✓	Sockeye	fry	Shoestring Lake	PWS	Esther Lake	Stocking	PWSAC
✓	Sockeye	fry	Wolf Lake	PWS	Esther Lake	Stocking	PWSAC
✓	Sockeye	smolt	Main Bay (Eshamy)	PWS	Main Bay	Stocking	PWSAC
✓	Sockeye	smolt	Main Bay (Eyak)	PWS	Main Bay	Stocking	PWSAC
✓	Sockeye	smolt	Main Bay (Coghill)	PWS	Main Bay	Stocking	PWSAC
✓	Sockeye	smolt	Eshamy Lake	PWS	Main Bay	Stocking	PWSAC
✓	Coho	smolt	Port Valdez	PWS	Solomon Gulch	Stocking	VFDA
✓	Coho	smolt	Tatitlek Creek	PWS	Solomon Gulch	Stocking	VFDA
✓	Chinook	smolt	Port Valdez	PWS	Solomon Gulch	Stocking	VFDA
✓	Sockeye	fry	Summit Lake	PWS	Gulkana I	Stocking	PWSAC
✓	Sockeye	fry	Cross Wind Lake	PWS	Gulkana I	Stocking	PWSAC
✓	Sockeye	fry	Gulkana River	PWS	Gulkana I	Stocking	PWSAC
✓	Sockeye	fry	Gulkana River	PWS	Gulkana II	Stocking	PWSAC
✓	Chinook	fry	Monsoon Lake	PWS	Gulkana II	Stocking	PWSAC

by
state,
not
PWSAC

SPECIES	LIFESTAGE	RELEASE SITE	REGION	HATCHERY	TYPE PROJECT	OPERATOR
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<i>disc</i> → Pink	fry	Eklutna	CI	Eklutna	Stocking	CIAA
<i>disc</i> → Chum	fry	Eklutna	CI	Eklutna	Stocking	CIAA
<i>disc</i> → 70 Coho	smolt	Eklutna	CI	Eklutna	Stocking	CIAA
<i>disc</i> → Chinook	smolt	Eklutna	CI	Eklutna	Stocking	CIAA
<i>disc</i> → NO COMM Coho	smolt	Bear lake	CI	Trail Lakes	Stocking	CIAA
<i>disc</i> → Chinook	smolt	?	CI	Trail Lakes	Stocking	CIAA
<i>disc</i> → 75 Pink	fry	Tutka Lagoon	CI	Tutka	Stocking	CIAA
<i>disc</i> → Pink	fry	Ingram Creek	CI	Tutka	Stocking	CIAA
<i>disc</i> → Pink	fry	Homer Spit	CI	Tutka	Stocking	CIAA
<i>disc</i> → 70 Pink	fry	Halibut Cove	CI	Tutka	Stocking	CIAA
<i>disc</i> → Chum	fry	Tutka Lagoon	CI	Tutka	Stocking	CIAA

August 18, 1992

Steve McGee
F.R.E.D. Division
A.D.F. & G.
P.O. Box 25526
Juneau, AK 99802-5526



Steve,

Thank you for allowing the needed time to complete these forms. As you know, results of the previous few seasons compounded with current 92 results have precipitated revelations in the hatchery program. As a result, many considerations must be addressed within production planning. The surveys I've completed may shed some light on PWSAC's direction with production.

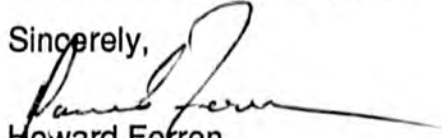
Along with these surveys, I'm providing a list of a few assumptions inherent in the numbers.

1. Generally, the division of benefits for each project is 70% CPF, 30% corporate escapement (brood stock and cost recovery).
2. Projects such as remote releases from which brood stock may be harvested, are never the less not subject to cost recovery. These releases are meant for the CPF. Brood stock requirements may result in a 4% corporate harvest rate.
3. Sport fish harvest rates are generally set at .5%.
4. Regarding "egg capacities", I have taken the hatchery permitted green egg capacity and portioned it between specific projects, so the surveys reflect only the green eggs for the portion of the total that is addressed in that survey.
5. The CPF harvest rate on cohos and chinooks is expected at 90%. These stocks are not managed for corporate escapement because the fisheries are managed for different species at the time of chinook and coho returns.
6. The Main Bay program is the least understood at this point in time because of genetic and management questions which have resulted in new considerations which have not yet been addressed by the Department and PWSAC. The specific production levels are still planned, but the remote release programs are questioned. I suggest that for the Coghill release and Eshamy release, that you simply say "off station release" with the final location yet to be specified.
7. Regarding fish weights, we only utilize the average weight per stock and don't separate, for planning purposes, male and female weights. Field

data exists in hatchery logs from which this information could be obtained,
but it would be a lengthy project to compile the data.

Should you have any questions, please call.

Sincerely,



Howard Ferren
Planner

ALASKA STATE LEGISLATURE



P.O. Box 770296
Eagle River, Alaska 99577
(907) 694-6683

3111 C Street, Suite 540
Anchorage, Alaska 99503
(907) 561-8459

State Capitol
Juneau, Alaska 99801-1182
(907) 465-3711

SENATOR SAM COTTEN

/Eliason

Eagle River Fax: 694-1535

Juneau Fax: 465-4979

FAX TRANSMITTAL SHEET

TO:

John Boyce / Mark Herrmann, Economic's Dept

FAX:

474-5219

FROM:

Ginny Fay

DATE:

9/10/92

MESSAGE:

I sent to the Fairbanks legislative information office a set of diskettes w/ the salmon production and cost data. Attached is a table that identifies enhancement project #'s w/ the cost survey. The projects correspond to the projects are only commercial fisheries production. The cost surveys include all costs but identify the %

Number of Pages

2

(Including Cover Sheet)

of costs attributable to commercial production. pls.
Call to confirm you picked up the data.
Let me know if you have any questions.

Thanks

Ginny 586-2465

ALASKA STATE LEGISLATURE



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Juneau, Alaska 99801-1182
(907) 465-3711

SENATOR SAM COTTEN / *Eliason*

Eagle River Fax: 694-1535

Juneau Fax: 465-4979

FAX TRANSMITTAL SHEET

TO:

Lonnie White

FAX:

486-1828

FROM:

Ginny Fay

DATE:

8/24/92

MESSAGE:

*Lonnie, Thanks for taking the time to
fill out these surveys but they are missing
Commercial harvest #'s. Could you
pls. take the time to fill them out asap
Thanks!! ifax back*

Number of Pages

13

(Including Cover Sheet)

ALASKA STATE LEGISLATURE



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Juneau, Alaska 99801-1182
(907) 465-3711

SENATOR SAM COTTEN / *Eliason*

Eagle River Fax: 694-1535

Juneau Fax: 465-4979

FAX TRANSMITTAL SHEET

TO:

Lonnie White

FAX:

486-1828

FROM:

Ginny Fay

DATE:

9/4/92

MESSAGE:

*Lonnie, pls. include all costs for these
4 projects regardless of the origin/source
of funds. Please send back ASAP.
Thanks.
Ginny*

Number of Pages

13

(Including Cover Sheet)

ALASKA STATE LEGISLATURE

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(907) 465-3711

SENATOR SAM COTTEN / *Eliason*

Eagle River Fax: 694-1535

Juneau Fax: 465-4979

FAX TRANSMITTAL SHEET

TO:

Don Amend

FAX:

225-1348

FROM:

Ginny Fay

DATE:

8/26/92

MESSAGE:

Don, thank you for all your terrific effort on this project!! I realize that these survey forms can be difficult to complete given uncertainties but adult commercial harvest numbers are critical for the analysis. you must have some overall projections of total harvests. if harvest by location is too difficult to determine, pls. indicate total harvest for each project on the final sheet provided.

Number of Pages

18

(Including Cover Sheet)

*Thanks again!!
ginny*

ALASKA STATE LEGISLATURE



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(907) 465-3711

SENATOR SAM COTTEN / *Eliason*

Eagle River Fax: 694-1535

Juneau Fax: 465-4979

FAX TRANSMITTAL SHEET

TO:

rick focht

FAX:

463-3213

FROM:

ginny fay

DATE:

8/24/92

MESSAGE:

*Thanks for taking the time to so
carefully fill out the survey but the
"Percentage of total annual Costs" do not
sum to 100%. pls. Advise us on how
this should be corrected.*

thanks!!!

Number of Pages

8

(Including Cover Sheet)

ALASKA STATE LEGISLATURE



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(907) 465-3711

SENATOR SAM COTTEN

Eagle River Fax: 694-1535

Juneau Fax: 465-4979

FAX TRANSMITTAL SHEET

TO:

Steve reifenstuhl / bruce backen

FAX:

747-1470

FROM:

Ginny Fay

DATE:

8/18/92

MESSAGE:

Thanks for your time w/ these.
call + lib confusing or pages
missing.

Number of Pages 23
(Including Cover Sheet)

in 2 batches

ALASKA STATE LEGISLATURE



P.O. Box 770296
Eagle River, Alaska 99577
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State Capitol
Juneau, Alaska 99801-1182
(907) 465-3711

SENATOR SAM COTTEN / *Eliason*

Eagle River Fax: 694-1535

Juneau Fax: 465-4979

FAX TRANSMITTAL SHEET

TO:

bill coltharp

FAX:

747-5212

FROM:

giving say

DATE:

8/19/92

MESSAGE:

*Thanks for your time - i realize
that these #'s can be hard to estimate
esp. w/ a program in flux but
we would appreciate your best estimates.*

Number of Pages

9

(Including Cover Sheet)

ALASKA STATE LEGISLATURE



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☒ State Capitol
Juneau, Alaska 99801-1182
(907) 465-3711

SENATOR SAM COTTEN

Eagle River Fax: 694-1535

Juneau Fax: 465-4979

FAX TRANSMITTAL SHEET

TO:

Bart Watson

FAX:

586-2236

FROM:

Ginny Fay

DATE:

8/21/92

MESSAGE:

bart, this is a draft version of
the letter sent to you in April. however, it
has the cost survey instruction!
thanks

Ginny

Number of Pages 4
(Including Cover Sheet)

Southern Southeast Regional Aquaculture Association, Inc.

2721 Tongass Avenue
Ketchikan, Alaska 99901

Phone: (907) 225-9605

Fax: (907) 225-1348



FAX COVER SHEET

DATE: Aug 26

NO. OF PAGES TRANSMITTED 7
Including Cover Sheet

TO

NAME: Senator Sam Cotten / Ginny Fay

COMPANY: _____

FAX #: 465-4979

FROM

NAME: Don Amend

FAX #: (907) 225-1348

REMARKS: These are the forms I received.
It appears some are missing. These
are very rough estimates

Neefs Bay
Chumak

13. ADULTS HARVESTED IN SPORT/PERSONAL USE FISHERIES:

CURRENT/PERMITTED		PLANNED/FUTURE PERMITTED	
Years	Number of Fish	Years	Number of Fish
1992 to	1500	1992 to	
93 to	850	to	
94 to	1300	to	
95 to	1900	to	
96 to 2021	2000	to 2021	

14. Please provide information on your annual facility cost recovery. Indicate your estimated price per pound; harvest costs per pound (or vessel charter expenses per pound), computed on an ex-vessel (or ex-hatchery) basis, in 1991 dollars; and the total pound and number of fish harvested for cost recovery.

FACILITY COST RECOVERY:

Years	Price/lb.	Costs/lb.	Total Pounds	# of Fish
1992 to	\$0.95 0.98	\$0.09	123,000	20,000
1993 to	0.95	0.09	460,000	24,000
1994 to	0.95	0.09	552,000	25,000
to				
to				
to				
to				
to 2021				

*Neel
BAY
Chuvak*Correction (addition) to Green Survey form on SALMON ENHANCEMENT
PROJECT SURVEY12. ADULTS HARVESTED IN COMMERCIAL FISHERY:

Please provide information on the number of returning adults that will be harvested in the commercial fishery for both your current production and planned production.

CURRENT		PLANNED	
Years	Number of Fish	Years	Number of Fish
1992 to	2200	1992 to	
93 to	3200 17,000	to	
94 to	9500	to	
95 to	13,000	to	
96 to 2021	14,000	to 2021	

Correction (addition) to Green Survey form on SALMON ENHANCEMENT
PROJECT SURVEY

12. ADULTS HARVESTED IN COMMERCIAL FISHERY:

Please provide information on the number of returning adults that will be harvested in the commercial fishery for both your current production and planned production.

CURRENT		PLANNED	
<u>Years</u>	<u>Number of Fish</u>	<u>Years</u>	<u>Number of Fish</u>
1992 to _____	_____	1992 to _____	_____
_____ to _____	_____	_____ to _____	_____
_____ to _____	_____	_____ to _____	_____
_____ to _____	_____	_____ to _____	_____
_____ to 2021 _____	_____	_____ to 2021 _____	_____

C. H. H. H.

To Mary McDowell
From: Kate Troll
Re: Wild Stock Priority

Mary, I am not to trying to make more work for you. . .honestly.
Rather, I am trying to make your job easier. . . (I can hear you
say, "Oh, sure Kate")

So much for the BS eh?

What I have here for you is another way to look at wild stock
priority. This is what SEAS asked the Board of Fisheries to adopt
for Southeast in their 1990/91 cycle of meetings. This is the
proposal that started the whole discussion of statutory intent and
regulatory authority. . .maybe it can end the discussion too. . .who
knows. . .

POLICY ON THE MANAGEMENT OF ENHANCED FISH

When wild and hatchery stocks are mixed, the harvest shall be
managed on the strength of the wild stocks. Deviation from
current management of wild stocks to provide for greater or lessor
access to hatchery fish should not be allowed unless it can be
demonstrated that a change will not jeopardize conservation
concerns for wild stocks nor increase one user groups wild stock
opportunities at the expense of another user group.

**STATE OF ALASKA
DEPARTMENT OF FISH AND GAME
DIVISION OF FISHERIES REHABILITATION, ENHANCEMENT
AND DEVELOPMENT (FRED)**

AREA	HATCHERY NAME, ADDRESS, PHONE NUMBER, & MANAGER	SPECIES
Ketchikan	Beaver Falls Hatchery 2030 Sea Level Drive, Suite 205 Ketchikan, AK 99901 <u>Manager:</u> Southern Southeast Regional Aquaculture Association* <u>Phone:</u> (907)225-9605 <u>Fax:</u> (907)225-1348	Sockeye salmon
Big Lake	Big Lake Hatchery P.O. Box 520509 Big Lake, AK 99652-0509 <u>Manager:</u> Dan Moore <u>Phone:</u> (907)892-6816 <u>Fax:</u> (907)892-7513	Sockeye and coho salmon
Whittier (remote)	Cannery Creek Hatchery P.O. Box 788 Whittier, AK 99693-0788 <u>Manager:</u> Prince William Sound Aquaculture Corporation* <u>Phone:</u> (907)424-7511, 7512 <u>Fax:</u> (907)424-7514	Pink and chum salmon
(Northern Prince William Sound)		
Clear (60 miles SW of Fairbanks)	Clear Hatchery P.O. Box 40219 Clear, AK 99704-0219 <u>Manager:</u> Dave Parks <u>Phone:</u> (907)582-2964 <u>Fax:</u> (907)582-2964 (call first)	Rainbow and lake trout, Arctic grayling, Arctic char, and sheefish
Kasilof (Kenai Peninsula)	Crooked Creek Hatchery P.O. Box 430, Route 2 Kasilof, AK 99610-0430 <u>Manager:</u> Bob Och <u>Phone:</u> (907)262-4159 <u>Fax:</u> none	Sockeye, coho, and chinook salmon, and steelhead trout

* Hatchery operations contracted to private aquaculture association. See last page for address.

AREA	PHONE NUMBER, & MANAGER	SPECIES
Petersburg	Crystal Lake Hatchery P.O. Box 1088 Petersburg, AK 99833-1088 <u>Manager:</u> Jim Billi <u>Phone:</u> (907)772-4772 <u>Fax:</u> (907)772-9336	Chinook and coho salmon, and steelhead trout
Ketchikan	Deer Mountain Hatchery 2030 Sea Level Drive, Suite 205 Ketchikan, AK 99901 <u>Manager:</u> David Bright <u>Phone:</u> (907)225-6760 <u>Fax:</u> (907)225-0599	Chinook and coho salmon, and steelhead trout
Anchorage (Elmendorf AFB)	Elmendorf Hatchery 716 Steel Street Anchorage, AK 99501 <u>Manager:</u> Darrell Keifer <u>Phone:</u> (907)274-0065 <u>Fax:</u> (907)274-0065 (call first)	Chinook and coho salmon
Anchorage	Fort Richardson Hatchery P.O. Box 5-337 Fort Richardson, AK 99505-0337 <u>Hatchery Manager:</u> Gary Wall <u>Rainbow Trout Broodstock Development</u> <u>Leader:</u> Irv Brock <u>Phone:</u> (907)428-1347, 1348 <u>Fax:</u> (907)428-3548	Rainbow and steelhead trout, and chinook and coho salmon
Glennallen	Gulkana Hatchery P.O. Box 47 Glennallen, AK 99588-0047 <u>Manager:</u> Ken Roberson <u>Phone:</u> (907)822-5520 <u>Fax:</u> (907)822-3811	Sockeye and chinook salmon
Sitka (remote) (Eastern Baranof Island)	Hidden Falls Hatchery 1308 SMC Road Sitka, AK 99835 <u>Manager:</u> Northern Southeast Regional Aquaculture Association* <u>Phone:</u> (907)788-3215 <u>Fax:</u> (907)747-1470	Chum, coho, and chinook salmon

* Hatchery operations contracted to private aquaculture association. See last page for address.

AREA	PHONE NUMBER, & MANAGER	SPECIES
Kodiak (remote) (Afognak Island)	Kitoi Bay Hatchery* 211 Mission Road Kodiak, AK 99615-6399 <u>Manager:</u> Tim Joyce <u>Phone:</u> (907)486-6559 <u>Fax:</u> (907)269-5468 (call first)	Pink, chum, sockeye, and coho salmon, and rainbow trout
Klawock (Prince of Wales Island)	Klawock Hatchery P.O. Box 101 Klawock, AK 99925-0101 <u>Manager:</u> Steve Hansen <u>Phone:</u> (907)755-2232 <u>Fax:</u> (907)755-2440	Coho and sockeye salmon, and steelhead trout
Baranof Island (remote)	Little Port Walter Research Station Little Port Walter P.O. Box 9040 Sitka, AK 99835-9040 <u>Manager:</u> Frank Thrower (NMFS & ADF&G)** <u>Phone:</u> Marine Radio WRY8219 <u>Fax:</u> none	Chinook salmon and steelhead trout (pen-reared)
Cordova (remote) (Northwestern Prince William Sound)	Main Bay Hatchery P.O. Box FLJ Cordova, AK 99574 <u>Manager:</u> Prince William Sound Aquaculture Corporation* <u>Phone:</u> (907)269-5451 <u>Fax:</u> (907)269-5452 (call first)	Sockeye and pink salmon
Kodiak	Pillar Creek Hatchery 211 Mission Road Kodiak, AK 99615-6399 <u>Manager:</u> Chris Clevenger <u>Phone:</u> (907)486-4791 <u>Fax:</u> (907)486-4969	Sockeye salmon
Cold Bay (Alaska Peninsula)	Russell Creek Hatchery P.O. Box 50 Cold Bay, AK 99571-0050 <u>Manager:</u> Richard (Butch) Cobb <u>Phone:</u> (907)532-2373 <u>Fax:</u> (907)532-2450	Sockeye and pink salmon

* Hatchery contracted to Kodiak Regional Aquaculture Association; state employees in charge of hatchery operations.

** Experimental research station jointly funded by the FRED Division and the National Marine Fisheries Service.

AREA	PHONE NUMBER. & MANAGER	SPECIES
Kotzebue (remote) (Noatak River)	Sikusilaq Springs Hatchery P.O. Box 1030 Kotzebue, AK 99752-1030 <u>Manager:</u> Peter Rob <u>Phone:</u> (907)485-2160 <u>Fax:</u> (907)485-2160 (call first)	Chum salmon
Juneau (remote)	Snettisham Hatchery P.O. Box 20 Douglas, AK 99824-0020 <u>Manager:</u> John McNair <u>Phone:</u> (907)586-3838-11 <u>Fax:</u> (907)586-3838-34	Chum, coho, sockeye, and chinook salmon
Moose Pass (Kenai Peninsula)	Trail Lakes Hatchery P.O. Box 49 Moose Pass, AK 99631-0049 <u>Manager:</u> Cook Inlet Aquaculture Association* <u>Phone:</u> (907)288-3606 <u>Fax:</u> (907)283-9433	Sockeye, chinook, and coho salmon
Homer (remote) (Kachemak Bay)	Tutka Lagoon Hatchery 3298 Douglas Street Homer, AK 99603-1942 <u>Manager:</u> Cook Inlet Aquaculture Association* <u>Phone:</u> (907)235-8486 <u>Fax:</u> (907)235-8486 (call first)	Pink, chum, and sockeye salmon

* Hatchery operations contracted to private aquaculture association. See last page for address.

ASSOCIATIONS CURRENTLY CONTRACTED TO OPERATE SEVEN STATE FACILITIES

Cook Inlet Aquaculture Association

HC 2, Box 849

Soldotna, AK 99669-9707

Office: (907)283-5761

Fax: (907)283-9433

Tom Mears, Executive Director

State Hatcheries Operated: Trail Lakes Hatchery and Tutka Hatchery

Kodiak Regional Aquaculture Association

P.O. Box 3407

Kodiak, AK 99615

Office: (907)486-6555

Fax: (907)486-5932

Larry Malloy, Executive Director

Norma Holt, Administrative Assistant

State Hatchery Operated (partially): Kitoi Bay Hatchery

Northern Southeast Regional Aquaculture Association

1308 SMC Road

Sitka, AK 99835

Office: (907)747-6850

Fax: (907)747-1470

Peter Esquiro, General Manager

State Hatchery Operated: Hidden Falls Hatchery

Prince William Sound Aquaculture Corporation

P.O. Box 1110

Cordova, AK 99574

Office: (907)424-7511, 7512

Fax: (907)424-7514

Bruce Suzumoto, President

State Hatcheries Operated: Cannery Creek Hatchery and Main Bay Hatchery

Southern Southeast Regional Aquaculture Association

1621 Tongass Avenue, #103

Ketchikan, AK 99901

Office: (907)225-9605

Fax: (907)225-1348

Donald F. Amend, General Manager

State Hatchery Operated: Beaver Falls Hatchery

Table 1. Numbers of chum salmon returning to Sikusuilag Hatchery

Return Year	Catch		Escape Plus	Total
	Commercial	Subsistence	Brood	
1985	0	0	30	30
1986	2,500	0	1,120	3,620
1987	5,611	1,969	1,246	8,826
1988	17,201	609	2,228	20,038
1989	12,989	1,177	7,913	23,079
1990	5,000*	3,000	6,000	14,000
1991	15,000	3,300	6,700	25,000

* fishery was closed 1 month earlier than usual

Post-it™ brand fax transmittal memo 7671		# of pages	1
To	Molly McCammon	From	Stewern Gee
Co.	Gosen Hoffman	Co.	ADF#6 FRED
Dept.		Phone #	
Fax #	4523	Fax #	