

ALASKA LEGISLATURE SPECIAL COMMITTEE / SUBJECT FILE 8672
1832 SCOMM 74: SEN. SPEC. COMM. ON DOMESTIC & INTL. FISH., 1991-92. *AG*

- 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
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						

- 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.

[illegible]

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							

<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							

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
From	To	Operating	Construction	Comm.	Sport/Personal	Cost-Recovery	(ADF&G Use Only)
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
From	To	Operating	Construction	Comm.	Sport/Personal	Cost-Recovery	(ADF&G Use Only)
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													
	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													
	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/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	_____

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:

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	_____

9. MEAN WEIGHT OF RETURNING ADULT MALES: _____ pounds
10. MEAN WEIGHT OF RETURNING ADULT FEMALES: _____ pounds
11. 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	_____

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

[illegible]

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		
<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 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	
<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 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	
<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	_____

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

DRAFT

regional, fishing & gear group

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 prove out of date?

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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

8yr1

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: <u>822,000</u>	Tot Silvr Rel: <u>2.1 mm</u>	Tot Sock Rel: -
Tot Chum Rel: <u>100 mm</u>	Tot Pink Rel: <u>156 mm</u>	

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

Total Harvested Adults

Adult Kings: <u>1700</u>	Adult Silvr: <u>309,000</u>	Adult Sock: <u>Q</u>
Adult Chum: <u>900,000</u>	Adult Pink: <u>13.2</u>	
Total Comm Harvest: <u>14,400,000</u>		

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

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 issues to build the public

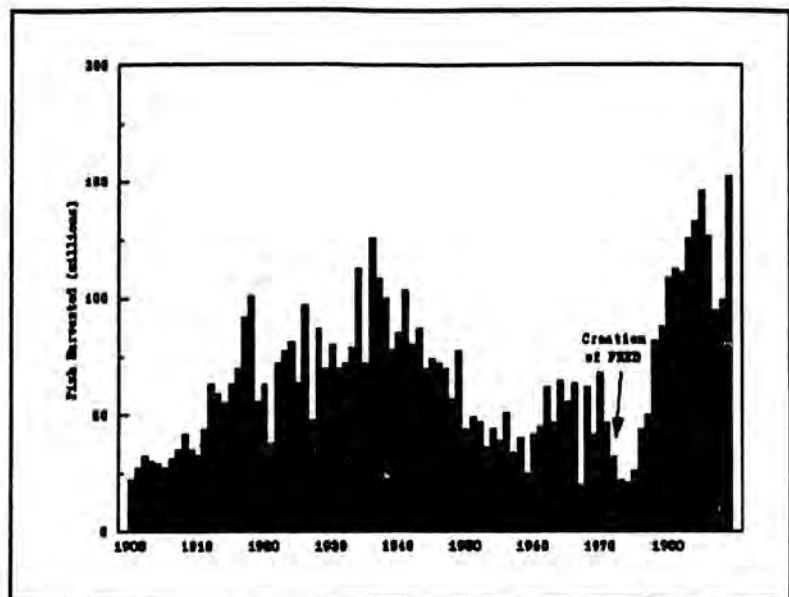


Figure 1. *Alaskan commercial salmon harvest, 1900-1989.*

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.

CORRECTION

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

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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

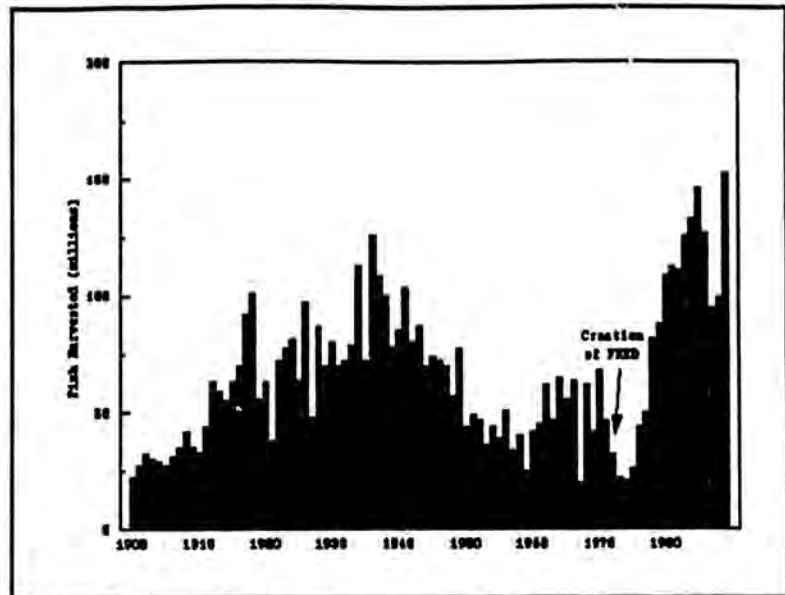


Figure 1. *Alaskan commercial salmon harvest, 1900-1989.*

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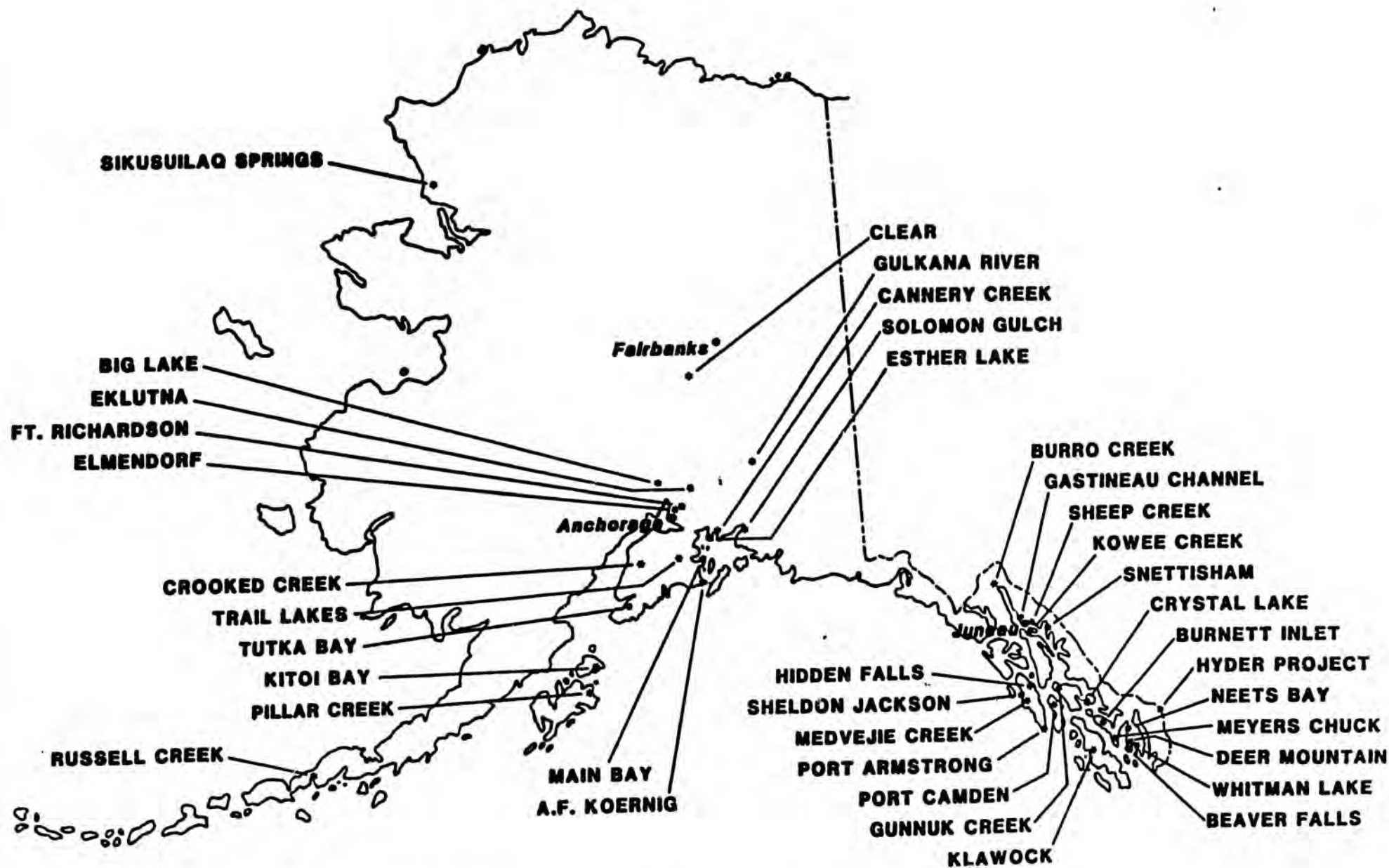


Figure 1. State and private nonprofit hatcheries in Alaska.

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

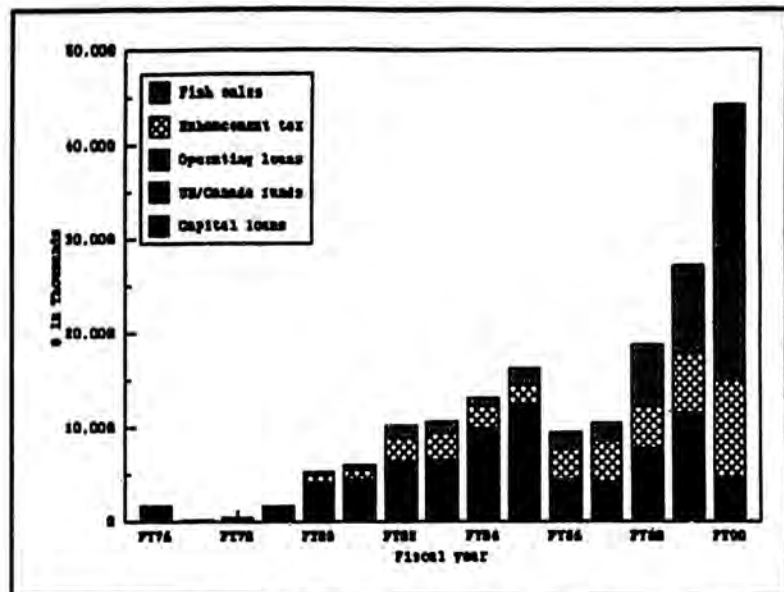


Figure 3. PNP hatcheries' total funding sources, FY 76-FY 88.

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;

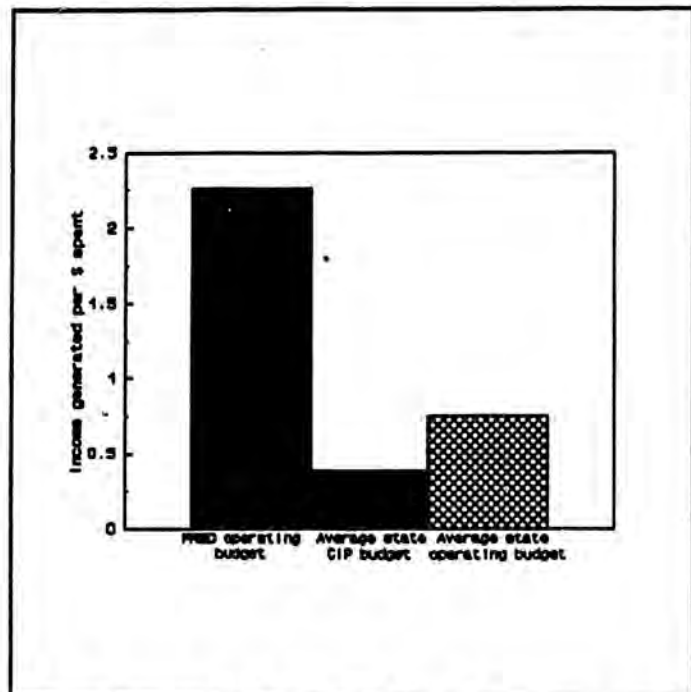


Figure 4. *FY 1991-FY 2010 long-range state revenue forecast, in 1990 dollars. Data from the Institute of Social and Economic Research.*

- 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.

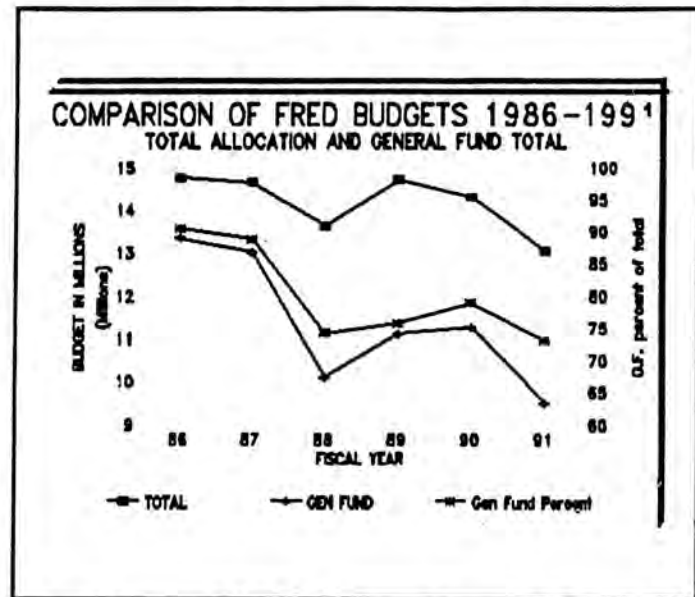


Figure 5. *FRED Division General Fund allocation, FY 86-FY 91.*

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

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<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.