

ALASKA LEGISLATURE COMMITTEE FILES 1981-1982 8672

1818 HRES • AQUACULTURE I - AQUACULTURE II

SHORT SUMMARY OF THE ISSUES

1.0 FINANCING

POSSIBLE COMMITTEE ACTION

(1) Statutory changes. (a) Amendment to AS 16.10.520. Change the single fisheries enhancement loan limit. Either:

(1) delete the \$6,000,000 present limit and have no limit: in that situation each project would be reviewed on its merits and would not be restricted because of the financing limit: or

(2) increase the limit to \$10,000,000.

(b) Amendment to AS 43.76. Clarification of the enhancement tax statute based on experience gained from last year.

(2) Appropriation. An appropriation to the fisheries enhancement loan fund for loans authorized under AS 16.10.510. The anticipated need for loan funds for the next fiscal year is approximately \$10,000,000. The loan fund now has approximately \$2,800,000 and pending loan requests are about \$2,000,000 and another \$2,000,000 are anticipated this fiscal year. *25mil*

(3) Budgetary. A letter from the committee to the finance committee regarding the fisheries enhancement tax. AS 43.76 enacted in 1980 authorized the regional associations to hold an election regarding the imposition of a mandatory assessment. The elections were held in three regions and the regions voted to impose the assessment. The collection of the assessment is treated as tax revenues to the general fund subject to annual appropriation. AS 43.76.025 provides that the legislature may make appropriations for the purposes of providing financing to the regional associations based on the revenues collected within the specific region. The specifics regarding the amount collected and the allocation for each region is attached in the packet titled financing.

THE ISSUE

It is obvious that financing is the most critical of all areas. If the appropriate financial mechanism cannot be found the program fails. The legislature and governor have supported the private-not-for-profit program for the past five years. Because of the time it takes for a cycle of fish to proceed from egg to returning adult the question of whether the financing mechanism that is being used will work is still in doubt. These requests are basically making adjustments in the existing mechanism and not introducing new changes.

SHORT SUMMARY OF ISSUES

2.0 BROODSTOCK

POSSIBLE COMMITTEE ACTION

Resolution regarding policy direction. Introduction of a resolution by the committee directing the Board of Fish and the Department of Fish and Game to provide for broodstock for fisheries enhancement and rehabilitation projects to be taken from already depressed or depleted salmon stocks.

THE ISSUE

Availability of eggs for enhancement and rehabilitation activities has been a continuing problem for both the state and the private not-for-profit associations since the program was initiated. The primary purpose of the use of hatcheries and other enhancement and rehabilitation techniques is to rebuild depressed stocks of fish. That is the mandate given to FRED and offered to the associations. The issue arises when the decision has to be made where the eggs to put in the facilities are going to come from. That decision is within the jurisdiction of the Commercial Fisheries Division of ADF&G and the Board of Fisheries. Coordination has not always been the rule but more like the exception.

With one agency charged with maintaining existing stocks, Commercial Fish and another with rebuilding depressed stocks, FRED, the legislature has built in conflict. How is Commercial Fish to allow the taking of eggs from streams of depressed stocks? Streams that in some cases have not reached optimum escapement levels for several years or decades. In most cases very little if any thing is known about the escapement levels for streams in Alaska. Thus figuring out how many eggs can be removed from a stream is more guess work than factual knowledge. But the state does not reward people for taking any type of risk. Therefore there is no incentive.

The result is that the state has embarked on an aggressive enhancement program, built many facilities, encouraged private involvement, financed private individuals, imposed enhancement taxes, created support facilities in state government and not provided a policy relating to the one essential thing that will determine success or failure FISH EGGS.

At the present time the Board of Fish has the role to determine allocation of the returning stocks. They are allocated to escapement, subsistence, sport, and commercial. There is a need to provide for an allocation for broodstock for the enhancement and rehabilitation projects. In order to avoid the double declining scenario it may be necessary for the legislature to provide some direction that allocation for enhancement and rehabilitation and hatchery programs be given out of already depressed stocks.

SHORT SUMMARY OF ISSUES

3.0 FISH MARKING, RECOVERY AND EVALUATION

POSSIBLE COMMITTEE ACTION

Finance committee recommendation. Recommendation to finance committee regarding necessary budgetary action. Some of the elements to begin to implement a workable marking, recovery and evaluation program have been recommended to the legislature in the governor's proposed budget. A letter adopted by the committee outlining the recommended program and the appropriate funding level is requested.

THE ISSUE

Accurate timely knowledge of the state's fisheries is essential to solve the complex problems regarding management of resource. Not only to assure continuation of the resource but also to provide the ability to allocate it in the manner society wishes. Technological advances are available to begin much more accurate data gathering. But the program must be implemented in a coordinated and intelligent manner.

All of the participants in the enhancement and rehabilitation programs unanimously support the creation and implementation of a marking, recovery and evaluation program.

Large numbers of salmon stocks will be tagged with wire coded tags this year and more in coming years. The tagging will occur on both natural and hatchery stocks. After the tags are placed the program is totally dependent upon a comprehensive and continuing recovery program. This will primarily occur in the processing plants where the fish are unloaded. It will require trained personnel at each plant to recovery a statistically acceptable number of the tagged returns. The wire coded tags must then be removed from the fish head, interpreted and the data regarding the place and time of catch of the fish correlated with the place and time the wire coded tag was implanted. In other words a very coordinated program. It will involve interdisciplinary teams made up of all ADF&G divisions and the private-not-for-profit corporations.

The department has proposed a plan to begin implementing a state wide program. It involves starting in Southeast this season and expanding to the rest of the state in the following year. The estimated cost of this years program is attached. Details of the plan and the operational schematic are contained in the packet.

SHORT SUMMARY OF THE ISSUES

4.0 REGIONAL PLANNING

POSSIBLE COMMITTEE ACTION

(1) Statutory change. Amend AS 16.10.375 as follows:

AS 16.10.375. Regional salmon plan. (a) The commissioner shall designate regions of the state for the purpose of salmon production and have developed and amend as necessary a comprehensive salmon plan for each region, including but not limited to, provisions for the management of natural stocks, and enhanced and rehabilitated stocks, from both public and private nonprofit hatchery systems.

(b) Subject to plan approval by the commissioner, comprehensive salmon plans shall be developed by regional planning teams consisting of department personnel and representatives of the appropriate qualified regional association formed under sec. 380 of this chapter.

(2) Finance committee recommendation. A letter from the resources committee to finance supporting a budget item in ADG&G budget for the regional planning teams.

THE ISSUE

Scope of regional planning teams.

The original purpose for the creation of the Regional Planning Team concept was to provide a focus for planning the management of fisheries within a given region. The planning was to be "comprehensive", i.e. to include all fisheries, natural stocks, and enhanced and rehabilitated stocks from both public facilities and private not-for-profit-corporations.

In practice that has not happened. The interpretation of sec. 375 has been to limit it to planning for the private-not-for-profit facilities. There has been a great deal of effort to limit the scope of the planning team.

Since the fishery is an interrelated system one segmented cannot be rationally implemented without effecting the others therefore it only makes common sense that the planning process must encompass all of the salmon stocks. In fact it is probably not logical to just limit it to the salmon stocks and the planning process should include all fisheries. That is the recommendation of Miller report to the legislature in 1979. But expanding it to all salmon stocks will be a help.

Budget support for regional planning.

Planning is not free but pays for itself by encouraging and assisting good projects preventing disasters from occurring. In the past year the Regional Planning Teams have been funded by the state. The estimated costs have been arrived at and divided between the department and the appropriate regional association. A breakdown of the FY81 budget is attached along with an FY82 recommendation. The experience has shown that the process works very well when there are incentives for each party to participate and each party has the means to participate within their own control.

AGRICULTURE

II



Alaska State Legislature

House of Representatives

Committee on Resources

Terry Gardiner, Co-Chairman
Fred F. Zharoff, Co-Chairman
465-3715

April 10, 1981

Pouch V
State Capitol
Juneau, Alaska 99811

The Honorable Sam Cotten
Chairman House Finance Committee
Capital Building
Juneau, Alaska 99811

Dear Representative Cotten:

The Fouse Resources Committee held hearings regarding the status of the fisheries enhancement and rehabilitation program in the State. Based on the testimony presented during the hearings, it is Resource Committee's request that the following matters be included in the FY 82 budget.

The State has established two basic programs to assist in the rehabilitation and enhancement of the salmon resources. One is the Fisheries Rehabilitation and Enhancement Division of the Department of Fish and Game; the second is the private-not-for-profit aquaculture associations. The hatchery program established for the PNP program is funded through loans which are to be repaid from receipts received from selling fish which return to a designated terminal harvest area.

There are several types of rehabilitation and enhancement activities which result in a benefit to the common property fishery but which do not produce fish which return to a specified place where they can be generating projects; they do not generate cash to the party performing the rehabilitation or enhancement project. Although all projects relating to the fishery resource are subject to the approval and permission of the Commissioner of the Department of Fish and Game many times it is much more econom' and efficient for the aquaculture associations to perform the work.

It is the recommendation of the House Resource Committee, that these type of activities by funded by the State both through the Department of Fish and Game and by grants to the appropriate regional aquaculture association.

There are several activities proposed for funding in this years budget which are 'non cash generating' which should be funded. The projects include lake fertilization, habitat improvement, lake stocking and rearing, stream planting and many others.



Alaska State Legislature

House of Representatives

Committee on Resources

Terry Gardiner, Co-Chairman
Fred F. Zharoff, Co-Chairman
465-3715

April 13, 1981

Pouch V
State Capitol
Juneau, Alaska 99811

The Honorable Sam Cotten
Chairman, House Finance Committee
Capital Building
Juneau, Alaska 99811

Dear Representative Cotten:

The House Resources Committee has held hearings on the status of the fisheries rehabilitation and enhancement program. Based on the testimony received during the hearings, it is the recommendation of the Resources Committee that the following item be included in the FY 82 budget.

An appropriation of \$2,304,900 to the Department of Fish and Game. The individual items must be included in various division budgets and the backup material is attached. Note that \$1,096,100 is included in the governor's FY 82 budget request. This total includes an additional amount of \$1,208,800.

A summary of the issue of fish marketing, recovery and evaluation is attached along with the material prepared by the Department of Fish and Game. The department has requested the additional amount of \$1,208,800. The governor's BRC has considered the issue and refused to submit a additional budget amendment to the legislature. The House Resources Committee has considered the issue and feels it is important that this program be started as soon as possible.

The State can only guarantee the most effective overall salmon fisheries program by gaining a more intimate knowledge of the stocks and runs involved. This can be best accomplished by a coordinated mark recovery program. The effort will have no impact on the entire State and will be essential for the future management of the resource and the international negotiation which we will continue to be involved in.

Thank you for your consideration of this matter.

Sincerely,

Representative Zharoff
Co-Chairman

Representative Gardiner
Co-Chairman



Alaska State Legislature

House of Representatives

Committee on Resources

Terry Gardiner, Co-Chairman
Fred F. Zharoff, Co-Chairman
465-3715

April 13, 1981

Pouch V
State Capitol
Juneau, Alaska 99811

The Honorable Sam Cotten
Chairman House Finance Committee
Capital Building
Juneau, Alaska 99811

Dear Representative Cotten:

The House Resources Committee has held hearings on the status of the fisheries rehabilitation and enhancement program; both the public effort through the Department of Fish and Game and Private-Not-For-Profit program set up in AS 16.10.375-600.

It is the recommendation of the House Resources Committee that the following budgetary matters be included in the FY 82 budget:

1.0 Appropriation of \$1,650,000 to the Department of Commerce and Economic Development for transfer to the Regional Aquaculture Associations. The money is a result of the Fisheries Enhancement Tax that the appropriate regional associations has elected to impose on themselves. At the time that tax law was passed in 1980 and an election was held in each region, the legislature and governor committed to passing at least the total amount collected back to the regions. The total should be allocated as follows:

- .1 Southern Southeast Regional Aquaculture Association. \$800,000
- .2 Northern Southeast Regional Aquaculture Association. \$500,000
- .3 Cook Inlet Aquaculture Association. \$350,000

The appropriation should not be tied to the collection of the receipts from the enhancement tax. The programs must be assured of continuity of funding. Although the appropriation is based upon a anticipated collections any discrepancy can be compensated in next years budget.

Thank you for your consideration of this matter.

Sincerely,

Fred Zharoff
Co-Chairman

Terry Gardiner
Co-Chairman



Alaska State Legislature

House of Representatives

Committee on Resources

Terry Gardiner, Co-Chairman
Fred F. Zharoff, Co-Chairman
465-3715

April 15, 1981

Pouch V
State Capitol
Juneau, Alaska 99811

The Honorable Sam Cotten
Chairman, House Finance Committee
Capital Building
Juneau, Alaska 99811

Dear Representative Cotten:

The House Resource Committee held hearings regarding the status of the fisheries enhancement and rehabilitation program in the State. Based on testimony presented during the hearings it is the Resources Committee request that the following matters be included in the FY 82 budget.

Planning is not free but pays for itself by involving all of the major participants. The purpose is to assist in making good decisions and prevent the disasters from occurring. The regional planning concept has been very successful. The regional teams are made up of three (3) members of the Department of Fish and Game and three (3) members of the regional association in the area. In some areas the overall strategic plan has been drafted and work in continuing on the implementation issues, in others the overall plan is still being formulated.

The costs for the regional planning teams have been paid by the State. The estimated costs have been arrived at and divided between the department and the appropriate regional association. Experience has proved that the process works very well when there are incentives for each party to participate and each party has the money within their on control.

The House Resources Committee recommends that a total of \$600,000 be appropriated to the Department of Fish and Game for the planning efforts and that amount be allocated one half to the department and the other half divided between the following regional associations.

Department of Fish and Game	\$300,000
Southern Southeast Regional Association	50,000
Northern Southeast Regional Association	50,000
Prince William Sound Aquaculture Assoc.	50,000
Cook Inlet Aquaculture Association	50,000
Lower Yukon/Kuskokwim Aquaculture Assoc.	50,000
Imparpik	50,000

TOTAL: \$600,000

STATE OF ALASKA

JAY S. HAMMOND, GOVERNOR

DEPARTMENT OF FISH AND GAME

OFFICE OF THE COMMISSIONER

SUPPORT BUILDING
JUNEAU, ALASKA 99801
PHONE: (907) 465-416.

April 14, 1981

Honorable Terry Gardiner
Honorable Fred F. Zharoff
State House of Representatives
Pouch V, State Capitol
Juneau, Alaska 99801

Dear Mr. Gardiner and Mr. Zharoff:

This letter is in response to a request by John Sund concerning a proposal for utilization of fish wastes.

FRED Division has put together the enclosed proposal to examine fish wastes as an unutilized resource that currently poses a disposal problem for the fish processing industry in Alaska. We recommend that FRED Division administer a consultant contract to complete Phase I. Completion of Phase II of the project may involve FRED Division directly.

Phase II would consist of field testing one or more of the recommendations brought forward under Phase I. For purposes of the conduct of the overall project, each phase is contractually separate from the other. Simply, the contractor who carries out Phase I may not necessarily be the contractor chosen to complete Phase II.

We believe that Phase I of this project should not exceed \$100,000 and should be completed by December 15, 1981. Whether or not to proceed with Phase II of the project can be determined during the next legislative session.

Sincerely,



Robert S. Roys
Director
Division of Fisheries Rehabilitation,
Enhancement and Development

Enclosure

cc: Commissioner Skoog

Proposal

UTILIZATION OF FISH WASTES

Phase I

Task 1. Fish Waste Characterization

- A. Geographical location of plants which produce fish waste
- B. Season of the processing industry
- C. Amount of fish waste produced
- D. Ingredients of fish waste. What is the chemical composition of these ingredients?
- E. Current methodologies for disposal of fish wastes
- F. Water quality regulations governing disposal of fish wastes
- G. Biological impacts, if any, of current disposal practices
- H. Economic impacts, if any, of current disposal practices on the industry itself

Task 2. Review of World-Wide State of the Art of Fish Waste Disposal and Utilization

Task 3. Recommendations and Rationale for Application of Alternate Disposal or Utilization of Fish Wastes in Alaska

- A. For each alternative, include an analysis of the costs involved to conduct a demonstration project in order to field test the recommended alternative.

Phase II. Demonstration Projects

MEMORANDUM

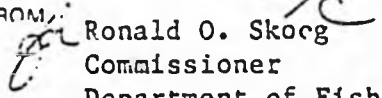
State of Alaska

TO: Ronald Lehr
 Director
 Budget & Management Division
 Office of the Governor

DATE: March 20, 1981

FILE NO:

TELEPHONE NO: 465-4160

FROM:  Ronald O. Skoeg
 Commissioner
 Department of Fish and Game

SUBJECT: Budget Amendment

The Fisheries Rehabilitation, Enhancement and Development (FRED) Division requests an amendment to its FY 82 budget to include an additional \$1,208,800 for mark, tag, and recovery efforts Statewide. This hatchery evaluation effort will be a joint project of the three Fisheries Divisions and private nonprofit hatchery operators.

To put this request into perspective, a brief description of where we are now and where we are going follows:

Voters of Alaska have approved salmon enhancement bonus approximating 80 million dollars. FRED Division operates 17 hatcheries throughout the State and will operate three more before the end of FY 82. The total operational egg capacities for these 20 facilities will be 624.5 million. Additionally, the Legislature established the Private Nonprofit (PNP) Hatchery Program. Since the inception of the PNP Program, 12 PNP salmon hatchery permits have been issued. Permitted egg capacities of these is about 185 million eggs.

Enhancement programs are now demonstrating large scale salmon production resulting in millions of supplementally produced adult salmon. Supplemental returns now make up a significant portion of localized runs and will soon constitute a substantial part of the State's total salmon production.

1980 Salmon Fry-Smolt Production	Releases	Returns (Prelim.)
Southeastern - State	6,196,764	38,276
PNP	13,802,224	11,554
Southcentral - State	46,551,080	841,206
PNP	22,221,000	1,494,930
Total	80,771,068	2,385,966

Projected Adult Returns in 1981 -

Southeastern - State	76,700
Southcentral - State	620,600

Problem Statement

Rehabilitated salmon runs and new salmon runs produced by State and PNP facilities, while desirable, may present new problems that must be dealt with. These include commercial, sport, and subsistence harvest allocations, seasons, and location of openings. To perpetuate the strengths of the wild stocks and the effectiveness of the enhancement facilities, natural escapements and hatchery brood stocks must be maintained. We can only guarantee the most effective overall salmon fisheries program by gaining a more intimate knowledge of the stocks and runs involved. This can best be accomplished by a coordinated mark recovery program.

Problem Solution

Through a cooperative effort of the three Fisheries Divisions and the PNP groups, we have prepared a Statewide proposal that will allow the evaluation of each facility's adult salmon production, in addition to providing information concerning stock migration, timing, separation, and harvest rates. Fishery professionals and members of the PNP groups all agree that to do anything less would cause chaos in future program management. In addition, detailed marking provides knowledge regarding methods on improving production.

In order to obtain this information in 1982, 1,482,000 (PNP & State) fish in Southeast and 2,841,000 fish in Southcentral regions of the State must be marked. Numbers of fish that must be marked will increase as each facility reaches full design capacity.

Commercial, sport, and subsistence fisheries and the hatcheries' rack returns must be sampled to provide the data necessary to most efficiently manage the fisheries and the hatcheries and still protect wild stocks and ensure hatchery brood stock requirements. To be most useful to in-season management of fisheries and hatcheries, mark recovery and sampling information must be made available to managers in a timely manner.

In 1980, 19% of the coho catch and 33% of the chinook catch in the Southeast Troll Fisheries were sampled for coded wire tags (CWT). 6,441 heads were processed, and 5,275 CWT's were recovered. Of these tags, 29% were from Alaskan projects. As the number of marked releases increases, the number of fish actually sampled will increase, as will the number of tags that will be recovered and processed. In 1982, it is expected that in this same troll fishery, 2,704 tags will be recovered just from FRED Division's releases. In 1986, this number will be 5,000. These numbers reflect only projections for the Southeast troll sampling program. Seine and gillnet sampling effort throughout the State, as well as troll sampling programs in other areas of the State, will also be expanding rapidly. Considering the large number of facilities and stocks that must be monitored, a highly coordinated effort through a tightly structured team is necessary. The Department, in cooperation with the PNP sector, is determined to ensure that this effort is successful.

The Tag Recovery Lab will be located in Juneau in Regional office space. The lab will contain a large freezer for storing fish heads shipped from all over Southeast. The Lab will also house coded wire tag detectors, dissecting microscopes, and a micro computer. A Fishery Biologist III will serve as project leader and be responsible for the coordination of mark/recovery information. Technicians will actually remove tags from fish heads and read data. Included in the staff will be a Systems Analyst to design a system to efficiently store, edit, integrate, and retrieve the diverse mark, recovery, and sampling data for various analytical, management, and reporting purposes. This information will be used by all three Fisheries Divisions. An inter-Divisional team in Southeast Alaska is drafting a comprehensive proposal to establish the functional organization to ensure that a coordinated comprehensive mark/recovery program is instituted. The schematics of this proposed organization is outlined in Table 5 and Figures 1 and 2.

The following tables summarize budget information and marking locations and numbers. Recovery budget estimates are based on sampling 30% of the fishery.

Enclosures

cc: Janet Green

Table 1

MARK, TAG, AND RECOVERY
FY 82 BUDGET REQUEST

FY 82 BUDGET CONTAINED IN GOVERNOR'S REQUEST

Recovery

FRED	85.8
Comm. Fish	261.1
Sport Fish	250.0

Tagging

FRED (129.3 FRED; 84.9 PNP)	214.2
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Equipment (CWT Taggers)

FRED	285.0
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TOTAL PRESENT FY 82 REQUEST \$1,096.1

ADDITIONAL FY 82 BUDGET REQUEST - FRED DIVISION

For Budget Amendment

Southeast Recovery Lab	309.5
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Marking (FRED)	310.9
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Equipment (Price increase since initial request)	35.0
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Recovery

FRED	361.4
PNP	192.0

TOTAL ADDITIONAL REQUEST \$1,208.8

TOTAL BUDGET \$2,304.9

Table 2. Mark and recovery budget for FY 82 SE Alaska hatchery and fisheries evaluation.

	100	200	300	400	500	Total
FRED Marking	55.6	3.4	0.5	15.1		74.6
PNP Marking	31.9	5.0	2.6	11.8		51.3
CWT Machines (8)					160.0	160.0
Recovery						
FRED	68.1	4.1	5.5	2.7	7.1	87.5
CF	233.1	5.0	15.0	3.0	5.0	261.1
SF	57.9	2.9	839.7	.5	3.8	74.0
					Subtotal	708.5

Table 3. Mark and recovery budget for FY 82 SC Alaska hatchery and fisheries evaluation.

FRED Marking	252.1	21.6	31.0	50.4	10.5	365.6
PNP Marking	24.5	2.0	.0	7.1	.0	33.6
CWT Machines (8)					160.0	160.0
Recovery						
FRED	250.0	10.3	30.3	62.9	6.2	359.7
SF	146.7	2.2	9.5	15.1	2.5	176.0
PNP	40.0	4.0	-0-	8.0	140.0	192.0
					Subtotal	1,286.9

Table 4. Recovery Lab in Southeast

Lab	206.7	10.0	23.5	4.0	65.3	309.5
					Total	2,304.9
					*Already Requested	1,096.1
					TOTAL ADDITIONAL REQUEST	1,208.8

* Governor's Budget - FRED 585.0
 CF 261.1
 SF 250.0

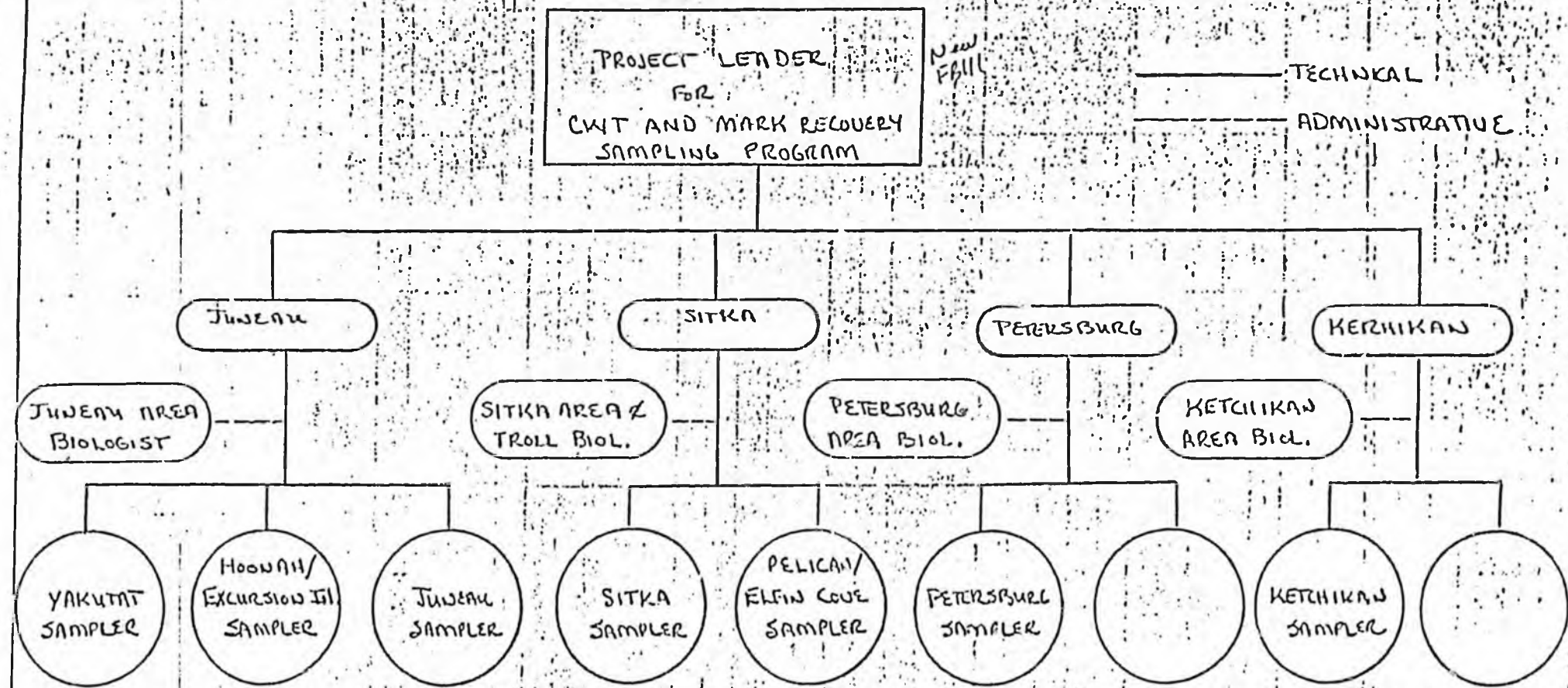
Table 5

Recovery Lab

Personal Services		206.7
FB III - Lab Director/Coordinator--Existing FRED budget		
FB III - CF Project Leader--Existing CF Budget		
FB I - Quality control		33.3
FT III - May to Dec (8 months)		18.7
FT III - Jun to Nov (6 months)		14.0
2 FT II's - Jun to Nov (12 months)		25.1
EDP Programmer IV		43.3
Data Entry Clerk III		26.1
Systems Analyst II		46.2
TRAVEL		10.0
CONTRACTUAL		23.5
Rent	11.9	
Computer	3.6	
Telephones	3.0	
Remodeling	3.5	
Misc.	1.5	
COMMODITIES		4.0
Remodeling	1.5	
Supplies	2.5	
EQUIPMENT		65.3
Freezer	30.0	
4 CWT detectors	28.0	
5 CWT holding jigs	.5	
2 calculators	.5	
5 dissecting microscopes	3.5	
Large magnet	.3	
Furniture	2.5	
TOTAL		309.5

FIGURE 1

ORGANIZATIONAL SCHEMATIC FOR SOUTHEAST ALASKA COMMERCIAL HARVEST CODED WIRE TAG AND MARK RECOVERY SAMPLING PROGRAM



FISHERIES SAMPLED

SOLE	X	X	X	X	X	X	X	X
COE		X	X	X	X	X	X	X
NET	X	X	X	X	X	X	X	X

NOTE: THE ABOVE SAMPLERS WILL BE USED ON A TIME AVAILABLE BASIS FOR OTHER COMMERCIAL HARVEST SAMPLING DUTIES.

FIGURE 2 - FUNCTIONAL ORGANIZATION OF ADFWG SOUTHEAST ALASKA REGION FISHERIES MARK/RECOVERY PROGRAM (ADFWG-3/81)

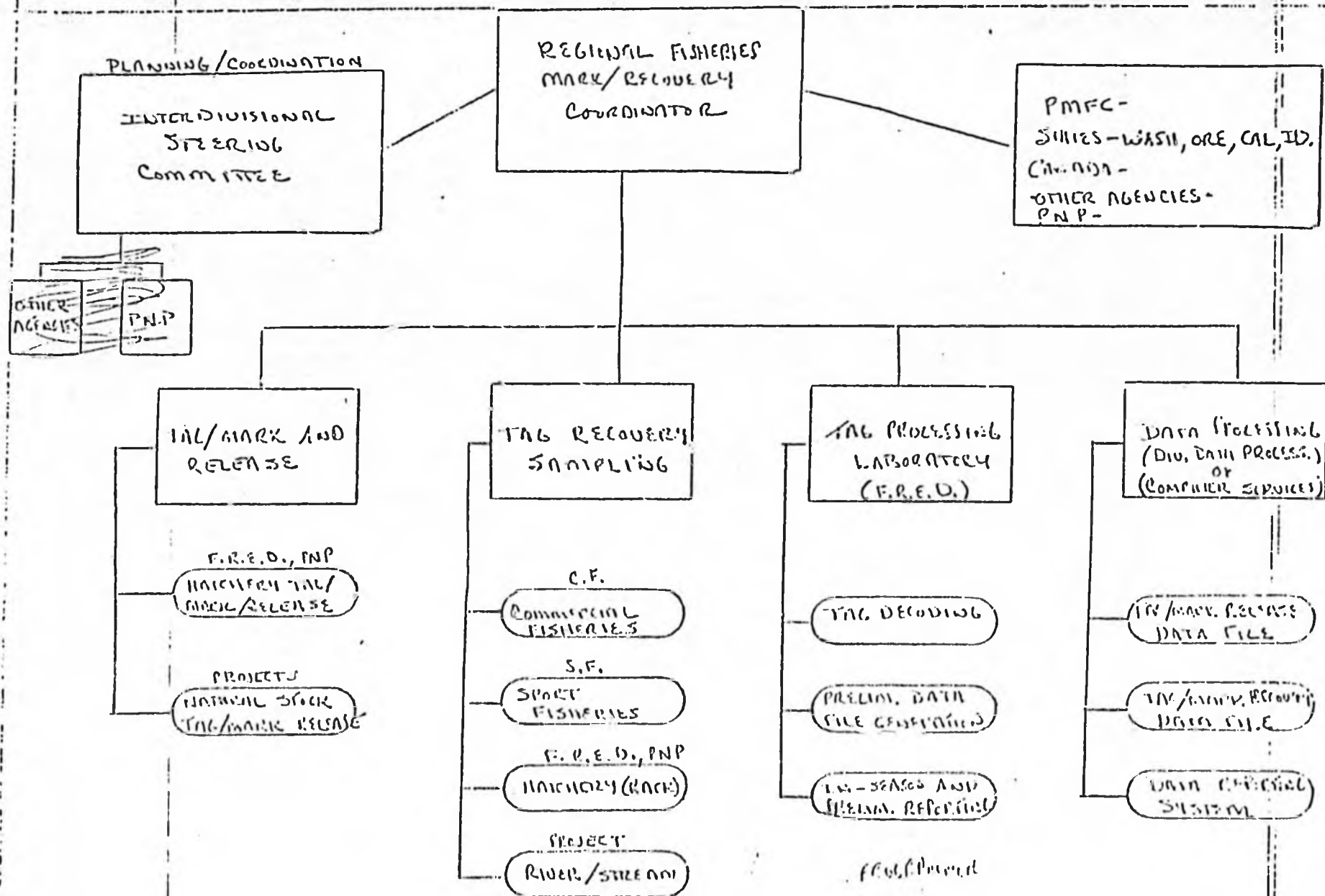


Table 6

Proposed Marking Plan and Budget Summary for FY 82

(\$ in thousands)

<u>Facility/Species</u>	<u>100</u>	<u>200</u>	<u>300</u>	<u>400</u>	<u>Total</u>
Beaver Falls					
100,000 chum	9.2		0.5	1.0	10.7
Crystal Lake					
100,000 king	7.4			1.2	8.6
25,000 coho	1.6			0.3	1.9
47,000 chum	4.4			0.7	5.1
	13.4			2.2	15.6
Deer Mountain					
100,000 king	7.4			1.1	8.5
25,000 coho	1.6			0.3	1.9
	9.0			1.4	10.4
Hidden Falls					
No king					
100,000 chum	8.6	2.8		4.8	16.2
Klawock					
25,000 coho	1.6			0.3	1.9
50,000 chum	4.8			1.7	6.5
	6.4			2.0	8.4
Snettisham					
50,000 chum	4.6	0.6		2.4	7.6
12,000 coho	0.8			0.2	1.0
50,000 king	3.6			1.1	4.7
	9.0	0.6		3.7	13.3
GRAND TOTAL	55.6	3.4	0.5	15.1	74.6
684,000 CWT's					
				+ 5 EA. CWT machines @ 20,000 ea.	100.0
				TOTAL	\$174.6

Table 7

PROPOSED MARKING PLAN AND BUDGET SUMMARY FOR FY 82 PRIVATE NONPROFIT

Facilities in Southeast Alaska

<u>Facility</u>	<u>\$ in 1,000's</u>				
	<u>N/P</u> <u>100</u>	<u>200</u>	<u>300</u>	<u>400</u>	<u>Total</u>
<u>SSRAA</u>					
Chum-Diss. Cr. CWT 59,000	5.4	0.6	0.3	1.5	7.8
Carroll R. CWT 59,000	5.4	0.6	0.3	1.5	7.8
King-Unuk CWT 80,000	6.7	0.6	0.2	0.9	8.4
Coho-Indian R. CWT 25,000	(costs included w/kings)				
<u>NSRAA</u>					
Chum-mixed Single clip 50,000	1.1		0.2	0.7	2.0
Pink-mixed Single clip 50,000	1.1		0.2	0.7	2.0
<u>DIPAC</u>					
Chum-mixed Single clip 50,000	1.1		0.2	0.7	2.0
Pink-mixed Single clip 50,000	1.1		0.2	0.7	2.0
<u>Sheldon Jackson</u>					
Pink-Indian R. Double clip 50,000	1.4			0.3	1.7
Chum-mixed Double clip 50,000	1.4	0.3		0.5	2.2
Coho-mixed CWI 25,000 smolt	1.6	0.3		0.1	2.0
<u>Burro Creek</u>					
Chum-Single clip 50,000	1.1	0.5	0.2	0.8	2.6
Pink-Single clip 50,000	1.1	0.5	0.2	0.8	2.6
<u>AK Aquaculture</u>					
Pink-Single clip 50,000	1.1	0.5	0.2	0.8	2.6
Chum-Single clip 50,000	1.1	0.5	0.2	0.8	2.6
<u>Meyers Chuck</u>					
Pink-Single clip 50,000	1.2	0.6	0.2	1.0	3.0
<hr/>					
Subtotal: Marking Activities	31.9	5.0	2.6	11.8	51.3
Equipment Purchases to Accomplish Above:					
3 ea. CWT machines (complete) @ \$20.00 each					60.0
<hr/>					
TOTAL:					111.3

Table 10

SOUTHEAST RECOVERY

	<u>100</u>	<u>200</u>	<u>300</u>	<u>400</u>	<u>500</u>	<u>Total</u>
<u>FRED RECOVERY</u>						
Coastwide	68.1	4.1	5.5	2.7	7.1	87.5
<u>SPORT FISH RECOVERY</u>						
Ketchikan	9.5	2.3	2.5	.5	.2	15.0
Juneau/Yakutat	14.2	-0-	-0-	-0-	1.8	16.0
SE King	34.2	.6	6.4	-0-	1.8	43.0
	<u>57.9</u>	<u>2.9</u>	<u>8.9</u>	<u>.5</u>	<u>3.8</u>	<u>74.0</u>
<u>COMM FISH RECOVERY</u>						
Troll Fishery	233.1	5.0	15.0	3.0	5.0	261.1
					TOTAL	422.6

Table 9

SOUTHCENTRAL RECOVERY

	<u>100</u>	<u>200</u>	<u>300</u>	<u>400</u>	<u>500</u>	<u>Total</u>
<u>FRED Recovery</u>						
Big Lake	60.2	4.4	2.8	27.4	-0-	94.8
Halibut Cove -						
Sport Fish	22.7	0.5	3.3	5.7	1.9	34.1
Comm. fish	22.7	0.5	3.3	5.7	1.9	34.1
Beluga -						
Fritz Creek	16.0	-0-	1.0	4.6	1.4	23.0
Leisure	13.0	-0-	1.5	1.5	1.0	17.0
Cannery	6.7	0.6	5.0	1.2	-0-	13.5
Sikusuilag - 0						
Kitoi	21.2	2.2	1.7	3.0	-0-	28.1
Tutka	35.7	0.9	2.9	5.4	-0-	44.9
Kasilof -						
Smolts	30.5	0.2	2.9	3.9	-0-	37.5
Big Lake and						
Crooked Creek	8.4	0.0	0.9	1.0	-0-	10.3
Karluk	12.9	1.0	5.0	3.5	-0-	22.4
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
Subtotals	250.0	10.3	30.3	62.9	6.2	359.7
PWSAC						
Equipment -						
Traps, Sonar						
PNP Recovery	40.0	4.0	-0-	8.0	140.0	192.0
<hr/>						
<u>Sport Fish Recovery</u>						
Deshka	74.4	2.2	5.5	6.9	-0-	89.0
Kenai	72.3	-0-	4.0	8.2	2.5	87.0
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
	146.7	2.2	9.5	15.1	2.5	176.0

Table 8

Proposed Marking Plan and budget Summary for FY 82

	SOUTHCENTRAL					Total
	100	200	300	400	500	
(\$ in thousands)						
<u>FRED Marking</u>						
Big Lake CWT & Clips 260,000	11.0	-0-	1.0	3.0	-0-	15.0
Jewel Lake) Quartz Lake)> CWT & Clips 150,000	5.4	-0-	0.2	1.9	-0-	7.5
Halibut Cove CWT & Clips 50,000	4.0	-0-	0.0	1.4	0.1	5.5
Beluga Lake) Fritz Creek)> CWT & Clips 25,000	2.0	-0-	-0-	0.7	0.1	2.8
Whittier CWT & Clips 90,000	2.4	-0-	-0-	0.8	0.1	3.3
Seward CWT & Clips 25,000	7.8	-0-	0.9	1.8	0.2	10.7
Cannery Creek CWT & Clips 224,000	14.9	1.6	2.5	3.0	0.5	22.5
Main Bay CWT & Clips 126,000	23.8	1.4	2.0	4.0	0.5	31.7
Sikusuilag CWT & Clips 160,000	14.6	0.8	-0-	1.2	-0-	16.6
Russell Creek CWT & Clips 136,000	19.5	14.4	-0-	0.2	-0-	34.1
Kitof CWT & Clips 240,000	23.1	1.0	1.2	5.9	-0-	31.2
Tutka CWT & Clips 105,000	32.8	0.3	2.7	5.1	-0-	40.9
Kasilof CWT & Clips 480,000	35.0	0.5	4.0	3.2	-0-	42.7
East Creek CWT & Clips 280,000	23.0	0.6	4.9	8.2	8.0	44.7

Table 11

New Permanent Full Time Positions Requested
for Mark, Tag, and Recovery

FRED

Fish Biologist I - Lab
EDP Programmer IV - Lab
Data Entry Clerk III - Lab
Systems Analyst II - Lab

COMM FISH

*Fish Biologist II - Troll Recovery
*Fish Biologist I - Troll Recovery

New Seasonal or Non Permanent Positions Requested
for Mark, Tag, and Recovery

*Comm Fish - 22 seasonal or non perm positions for 62 months
*Sport Fish - 25 seasonal or non perm positions for 89 months
**FRED - 125 seasonal or non perm positions for 370 months

* Included in Governor's FY 82 Budget Request

** 47 seasonal and non perm positions included in Governor's FY 82 Budget
Request

STATE OF ALASKA

JAY S. HAMMOND, GOVERNOR

OFFICE OF THE GOVERNOR

BUDGET & MANAGEMENT

POUCH AM — JUNEAU 99811
PHONE 465-2213

March 27, 1981

Honorable Don Bennett and Ed Dankworth
Co-Chairmen Senate Finance Committee
Alaska State Legislature
Pouch V
Juneau, Alaska 99811

FY 82 Budget Amendment #B080816
Department of Commerce and
Economic Development
New BRU: Fisheries Enhancement
Tax Receipts
Increase of \$1,306,400 program receipts

Dear Senators Bennett and Dankworth:

Please amend the Governor's FY 82 Budget to include \$1,306,400 in program receipts to be granted to Regional Aquaculture Associations which have imposed a fisheries enhancement tax pursuant to Chapter 154, SLA 1980. This amendment is requested as a new appropriation immediately following Business Loans, which appears on page 34, line 13 in 4B 50.

Chapter 154 authorized imposition of fisheries enhancement taxes if a regional association approves the tax by majority vote. AS 43.76.025 (a) requires the Department of Revenue to collect the tax and AS 43.76.025 (c) authorizes the Legislature to "make appropriations based on this revenue to the Department of Commerce and Economic Development for the purpose of providing financing for qualified regional associations."

The Department of Revenue has estimated the following revenues will be collected during FY 82:

Southern Southeast Region	\$533,800
Northern Southeast Region	\$411,900
Cook Inlet Region	<u>\$360,700</u>
	\$1,306,400

The regional aquaculture association have submitted the following budget requests for FY 82. Please note that the regions' revenue estimates differ from the Department of Revenue estimates:

Southern Southeast Region	\$ 800,000
Northern Southeast Region	500,000
Cook Inlet Region	<u>350,000</u>
	\$1,650,000

Honorable Don Bennett and Ed Dankworth

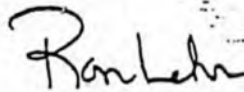
March 27, 1981

Page 2

Funds appropriated by the Legislature to the Department of Commerce and Economic Development for this purpose will be disbursed under contract between each regional aquaculture association and the Department. Regulations are being drafted by the Department governing the preparation of budgets, reporting requirements, disbursement procedures and required accounting methods.

If the fisheries enhancement tax should generate revenue in excess of the current estimated revenue for any of the regions, additional budget amendments will be submitted.

Sincerely,



Dr. Ronald D. Lehr
Director

Attachments

cc: Honorable Jim Duncan, Speaker, House of Representatives
Honorable Jalmar Kerttula, President Senate

TO: Ron Lehr, Director
Division of Budget & Management
Office of the Governor

DATE: March 24, 1981

RECEIVED

FILE NO:

08
B050810
MAR 24 1981

TELEPHONE NO:

BUDGET AND MANAGEMENT

FROM: Lois Cook, Director *LC*
Division of Administrative Services
Department of Commerce & Economic
Development

SUBJECT: Budget Amendment
Covering Fisheries
Enhancement Grants
Based Upon Fisheries
Enhancement Tax
Program Receipts

We are presenting the attached budget amendment to your office for introduction to the Legislature covering fisheries enhancement grants to regional aquaculture associations operating in regions where the fisheries enhancement tax was approved by fishermen voting in the Northern Southeast Region, the Southern Southeast Region, and the Cook Inlet Region. The results of the elections were certified by the Commissioner of Commerce and Economic Development, Charles Webber, on March 12, 1981. The effective date of the tax is to be April 1, 1981.

Based upon a projection prepared by the Department of Revenue, it is estimated that the following revenues will be collected under the fisheries enhancement tax during fiscal year 1982:

Southern Southeast Region	\$ 533,800
Northern Southeast Region	411,900
Cook Inlet Region	360,700
	<u>\$1,306,400</u>

Budgets have been submitted by each of the regional aquaculture associations with the following breakdown by line item classification. Please note that their revenue estimate differs from the projection developed by the Department of Revenue.

	<u>Northern Southeast Regional Aquaculture Assoc., Inc.</u>	<u>Southern Southeast Regional Aquaculture Assoc., Inc.</u>	<u>Cook Inlet Aquaculture Assoc.</u>
100	281.9	372.45	50.78
200	36.0	133.00	5.43
300	50.0	75.75	25.63
400	40.0	157.70	8.83
500	20.0	30.40	--
600	72.1	30.70	259.40
800	0.0	0.00	0.00
	<u>500.0</u>	<u>800.00</u>	<u>350.00</u>

Funds appropriated by the Legislature to the Department of Commerce and Economic Development for this purpose will be disbursed under contract between each regional aquaculture association and the Department of Commerce and Economic Development. Regulations are being drafted by the Department of Commerce and Economic Development governing the preparation of budgets, reporting requirements, disbursement procedures and required accounting methods.

If the fisheries enhancement tax should generate revenue in excess of the current estimated revenue for any of the regions, additional budget amendments will be submitted.

LJC/sh3/13

Attachments

STATE OF ALASKA
Office of the Governor
Budget & Management Div.

REVISED PROGRAM SUMMARY
by
BUDGET COMPONENT

CATEGORY	Fisheries Enhancement
COVER PROGRAM	Private Nonprofit Hatcheries
AGENCY	Department of Commerce & Economic Dev
DIVISION	Business Loans
BUDGET REQUEST UNIT	Business Loans
BUDGET COMPONENT	
APPROPRIATION	
ALLOCATION	

	INITIAL AUTHORIZATION	RP	RP	RP	RP	RP	RP	RP	AMENDED AUTHORIZATION
01	PERSONAL SERVICES								
02	TRAVEL								
03	CONTRACTUAL								
04	COMMODITIES								
05	EQUIPMENT								
06	LANDS, BUILDINGS								
07	GRANTS, CLAIMS		1,306,400						1,306,400
08	MISCELLANEOUS								
	TOTAL		1,306,400						1,306,400
1002	FEDERAL RECEIPTS								
1003	G/F MATCH								
1004	GENERAL FUND								
1005	I/A RECEIPTS								
1028	PROGRAM RECEIPTS	1,306,400							1,306,400
15	FULL TIME								
16	PART TIME								
17	TEMPORARY								
18	MAN-MONTHS								

Phase II of SE Salmon Plan underway

Phase II of the Comprehensive Salmon Plan for southern Southeast Alaska—a document that will present cost-benefit options for fisheries management, habitat protection and enhancement and rehabilitation—may be completed by the end of the year, said SSRAA planning director Gary Freitag.

Phase I of the two-phase plan was drafted and revised in 1979-80 and dealt with overall fisheries goal and objectives for the next 20 years. Authors of the plan include SSRAA, Northern Southeast Regional Aquaculture Association (NSRAA) and Alaska Department of Fish and Game (ADF&G). Phase II, referred to as "operational planning," will deal with short-range objectives and projects for individual areas.

Freitag said Phase II will contain a detailed literature and information search of successful and unsuccessful aquaculture practices throughout the Pacific Coast and their implications for southern Southeast Alaska.

"Failure information is harder to get because it's not published. Usually, only successful techniques are written about, but the failures are just as important to us. We need to know if those failures apply to our areas," said Freitag, who has been working on this project since October.

Once the data search is completed, then the sifting work begins. The information must be digested "to determine how to use the information to improve our techniques and strategies," he added. The compiled information will give SSRAA, and those who wish to use it, one of the most extensive salmon libraries available.

After all information is reviewed, regional profiles by district will be drawn to include present and historical salmon production and harvest patterns, along with existing and proposed strategies for fisheries management, habitat protection and rehabilitation and enhancement. The plan also will list opportunities for application of strategies, their risks and constraints, by 5-year time frames.

"When this plan is complete, we hope to be able to take this information, then look at an area and say what are the alternative

strategies for maximizing the uses of the land to benefit the fisheries," Freitag said. SSRAA will help develop the second phase of the comprehensive plan for southern Southeast Alaska fishing districts 1-8, while NSRAA will be concerned with northern Southeast Alaska districts 9-16. Both regional associations worked closely on Phase I of the plan and Freitag said there would still be some cooperation between the two regional associations on Phase II.

The Alaska legislature has funded regional planning efforts here and throughout the state, while association board directors have volunteered countless hours of their time. SSRAA board members on the regional planning committee are Jim Bray, John Emde, Bruce Eagle, Roger Ingman, Jake Jacobsen, Frank Jaynes, Bob Rooney and Lyle Simpson. Bray, Jacobsen and Jaynes also serve on the Regional Planning Team (RPT) composed of ADF&G officials and SSRAA and NSRAA directors.

Using the plan, the RPT will be able to review salmon restoration projects and recommend approval or disapproval to the ADF&G commissioner depending on their consistency with the plan's objectives. While the RPT is charged with developing the plan and arranging for public review of it throughout the area, the ADF&G commissioner is responsible for final approval of the plan.

According to the plan, "the value of this Plan depends on the continual re-evaluation and revision as new knowledge is gained, as circumstances of the salmon stocks and user groups change and as projects progress. This Plan must not be considered an end product. Rather, it is the groundwork for a constantly evolving document. It sets forth goals and suggests coordinated action toward achieving those goals. Further, it provides uniformity of policies for management, rehabilitation, and enhancement of the salmon stocks.

"The RPT recognizes that the harvest objectives presented may be exceeded for some species and may never be reached for others. The objectives suggest production levels to strive for and offer a means to measure progress."

Regional Planning

COMPREHENSIVE

for Southern
—to promote
biological
increase so
Southeast
social and
consistent

Phase I (Co

-Identify long
and objective
-Includes: an
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and constrai
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-Phase II (I

-Identify sho
and projects
planning)
-Includes: Inf
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aquaculture
throughout
profiles; cos
operational
district prof

Objective

- 1) Increase the chinook harvest by the year 2000.
- 2) Increase the sockeye harvest by the year 2000.
- 3) Increase the harvest to 2.65 million by the year 2000.
- 4) Increase the harvest to 3 million by the year 2000.
- 5) Increase the harvest to 9 million by the year 2000.

SALMON ENHANCEMENT FACILITY EVALUATION
AND MANAGEMENT NEEDS

Historical Perspective

Voters of Alaska have approved salmon enhancement bonds approximating 80 million dollars. FRED Division operates 17 hatcheries throughout the state and will operate three more before the end of FY 82. The total operational egg capacities for these 20 facilities will be 624.5 million. Additionally, the legislature established the Private Non-Profit Hatchery Program. Since the inception of the PNP program, 12 PNP salmon hatchery permits have been issued. Permitted egg capacities of these is about 185 million eggs.

Enhancement programs are now demonstrating large scale salmon production resulting in millions of supplementally produced adult salmon. Supplemental returns now make up a significant portion of localized runs and will soon constitute a substantial part of the state's total salmon production.

<u>1980 Salmon Fry-Smolt Production</u>	<u>Releases</u>	<u>Returns (Preliminary)</u>
Southeastern - State	6,196,764	38,276
PNP	13,802,224	11,554
South Central - State	46,551,080	841,206
PNP	22,221,000	1,494,930
Total	88,771,068	2,385,966

Projected Adult Returns in 1981 -

Southeastern - State	76,700
South Central - State	620,600

Problem Statement

Rehabilitated salmon runs and new salmon runs produced by State and PNP facilities, while desirable, may present new problems that must be dealt with. These include commercial, sport, and subsistence harvest allocations, seasons, and location of openings. To perpetuate the strengths of the wild stocks and the effectiveness of the enhancement facilities, natural escapements and hatchery broodstocks must be maintained. International negotiations involving fisheries throughout the state will require detailed information concerning stock origins, interception rates and levels of wild and hatchery production. We can only guarantee the most effective overall salmon fisheries program by gaining a more intimate knowledge of the stocks and runs involved. This can best be accomplished by a coordinated mark recovery program.

Problem Solution

Through a cooperative effort of the three Fisheries Divisions and the PNP groups, we have prepared a Statewide proposal, that where possible, will allow the evaluation of each facility's adult salmon production, in addition to providing information concerning stock migration, timing, stock separation, harvest and interception rates. Fishery professionals and members of the PNP groups all agree that to do anything less would cause chaos in future program management. In addition, detailed marking provides knowledge regarding methods of improving production.

In order to obtain this information in 1982 1,482,000 (PNP & State production) fish in Southeast and 2,216,500 (State production only) fish in South Central region of the State must be marked. Numbers of fish that must be marked will increase to a certain point as each facility approaches full design capacity.

Commercial, sport and subsistence fisheries and the hatcheries' rack returns must be sampled to provide the data necessary to most efficiently manage the fisheries and the hatcheries and still protect wild stocks and ensure hatchery brood stock requirements. To be most useful to

in-season management of fisheries and hatcheries mark recovery and sampling information must be made available to managers in a timely manner.

In 1980, 19% of the coho catch and 33% of the chinook catch in the Southeast Troll Fisheries were sampled for coded-wire tags. 6,441 heads were processed and 5,275 CWT's were recovered. Of these tags 29% were from Alaskan projects. As the number of marked releases increases the number of fish actually sampled will increase as will the number of tags/marks that will be recovered and processed. In 1982 it is expected that in this same troll fishery 2,704 tags will be recovered just from FRED Division's releases. In 1986 this number will be 5,804. These numbers reflect only projections for the Southeast troll sampling program. Seine and gillnet sampling effort throughout the State as well as troll sampling programs in other areas of the State will also be expanding rapidly..

Considering the large number of facilities and stocks that must be monitored, a highly coordinated effort through a tightly structured team is necessary. The Department, in cooperation with the PNP sector, is determined to ensure that this effort is successful. Components of the proposal, giving numbers of fish to mark and recover and, in addition, the cost of manpower and equipment to accomplish the task are attached.

An inter-divisional team in Southeast Alaska is drafting a comprehensive proposal to establish the functional organization to ensure that a coordinated comprehensive mark/recovery program is instituted. The schematics of this proposed organization and a brief description of this program is attached. A parallel joint planning effort is underway in South Central region.

MEMORANDUM

TO: All interested parties.
FROM: Terry Gardiner, ^{T.G.} Fred Zharoff
DATE: February 27, 1981
RE: Aquaculture hearings, major issues for discussion

We recognize that there are several basic functions in the Fishery Enhancement program but the methods of addressing those issues may change with the development of the different entities. For example; under the issue of financing there may be a different approach for the initial development of a facility versus the method of financing for a facility which is fully built and under full scale production. If the following format does not suit your needs or abilities to answer, feel free to tackle the problem from another point of view.

The major objective is an analysis of progress and direction regarding supplemental programs to rebuild and sustain salmon runs. This involves a review of the states efforts through the FRED division of ADF & G and the private non-profit program.

Please address the following issues and any others you may think of:

- 1.0 Financing. The major sources of revenue for all of the fisheries enhancement programs are as follows:
 - .1 General fund, general obligation bonds, state loans, private investment capital, state grants, private loans, harvest of fish for direct sale, tax assessment on sale of fish.
 - .2 The most equitable and efficient mechanism of financing the start up of a fisheries enhancement programs: i.e. the necessary capital, operational funds, acquisition of brood-stock and other related start up matters.
 - .3 The most effective and efficient mechanism for the operation of fishery enhancement facility from the time of completion of construction to the time that the facility is operational at full capacity.

- .4 The most effective and efficient financing mechanisms for operation of the facilities after they have reached their full capacity.
 - .5 Comprehensive Fisheries planning. What is the best source of revenue for financing the planning efforts that have taken place. This answer also relates to a further subcategory entitled "planning".
- 2.0 Economic feasibility. What method of evaluating the economic feasibility of the Fisheries Enhancement project should be used? The two methods identified in the Miller report are cost benefit analysis for the public facilities and a return on investment model for the privately held facilities. Please indicate your rationale for either of the two methodologies or a third one if you disagree with using those two. Also, delineate your definition of the benefits and the costs related to these projects.
- 3.0 Planning. A regional planning concept has been set set out in the statutes and has been implemented in some of the regions of the State. The issue at this time is whether that concept is effective, who should pay for the various aspects of the planning concept; how is the planning to be done in areas that do not have regional associations; should the concept and process be continued. The definition of comprehensive planning and whether that includes planning fall of the salmon within the region whether they are from natural production streams or from supplemental production. For those areas where the regional planning concept has gone forward, a comment on the effectiveness of the planning concept in determining site selection, brood-stock selection, cost recovery mechanisms, and financial mechanisms for the appropriate projects.
- 4.0 Management concerns. A method of evaluating the impact on the fishery resource from the supplemental production facilities, including the necessity for a sufficient tag and tag recovery program. Also the issues for who should be responsible for the tagging programs, how should it be financed, processing of data, and other related issues.

- 5.0 Organizational structure. What is the best organizational structure for accomplishing the salmon enhancement program. At the present time, we have the FRED division in the Department of Fish & Game, private non-profit regional associations, and the private non-profit "Ma and Pa" corporations. Is it most effective to have three different entities working on the enhancement programs, should there be more than three, should it be reduced to one or two? Also, are there different aspects of the supplemental salmon program that are better done with one or the other of the organizational entities for purposes of structuring the financing mechanism for the programs.
- 6.0 Regulatory matters. We would appreciate a general comment on the regulatory matters relating to supplemental salmon programs. Obviously the Department of Fish & Game and the Board of Fish are the regulatory entities. The issue is whether there is problems in the regulatory area of the programs at this time; if so what are they and how could they possibly be corrected?

Most of these questions have dealt with delineating what is in existence now. We would appreciate it if the respondent would also take the time to propose some changes for the future development of the supplemental salmon program, including the organizational structure, financing mechanisms, planning issues and management issues. This may seem like an extensive set of issues, but not all parties are concerned with the whole program. Please be prepared and spend the time necessary to make a meaningful statement. The time the Committee has to spend on this important matter is very limited, 6-8 hours. By providing this written information you will make the hearing much more meaningful and productive.

Thank you for your cooperation on this matter.



Alaska State Legislature

House of Representatives

Committee on Resources

Terry Gardiner, Co-Chairman
Fred F. Zharoff, Co-Chairman
465-3715

Pouch V
State Capitol
Juneau, Alaska 99811

February 27, 1981

To all interested parties.

Dear Sir:

The House Resource Committee intends to conduct an overview of the Aquaculture & Fisheries Enhancement programs in the State on March 23, 24, 25 in the House Resource Committee room, Room 118 in the Capital building in Juneau. We would like to extend an invitation to you to participate in or observe those proceedings. The overall purpose of the hearings will be to examine the role that fisheries enhancement should play in the future development of the salmon fisheries in the State.

The first day of the hearings; March 23, from 3-5 PM would be basically set aside to give an overall summary of the past activities of the Department of Fish & Game, FRED division, the regional private non-profit Aquaculture associations, and the individually owned private non-profit corporations.

The second day; March 24, from 3-5 PM will be used to finish up the overview and address the specific issues which are key to developing the present policy and the future role of the fishery enhancement entities. Attached to this letter is a memorandum outlining some of the issues to be discussed and we would appreciate your written response to those issues to be forwarded to our offices prior to Thursday, March 12, to the attention of Terry Gardiner. If you have any other issues that you feel should be discussed please attach that to your written response.

The third day; March 25, from 3-5 PM will be spent addressing the specific matters which must be taken by the Committee either to continue the present direction or make the changes changes the Committee deems necessary. This would include specific legislation which needs to be enacted or addressing specific budgetary matters which the Committee would like to recommend to the Finance Committee to be taken up in either the operating budget or capital budget. If you feel there

February 27, 1981

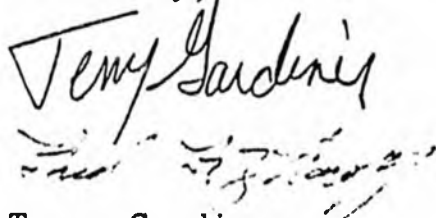
Page 2

are some specific statutory amendments that should be acted on by the Committee, please attach a written summary or a specific piece of legislation to your written response, which should be forwarded to our offices prior to March 19.

We would like to have a meeting on Friday, March 20 at 10:00 AM in Room 118 in the Capitol building with all the people who intend to participate in the hearings to review the written answers to the proposed issues and to discuss the testimony and the information base each of the parties intends to use. It would be our hope through this meeting that the major issues can be identified so that as many of the surprises as possible are eliminated from the testimony at the hearings. We think it is important that we concentrate on the major issues for the direction that the program should take and not get caught up in minor battles over the statistics that each of the parties is depending upon or using.

Feel free to contact our offices any time regarding the development of information for the hearings and the procedure we plan to adopt.

Sincerely,

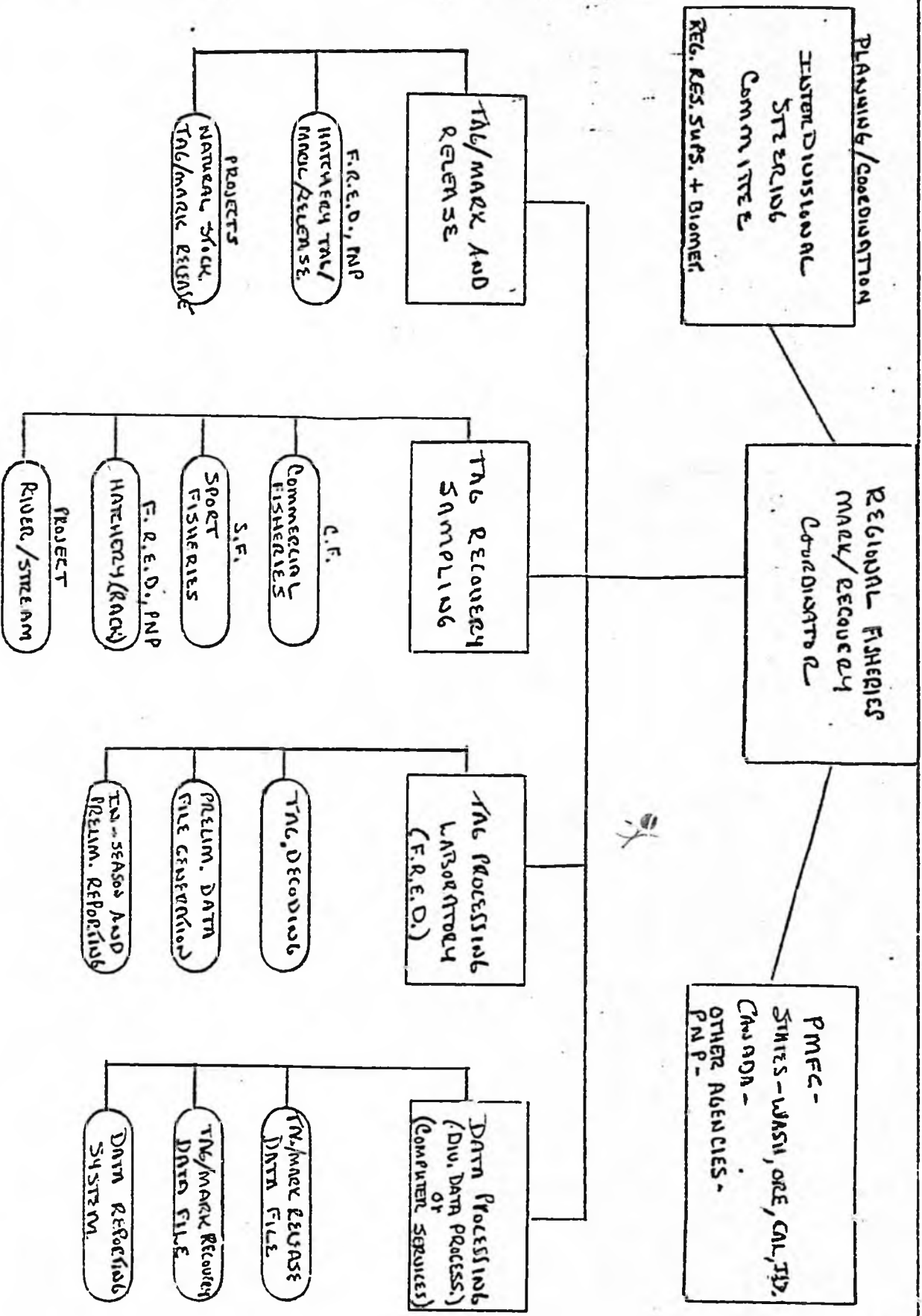
A handwritten signature in cursive script that reads "Terry Gardiner". Below the signature, there are some faint, illegible handwritten marks.

Terry Gardiner
Fred Zharoff
Co-Chairmen
House Resource Committee

Enclosures.

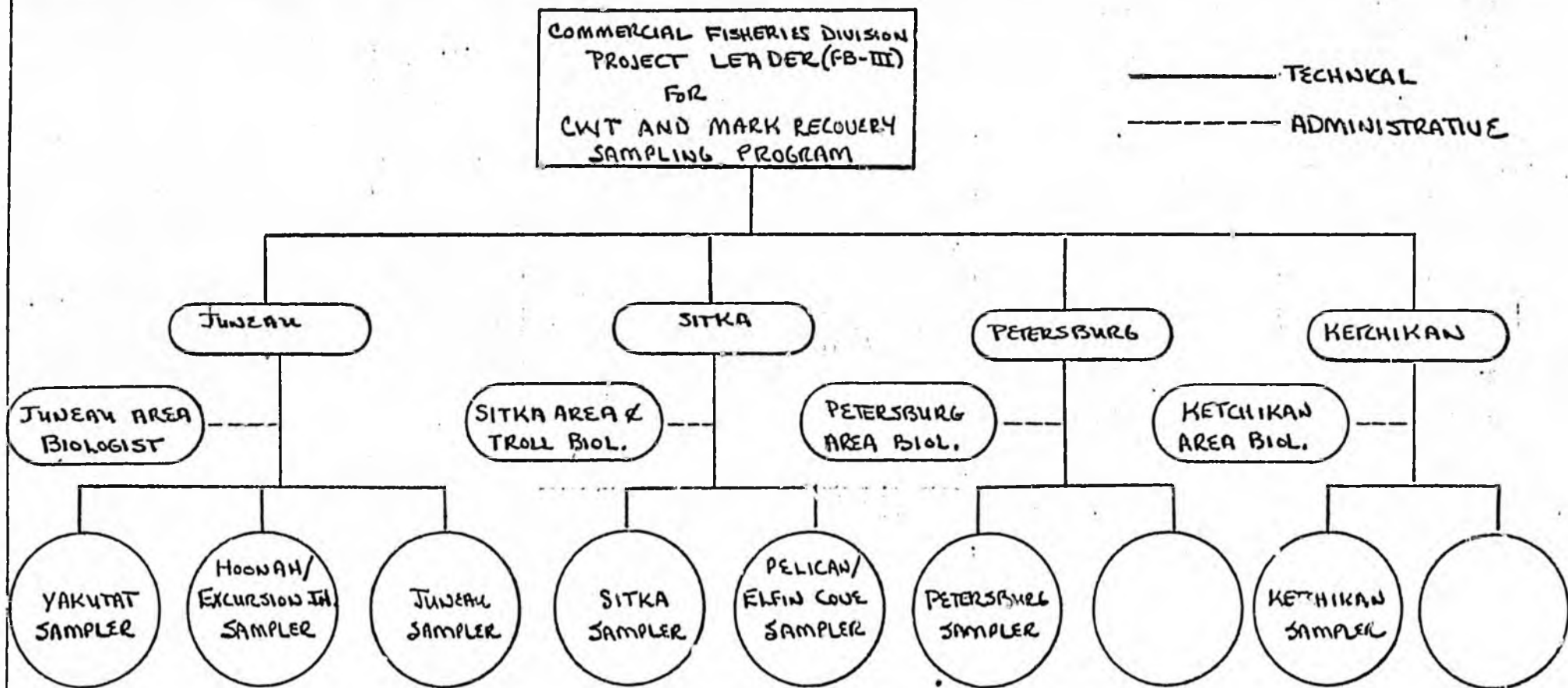
TG/drz

FIGURE • FUNCTIONAL ORGANIZATION OF ADF&G SOUTHEAST ALASKA REGIONAL FISHERIES MARK/RECOVERY PROGRAM (ADFDG-3/81)



FIGURE

ORGANIZATIONAL SCHEMATIC FOR SOUTHEAST ALASKA COMMERCIAL HARVEST CODED WIRE TAG AND MARK RECOVERY SAMPLING PROGRAM



———— TECHNICAL
 - - - - ADMINISTRATIVE

FISHERIES SAMPLED

TROLL	X	X	X	X	X	X	X	X
SEINE		X	X	X		X		X
GILLNET	X	X	X			X		X

NOTE: THE ABOVE SAMPLERS WILL BE USED ON A TIME AVAILABLE BASIS FOR OTHER COMMERCIAL HARVEST SAMPLING DUTIES.

KODIAK AREA NATIVE ASSOCIATION

Post Office Box 172 - Kodiak, Alaska 99615 - Phone (907) 486 - 5725



March 12, 1981

Representative Fred Zharoff
Pouch V
Juneau, Alaska 99811

Dear Representative Zharoff:

The Kodiak Area Native Association (KANA) would like to submit this letter as a position paper on the issues concerning aquaculture and fisheries enhancement which you outlined in your joint letter with Representative Terry Gardiner.

The salmon fishery is traditionally the primary economic activity of the Kodiak Island villages, where off-season unemployment can run as high as 80%. Because of this dependency on the salmon industry for the payment of an ever-increasing load of monthly bills, it is in the best interests of the Kodiak villages to maintain the salmon harvest levels at the highest sustainable levels. For this reason, the KANA strongly supports continued efforts towards salmon enhancement, rehabilitation and development.

As your memorandum states under the heading "organizational structures", salmon enhancement can be accomplished through three (3) different types of organizations: The FRED Division of the Department of Fish and Game, the private non-profit regional associations, and the private non-profit "Ma and Pa" corporations. We feel that all these organizations play important roles in salmon enhancement, and that all three (3) organizations should be encouraged.

The "Ma and Pa" corporation permits the direct application of private investment funds and individual initiative into salmon enhancement. In terms of cost effective fish production, the pressures of amortizing capital expenditures will probably force the "Ma and Pa" operation to be the most efficient of the three (3) organizational levels. The required non-profit status, and the fluctuations of market and fish stock levels would prevent the "Ma and Pa" operation from being a "get-rich-quick" scheme.

The regional non-profit associations also have the advantages of being driven by private investment funds and private initiative. However, the broad-based representation on a regional association's board of directors makes it more accountable to a region's fishing community than the "Ma and Pa" corporations. The regional associations, however, would legitimately have the oversight capability over the "Ma and Pa" corporations, so that the smaller operations could better fit into an overall regional salmon plan. The regional associations are more versatile in their sources of funding, and with income derived from fish assessments, can pay for such non-cash-generating projects as stream

Representative Fred Zharoff

March 12, 1981

Page 2

clearance, stream bed improvements, beaver dam removal, and fish ladders. Although the regional association facilities would probably be somewhat less cost-efficient than the "Ma and Pa" operations, their versatility in the types of salmon enhancement projects they can support is a very strong element in overall salmon enhancement.

The Department of Fish and Game FRED Division facilities would be expected to be the least cost efficient method of fish production because of the high level of administrative overhead and the size of the organization. However, the FRED Division has the ability to perform research, test new techniques, maintain a disease and genetics research lab, and raise eggs for planting which would be financially impossible for a struggling non-profit regional association or "Ma and Pa" corporation. The FRED Division, and other Fish and Game enhancement activities in previous years, were responsible for the development of the Frazer Lake salmon run on Kodiak Island, and contributed to the stabilization of fish stock levels in the Kodiak region. For this reason we feel that the FRED Division should maintain its research and development functions and its fisheries rehabilitation activities, although fish production should be left to the private sector, wherever possible.

The KANA supports the existing multiple sources of funding for salmon enhancement activities. The independent "Ma and Pa" non-profit corporations should have access to grants, state and private loans, private investment capital, and the harvest of surplus fish in order to support their enhancement projects. The regional associations should have access to state grants, state and private loans, private capital, the harvest of surplus fish, and assessments on the sale of fish in order to support salmon development and enhancement activities region-wide. The FRED Division should have access to the state general fund, general obligation bonds, and funds derived from state-collected assessments on the sale of fish in order to support the special fisheries enhancement projects that would only be possible for the FRED Division to undertake.

The regional salmon resource planning process as described in the Alaska Statute has not been implemented in the Kodiak area, and will probably be unnecessary until and unless private salmon enhancement facilities are developed. Until that time, the local Fish and Game Advisory Committee has taken the role of the resource planning body. The Advisory Committee, which serves as the bridge between Fish and Game resource managers and user groups, could potentially continue to serve in the place of a Regional Planning Team even if private enhancement facilities are built, thus saving the expense of an additional board. In order to adequately plan the development and use of salmon enhancement facilities, supplemental production planning should be kept in the context of natural production. Thus negative impacts on natural production would be minimized.

Although no private salmon enhancement facilities have been developed in the Kodiak Island region, the potential exists for such facilities to be built. Interest is strong, especially in the Native villages, to bring stock levels in depressed or fished-out streams at least to historical levels, and to introduce salmon runs where possible with fish ladders. If the Department of Fish and Game does not take the initiative to develop these facilities, then

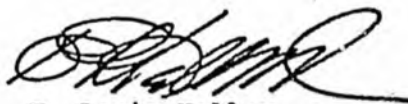
Representative Fred Zharoff
March 12, 1981
Page 3

private groups eventually will. Because the regions of the state are significantly different, the KANA recommends that the statutory and regulatory provisions not be so inflexible as to force the Kodiak Island region to follow exactly the same planning and development processes experienced by other regions of the state. For the sake of saving money at least, it might be most effective for the local Fish and Game Advisory Committee to serve as the regional planning agency. Statutory inflexibility should not prohibit expense-saving innovation.

We are sorry that we will not be able to participate in the aquaculture hearings on March 23 through 25, 1981 but we hope that these written comments will prove useful in your deliberations. Thank you for the opportunity to submit a response to the issues.

Sincerely,

KODIAK AREA NATIVE ASSOCIATION
Ione M. Norton, President



E. Louis Keller
Vice President

ELK:csd

cc: Representative Terry Gardiner



STATE OF ALASKA
OFFICE OF THE GOVERNOR
JUNEAU

February 25, 1981

The Honorable Terry Gardiner
Alaska State Legislature
Pouch V
Juneau, Alaska 99811

Dear Representative Gardiner:

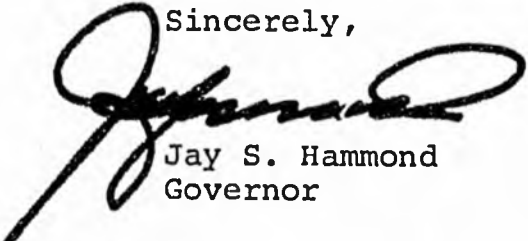
Thank you for your inquiry regarding FY 82 funding for operation of Regional Aquaculture Associations. I intend to submit a budget amendment for this program in the near future. The Department of Commerce and Economic Development is working on this matter.

At the present time, the Department is in the process of certifying the recent (Fall, 1980) fisheries enhancement tax election, per Chapter 154, SLA 80. Certification should be completed within the next two weeks. Additionally, the Department has asked the Cook Inlet Aquaculture Association, the Northern and the Southern Southeast Regional Aquaculture Associations to submit budgets for their FY 82 operations. Cook Inlet has already submitted its request. Budgets from the other associations are expected shortly. Upon review of these budgets, the Department will forward a budget amendment to my office for introduction to the Legislature.

Once funds are appropriated for this budget amendment, the Department of Commerce and Economic Development will prepare contracts for the quarterly disbursement of funds to each association. The attached memo is provided for background information on funding of the Regional Associations in FY 81, and the proposed procedures to be followed in FY 82.

If you have any additional questions on this subject, please call me.

Sincerely,



Jay S. Hammond
Governor

Enclosure

MEMORANDUM

State of Alaska

TO: Jim Stey, Deputy Director
Division of Budget & Management
Office of the Governor

DATE: February 20, 1981

FILE NO:

TELEPHONE NO:

FROM: Joe Davis, Loan Examiner *Joe Davis*
Division of Business Loans
Department of Commerce & Economic
Development

SUBJECT: Administration of Funding
Provided to Regional
Aquaculture Associations

Under CSHB 970, Ch. 108, a special appropriation was made by the second session of the Eleventh Legislature to the Department of Commerce and Economic Development for the payment of grants in the following amounts to the listed Regional Aquaculture Association:

Southern Southeast Regional Aquaculture Association	\$691,000
Northern Southeast Regional Aquaculture Association	\$500,000
Cook Inlet Regional Aquaculture Corporation	\$437,000

As specified in the legislation, a Promissory Note was signed by the authorized representative of each of the regional associations promising to repay the difference between the grant received and the amount of the Salmon Enhancement Tax collected if the tax were to be repealed before the amount of the tax collected equals or exceeds the amount of the grant.

For the purpose of administering these funds, annual budgets and quarterly cash flow projections were submitted by each of the regional associations to the Department of Commerce and Economic Development.

Based upon the budgetary information submitted, contracts were executed between each of the regional associations and the Department of Commerce and Economic Development which specified the reporting and recordkeeping requirements. Under these contracts initial disbursements were made based upon first quarter cash flow projections. Subsequent disbursements have been made following the receipt of actual expenditure statements for each quarter. To date, \$663,421 has been disbursed to Southern Southeast Regional Aquaculture, \$324,724 has been disbursed to the Northern Southeast Regional Aquaculture Association and \$300,500 has been disbursed to the Cook Inlet Aquaculture Association.

As authorized under CSHB 969, Ch. 154, fisheries enhancement tax elections were held this fall in the following regions of the State: The Cook Inlet Region (ADF&G District Area H), the Northern Southeast Region (ADF&G Districts 9-16) and the Southern Southeast Region (ADF&G Districts 1-8).

The question voted upon was, Shall a Salmon Enhancement Tax be levied at the rate of three (3) percent of the value of salmon sold to a processor in ADF&G Districts 1-8 and ADF&G Districts 9-16, and at the rate of two (2) percent in ADF&G District Area H. The effective date of the tax in each area is to be April 1, 1981. Eligible voters were all salmon fishermen holding limited entry and interim use permits of record on September 15, 1980 for the specific area in which the election was conducted.

The results of the election are as follows:

	Southern Southeast Region	Northern Southeast Region	Cook Inlet Region
Total Ballots Received*	2,079	2,061	865
Total Number of Ballots Counted	1,791	1,819	758
Results:			
For	1,074	1,111	544
Against	717	708	214
Number of Questioned Ballots	288	242	107

*This number includes only one ballot submitted by each eligible voter.

In each region the number of questioned ballots was not large enough to change the outcome of the election.

Certification of the results of the election is expected within the next two weeks by the Commissioner of the Department of Commerce and Economic Development.

Based upon projections prepared by the Department of Revenue in consultation with the Department of Fish and Game and the Regional Aquaculture Associations, it is estimated that the following revenues will be collected under the fisheries enhancement tax during fiscal year 1982:

Southern Southeast Region	\$533,800
Northern Southeast Region	\$411,900
Cook Inlet Region	\$360,700

Each regional aquaculture association has been asked to submit a budget statement and written justification to the Department of Commerce and Economic Development. Once received, a budget amendment for FY '82 will be prepared and submitted to the Legislature based upon the estimated program receipts that are to be deposited into the general fund. The budget amendment will not exceed the estimated amount of tax to be collected and deposited into the general fund. It is understood that the Legislature is not bound to return revenues to each region based upon the harvest assessments initiated through the tax. In submitting this budget amendment we would ask the Legislature to return these revenues during FY '82.

If funds are appropriated to the Department of Commerce and Economic Development for this purpose, funding would be disbursed quarterly under contract between the regional associations and the Department of Commerce and Economic Development. In addition, regulations will be adopted by the Department of Commerce and Economic Development governing the preparation of budgets, reporting requirements, methods of cost accounting to be used and procedures for the disbursement of funds.

JD/cw#21P1

STATE OF ALASKA

DEPARTMENT OF COMMERCE & ECONOMIC DEVELOPMENT

DIVISION OF BUSINESS LOANS

JAY S. HAMMOND, GOVERNOR

POUCH D
JUNEAU, ALASKA 99811
Phone: 465-2510

March 17, 1981

Honorable Terry Gardiner and
Honorable Fred Zharoff
Co-Chairmen
House Resources Committee
Pouch V
Juneau, Alaska 99811

Gentlemen:

Prior to FY '81, approximately \$6,900,000 in loans were closed under the Fisheries Enhancement Loan Program and approximately \$900,000 was disbursed in organizational and planning grants as authorized under AS 16.10.510. During FY '81, \$6,000,000 was made available by legislative appropriation for fisheries enhancement loans and \$1,628,000.00 in special grant appropriations. To date, approximately \$3,200,000 in loan commitments have been made. Applications for approximately \$2,000,000 are being processed at this time and an additional \$2,000,000 in loan requests are anticipated prior to the end of this fiscal year.

The Alaska Fisheries Enhancement Loan Program is in the initial stage of development. Because of the lead time required to bring hatchery projects to full production, only a limited number of performance indicators are available to evaluate financial investment decisions made thus far. All Fisheries Enhancement Loan applications must include a pro forma cash flow statement for the project. This type of investment model includes a planned production schedule and a projection of future revenues and expenditures anticipated over the life of the project. Each year the pro forma is adjusted by entering the actual production attained and expenditures and revenues realized. Future cash flow requirements are then adjusted accordingly. This model provides a method of evaluating the credit worthiness of an ongoing project as well as a budget control system.

Return on investment models and cost benefit analyses are not required as part of the loan application. These models are useful for the comparison of competing projects and establishing planning priorities when investment capital is limited. In a cost benefit analysis of salmon enhancement projects, direct benefits that should be considered are: gross revenue over the life of the project from the sale of fish by the hatchery operator and commercial fishermen, as well as increased processor revenues; and in the case of direct benefit for sport fish and subsistence harvest, the value of the fish caught. Indirect benefits might be in the form of redistribution of income, contribution to

employment, gross State product, foreign exchange (balance of payments), regional development, nutrition and tourism increase. Direct costs in terms of resources used over the life of the project should include the capital required for the construction, operation, and maintenance of the project as well as the harvest expense and the direct allocation of administrative costs. Indirect costs would include the allocation of organizational and start-up costs, research and development costs and the effect upon market structure and equilibrium. For comparative purposes the opportunity cost of capital should be computed and discounting techniques applied to future benefits and future costs.

This type of model would be quite useful in the regional planning effort as well as in the internal investment plans developed by the board of directors of the regional associations and nonassociation corporations.

The most equitable method of financing an enhancement project would be to have the beneficiary contribute funding or guarantees. Because the direct and indirect beneficiaries are not always easily identified or capable of an organized investment program, the burden falls upon the State to provide the investment program and organizational structure. Furthermore, private loans and private investment are readily available due to the high risk and the absence of a direct profit motive. A source of financing not identified in the memo and available on a limited basis is Federal EDA grants and direct funding through S-K funds and Farmers Home Administration.

The question of an efficient financing mechanism is extremely important because the source and availability of investment capital are limited. Under the Fisheries Enhancement Loan Program, several important control mechanisms are at work. Because the loan agreement requires a pay-back on all loan funds, a strong incentive is at work for operating in the most cost effective and time efficient manner. Adequate collateral is required to secure all loans which protects the State's investment. Loan funds are disbursed from controlled accounts which provides a budget control mechanism. All loan documents are signed by the authorized representative of the corporation as evidenced by an executed corporate resolution. This requirement ensures that the board of directors clearly understands the investment decision being made.

One problem that might be encountered under the existing financing system is that projects with more favorable cost recovery prospects might be chosen over projects with a broader benefit base and less potential for cost recovery.

Another potential problem under this system is that the State is, for the most part, the sole source of financing. Once committed to a project, it would be difficult to withdraw future loan commitments. Projects might not survive if State loan funding were to be denied.

It is clearly important, under this type of financing program, that the lending agency be allowed to act from an independent perspective so that responsible financial management and control can be monitored. The structure of the current system and the controls in effect provide an efficient financing mechanism during all phases of project development.

Honorable Terry Gardiner and
Honorable Fred Zharoff

-3-

March 17, 1981

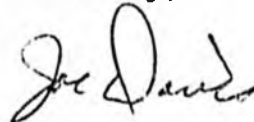
It appears that good progress is being made in the regional comprehensive planning effort. An important part of the planning effort in the future should be some form of financial investment planning using all three of the methods described in this letter (i.e., pro forma cash flow, return on investment and cost benefit analysis). Likewise, this planning effort should lead to more active participation by the entire board of directors of each regional association in financial investment and management decisions. Many of the groups are making progress in this area. (Because broad user-group oversight would be absent in areas without a regional association, it might be best to defer planning efforts in those areas until a regional association is formed.)

At the Division of Business Loans we have seen many of the nonprofit groups make considerable improvement in budgeting, record keeping and cost management. This is another extremely important ingredient for a successful program. It is important that all program participants develop these skills.

In the future, marketing might become an important function for the regional associations. As the association and nonassociation groups become more heavily involved in cost recovery to meet debt service and operating requirements, marketing will become very important. A carefully thought out and coordinated marketing program could also provide benefits to the industry as a whole.

Thank you for the opportunity of commenting.

Sincerely,



Joe Davis
Loan Examiner

JD/v15/1



LOWER YUKON/KUSKOKWIM AQUACULTURE ASSOCIATION

P. O. BOX 634
BETHEL, ALASKA 99559
907-543-3492

March 19, 1981

Terry Gardiner & Fred Zharoff,
Co-Chairmen
Committee on Resources
House of Representatives
Alaska State Legislature

Dear Sirs:

In response to your memorandum of February 27, 1981 requesting written response to major issues for discussion at your proposed aquaculture hearings March 23-25, here is our initial input:

1.0 Financing

- 1.2 Funding for start-up costs should be provided by general obligation bonds for PNP programs, or through the general fund. Low interest deferred state loans should remain as optional funding for projects unable to obtain direct funding.
- 1.3 Operational funding from facility completion to full capacity (first stage) operation should be included as part of the initial funding process whether direct funding or state loans through the Alaska Fisheries Enhancement Loan Program or the Commercial Fishing and Agriculture Bank (CFAB).
- 1.4 Second-stage operational funding should be generated internally by individual projects at this time. Any given project (State or PNP) should have a three-year period after full capacity production is reached in order to establish complete financial stability. If stability is not achieved by the end of the three-year period after full capacity operation is underway (or a maximum of ten years after facility completion) then the facility or project should be turned over to the other enhancement entity (State to PNP or PNP to State). This would provide the necessary incentive for cost-efficient projects.
- 1.5 Comprehensive Planning should continue to receive direct funding from the State.

2.0 Economic Feasibility

If the afore-mentioned concepts were implemented, economic feasibility would best be determined by on-going cost-benefit analyses, geared

specifically toward the financial maturity incentive. Otherwise, two standardized cost-benefit models should be developed: one a cumulative total costs (construction, personnel, operational expenses, etc.) per total cumulative benefits (market value, contribution to fishery, assessment monies, surplus harvest, and other revenues); the other model an annual operational cost-benefit model.

3.0 Planning

The Comprehensive Regional Salmon Planning process will provide a firm developmental base for fisheries enhancement programs. Effective dates of Phase I (the initial base plan designed for continual progression) completion should be considered as well as the development of expense ceilings for each region's specific needs. Methods of disbursement for planning funds should be reviewed in order to avoid problems that the newer Associations are likely to encounter.

4.0 Management concerns

The Division of Commercial Fisheries, Alaska Department of Fish and Game could coordinate the management concerns of public and private enhancement programs. The Division might be the best agency to review and monitor release and return of data of public and PNP programs. The State should fund tagging programs either in full or by half due to the value of the data.

5.0 Organizational Structure

The PNP program is going to be very successful as a state-wide salmon enhancement contributor. Before long, these initial years of growing and organizational pains will be almost eliminated. The F.R.E.D. Division has been fairly successful for a number of years now. Which entity, public or private (Ma and Pa should be included as a PNP entity) is best suited for the most efficient, cost-effective salmon enhancement programs? It seems relatively obvious that PNP programs would be more cost-efficient. Yet there would be a major setback in our state salmon resource if either of the two entities are deleted at this time. Alaska is sitting on a gold vein that is soon going to be discovered. Foreign control of the processing and marketing interests has plagued the long-term potential of our salmon fishery. It seems quite amazing in this day and age that our own country has not responded to our production capabilities. Within the next ten years we will see foreign control dissipate, & domestic markets expand substantially. Alaskan processors will be in a better position to pick and choose their markets without being locked in to a foreign commitment. Technology which already exists will be utilized more and more to provide a quality product to markets worldwide. When our salmon populations are low, everyone cries for hatcheries and salmon enhancement. When (for whatever reasons) the salmon populations are high, there seems to be a complete turn-around in the demand for enhancement programs.

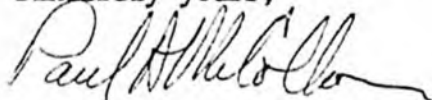
Alaska needs to make a long-term commitment to salmon enhancement programs, both public and private, if we are to be insured of a healthy future for our salmon resource.

6.0 Regulatory matters

PNP and public programs are doing similar work towards salmon enhancement. PNP program is presently regulated by F.R.E.D. Division which is the primary public enhancement entity in the state at this time. In order to eliminate the possibility of competitive bias, since some people seem to be concerned that only one salmon enhancement entity will achieve long-term success, the regulation of both public and private enhancement programs should change over to another agency. Alternatives could be the Commercial Fisheries Division, the Alaska Fisheries Council, or perhaps take the PNP state coordinator's office people out from under F.R.E.D. and place them through the Governor's Office. This could be formally addressed as long as the possibility of biased regulation exists. The F.R.E.D. Division is of course in the best position to regulate the physical aspects of the PNP programs. But unless potential bias can be eliminated, the Division of Commercial Fisheries should regulate or coordinate in an advisory capacity with a liberated PNP coordinator's office.

Thank you for the opportunity to provide input to your Committee on Resources regarding these important questions. We hope they will assist in providing an initial base for discussion and clarification of all issues.

Sincerely yours,



Paul McCollum
Lower Yukon/Kuskokwim Aquaculture Assoc.
P. O. Box 634
Bethel, Alaska 99559
phone 543-3492

Box 535
Petersburg, Alaska 99833
March 7, 1981

Fred Zaroff
Terry Gardiner
Committee on Resources
Pouch V
Juneau, Alaska 99833

Dear Fred and Terry:

Thank you for your invitation to testify at the AquaCulture Enhancement programs hearings for the Petersburg Gillnet Association. In all likelihood, the executive of the United Southeast Alaska Gillnet Association will represent the views of the Petersburg Chapter. Steve Haavig is far more familiar with the issues. My personal concerns are management, regulatory matters, and biological standards for maintenance of optimum genetic structure and disease control.

Since management must be based on hard data as well as the experience of ADFG personnel, it is imperative that a large scale tagging program be initiated with the goal of determining run return times and patterns of migration. Provisions must be made to prevent the location of hatcheries in major run corridors. Unfortunately, the Burnett Inlet facility in Clarence Strait is in the middle of a large August Kumpy fishery-- unfortunate because his private facility was created at a cost far below Association or State projects. A second, SE conflict area is around Juneau where five hatcheries are pumping fish into the midst of a large gillnet fishery. Overharvesting of natural runs may result unless tagging occurs to a significant degree on all enhanced stocks.

The state should finance these programs since data gathered at plants already exist. Further, the scale of the areas in Alaska implies the efficiency of utilizing existing ADFG experts and offices. ADFG Computer facilities should be financed through supplemental appropriations for these tagging data processing operations.

Please send me the Regional Plan for SE so that our members can review it.

There are problems in the regulatory function of the Board appropriating harvest of enhanced stocks. At stake is the harvest of major new runs and possible overharvest

by gillnetters, seiners, or trollers of one another's stocks. The choice of whom should harvest these stocks and avoidance of loss to one group of existing stock harvest levels carries huge economic gains or losses. To insure equitable distribution of harvest, a balance must be struck between protecting natural runs and insuring economic benefits. For my gear type, location of enhancement areas from the Snettisham facility to the outside of Baranof Island or Chatam Straight will have two negative impacts: the closure of the existing harvest area to allow both egg take from depleted stocks and the subsequent closure of the area to allow depleted stocks to return; further the inability to harvest the brood resulting of the egg take because they will be released outside of the gillnet area.

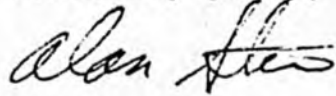
While this is a parochial concern, wide spread gear disturbances can occur. I tend to see advisory committees of one representative of each gear group advising and consenting to the Board's decision as the best check on the Board's decisions of allocation. If the Board makes trade offs, no veto should occur. If the Board makes objectionable ~~recommendations~~ recommendations, a veto could result in a more acceptable plan. An alternative which your committee could discuss would be possible ADFG decision making; but along this course lie innumerable caveats.

My third area of concern is the conformity of all hatchery and enhancement operations to guidelines adopted by ADFG after the 1976 1st aquaculture conference in Cordova. Biology should never sit in the back seat to economic or management concerns. For instance, the ADFG prohibition of selecting brood stock further than 50 miles from the site of release has been systematically ignored. Boby Bambs from the BC research station at Nanimo cautioned the conference against that practice because of genetic problems that can result. I believe this and other standards adopted in 1976 should be followed rigidly and that the committee should assign staff to draw up language that would accomplish the enforcement of those guidelines. Disease control has the potential of affecting large natural populations without anyone detecting the affects because of fish mortality at sea. More money must be appropriated to increase our diagnostic and research

capabilities in this field.

I'd like to praise Rep Zaroff for his efforts to repeal the raw fish tax. Last year, I mobilized thousands of telegrams in Petersburg against this burdensome appropriation of fishermen's livelihood. I stand ready to again assist you in any way possible. The adverse impact on ASMI can be made up by various other schemes which the representative is well aware.

Sincerely yours,



Alan Stein

I encourage lake fertilization and small breeder box projects run by groups of local fishermen on small depleted streams. This latter method in Seattle has brought back large runs of chums. Bush fishermen have repeatedly requested ADFG for permission to run the boxes but evidently laws prevent them from so doing. Perhaps, your rewrite could remedy the situation. Also in SE professional stream clearing is not undertaken on a large scale. I have seen numerous streams blocked 4-5 feet high with logs that drifted up. Funding and laws that will allow for the systematic clearing of these streams could magnify our runs quickly at a little cost. Please address this issue.

Cook Inlet Aquaculture Assn.

P.O. Box 850 — Soldotna, Alaska 99669

262-4441, Ext. 257/296

March 10, 1981

Terry Gardiner-Fred F. Zharoff
Resources Committee
Pouch V
Juneau, AK 99801

Subject: Aquaculture Input-Oversite hearings

Dear Representatives Gardiner & Zharoff:

The present aquaculture and fisheries enhancement program in Alaska is in an infancy stage. As such, it should have major problems. It is also important that these problems after being recognized as existing should be discussed in a candid and rational manner. The opportunity to now accomplish this is appreciated by Cook Inlet Aquaculture Association (CIAA).

The agencies and organizations which become involved in this effort are both numerous and very different. They are not of a uniform age or stage of development or involvement in the effort to enhance salmon in Alaska. Some are flexible and adaptive and understand or even welcome change. Some are nearly the opposite. There could be instances where a task position which requires creativity and changeability somehow becomes occupied by a very unimaginative and rigid person. This is an effort which requires people who are movers not maintenance people in most positions.

Whether the area is financial, managerial, economic feasibility, regulatory, or organizational structure the above mentioned problems of mismatched personnel with legislative and user group defined or envisioned needs becomes a major problem. THEREFORE, if the legislature is serious about the fisheries enhancement effort, it must use all of its resources to see that future personnel selections, at the State level such as legislative committee assignments, positions within the Governor's Office, Commissioner of Fish and Game, Board of Fisheries members, and down the levels to Division heads and Regional positions, are made so that the effort is not jeopardized but encouraged and bolstered.

FINANCING

The regional associations cannot be viewed by legislators as growing bureaucracies. They are controlled by volunteer board members interested in the resource not service careers. The funding process must be the least cumbersome and easily understood by anyone. Legislators must view funding as providing money for the most success oriented and success wanting group they have available for reaching the goal of raising more salmon. Fishermen want more salmon. The tax money must flow from processor to regional association in as simple a manner as possible. The only requirement that should be made is a receipt indicating the association has received the funds. The sole purpose of the tax was to guarantee association funding. Any attempt to supervise programs

FINANCING (continued)

or make encumbering activity out of fund transfers will jeopardize the program to some degree. These volunteer association boards are more fragile than State agencies.

The Cook Inlet Aquaculture Board of Director's constituency and their needs are very different from the other regions. The actions of the Board are more vulnerable to reversal if not viewed as credible by a large majority of all user groups in Cook Inlet.

We, therefore, would probably pursue a more studied and cautious approach to project selection and funding than other regionals. Commercial fishermen in Cook Inlet need to put their money where their mouth is. The recent vote indicates that they are willing to do that.

State loans for capital construction of hatcheries should be available on three to five life cycles of the species selected before payments start rather than just the terms now permitted. The present allows for pinks very well; for others with slow brood stock build up it is marginal at best.

For projects in the semi-permanent habitat improvement category such as fish passages, spawning beds, etc., the cost accrued as loans should be forgiven on loan due dates if the project is still operating successfully. Loan funds should be available for these projects under the present terms. The Regional Plan identified projects with probable potential would be recognized as eligible for these loans. The RPT could also determine if the projects are still operating successfully. There are some evaluation problems with this determination but probably not insurmountable.

Lake fertilization projects hold special interest for CIAA because several sites with promise are known and some have already received pre-fertilization study. The 2% assessment funds will never cover total fertilization costs. Surplus fish harvests are not likely. Loans should be made available to regional associations with some type of incremental forgiveness. If projected goals for a project are achieved, total forgiveness should be possible.

The funding for lake fertilization can probably be better utilized if there is a combination of the regional associations and ADF&G in this effort. A program for funding should be developed that encourages cooperative efforts in lake fertilization.

If large efforts, both time and money, are to be made in habitat improvement and lake fertilization, it must be recognized that the 2% assessment will not do what is needed. The 2% assessment implies a 50-1 benefit-cost ratio. Ratios in the 6-1 and less range are considered acceptable. A table is included with these remarks so that the tax rate needed for each benefit-cost ratio is readily observable.

For projects in the habitat protection category, small annual type, another funding program is suggested. These are defined as annual survey costs accrued when the habitat is observed each year to determine where work is needed such as debris removal, beaver dam by-passes, and low water remediation projects as well as the project. Loans on the present terms should be made available for these surveys and the work needed. Grants for Joint ADF&G and Regional projects should be available to repay the loans or pay for the project.

ECONOMIC FEASIBILITY

The method of evaluating the total Fisheries Enhancement Program should not include an assumption that the purpose of evaluation is to determine continuation. The program must be continued. PNP must be given a reasonable chance to prove it can do what is now only a promise.

Public facilities, specifically hatcheries and lake fertilization, can be evaluated on a type of benefit-cost analysis. The enclosed table shows the tax rates needed for these ratios. Let's not kid ourselves. A return on investment for regional and private hatcheries would probably give data that might be better understood by those benefiting and paying. The more a regional association's projects were successful, the more responsibility for enhancement and the financial means to accomplish the tasks would be given.

PLANNING

In Cook Inlet we are progressing on the first draft of the Plan after a tumultuous first year into the effort. This second time around probably allows us to view the benefits this process adds to the efforts to enhance salmon a little more readily. The value of this process to Cook Inlet salmon enhancement effort is large. It allows conceptual examinations by a group small enough to do it. It is an educational process working in the right size group but with many listeners. In Cook Inlet the idea is looked upon as an effective way to get many things done that will have a lasting impact. Financing, as is done now, with ADF&G grants to associations works fine with us. We should continue the planning process now that it has become more comfortable to the two groups. The Plan should include provisions for increased natural production. We call it management opportunities in Cook Inlet. More on this under management concerns.

We are just getting into understanding. The RPT, in the future, will need to look at site selection, brood stock selection, cost recovery mechanisms, and such for projects. It looks as if the RPT and the planning staff is a good group to clarify and articulate problems in these areas.

MANAGEMENT CONCERNS

We are working on including management concerns in the salmon enhancement process in a major and integral role. It is not developed to the stage at which definitive comments can be made on its operation or efficacy. It presently includes topics such as:

1. Development of more advance or alternate systems for escapement monitoring.
2. Refinement of management through receipt of additional data.
3. Additional staffing for research, enforcement, and management to correspond with an expanding data base on all species.
4. Increasing opportunities for participation in cooperative research and enhancement efforts.
5. Greater user group understanding and organization resulting in improvement in harvester/manager working relationships.
6. A broader distribution of salmon sport fishing pressure.
7. Recognition of mixed stock management concerns by user groups.
8. Development of stock separation techniques (e.g. test fishing, scale analysis, mark/recapture)

Resources Committee (House)
March 10, 1981

ORGANIZATIONAL STRUCTURE AND REGULATORY MATTERS

There should be no change in permitting the three entities to continue. A structural change makes little difference unless personnel with different attitudes in the key positions are also changed. The legislative promotion of salmon enhancement is diluted by State agencies just as other legislative promotions have historically been resisted. The leadership role in salmon enhancement has not been accepted by the ADF&G hierarchy. The historic role of protection and enforcement is not easily changed. While it now is called regulatory in Alaska, this posture is still reinforced by daily functions ADF&G personnel are called upon to perform. The legislature cannot coerce anyone into a leadership role. By some of its actions it can encourage it. One was mentioned earlier in the report--personnel replacement, when future positions are open. There is a natural occurrence of distrust initially when organizations such as PNP Regionals and ADF&G interact.

The permitting process within the regulatory power for salmon enumeration (adult and fry or smolt), habitat improvement, and feasibility studies needs to be addressed. Regional associations have as much at stake and are just as knowledgeable about and as careful with the resource as ADF&G. Some means which protects the associations from every or any whim of the permitting agency must be developed. If the purpose of the permitting process is to match methodology so that data can be shared, that is fine--no quarrel with that. If the purpose is to regulate associations for any other reason, it becomes intolerable. The fragile attitude of any volunteer board wanting to do good is often fractured when they beat their heads against an obstinate permitting agency.

I would like to stress again that this opportunity to discuss the problems in a candid and rational manner is greatly appreciated. Let's grow and work together, but let's not forget to grow and work for the sake of togetherness.

Sincerely,

Floyd E. Heimbuch
Floyd E. Heimbuch
Executive Director

FEH:sa
Enclosure

Cook Inlet Aquaculture Assn.

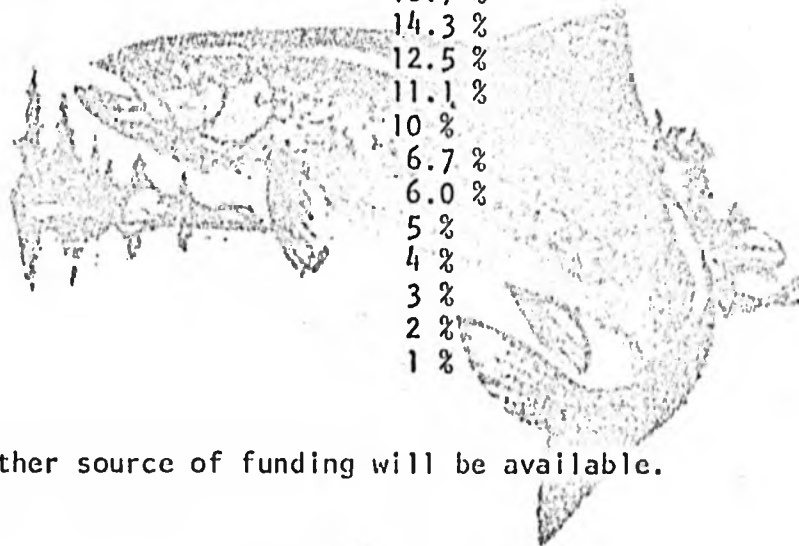
P.O. Box 850 — Soldotna, Alaska 99669

262-4441, Ext. 257/296

PROJECTED BENEFIT/COST
RATIO

TAX ASSESSMENT RATE NECESSARY
TO PAY FOR PROJECT *

1:1 or 1.0	100 %
2:1	50 %
3:1	33 %
4:1	25 %
5:1	20 %
6:1	16.7 %
7:1	14.3 %
8:1	12.5 %
9:1	11.1 %
10:1	10 %
15:1	6.7 %
16.7:1	6.0 %
20:1	5 %
25:1	4 %
33:1	3 %
50:1	2 %
100:1	1 %



* Assumes no other source of funding will be available.

NORTHERN SOUTHEAST REGIONAL
AQUACULTURE ASSOCIATION, INC.

P. O. Box 786, Sitka, Alaska 99835

(907) 747-6580

Rm. 205, Old City Hall Bldg.

March 12, 1981

Alaska State Legislature
House of Representatives
Committee on Resources
Pouch V
State Capitol
Juneau, Alaska 99811

Attn: Terry Gardiner, Co-Chairman

Gentlemen:

Thank you for the opportunity to comment upon the issues outlined in your letter of February 27, 1981, on the role that fisheries enhancement should play in the future development of the salmon fisheries in the state. This letter addresses those issues in the order set out in the memorandum attached to your letter.

1.0 FINANCING

- 1.2 The most equitable and efficient mechanism of financing start up of a fisheries enhancement program

Aquaculture private nonprofit enhancement groups (PNP) programs may fall into a double or triple bind: An area of declining stocks may need extra enhancement effort, but as stocks decline the catch declines and so the income from the tax declines, curtailing even existing enhancement. Inflation cuts even further into these declining dollars. Since aquaculture associations are starting enhancement efforts with severely depressed stocks, often two complete ocean cycles are necessary to reach satisfactory production levels. Thus, the waiting period may be seven to ten years -- not just a temporary setback.

Since common property fisheries are affected, as well as the economy and, thus, the welfare of the citizenry, the state may wish to entertain the

possibility of depressed-fishery grants for enhancement over a limited period of seven to ten years. A formula for predicting assessment amounts is a vital concern.

1.2 Best source of revenue for financing planning efforts.

Ultimately, these costs should be shared by the participants. Realistically, PNP's should begin funding increasing amounts as production successes allow.

2.0 ECONOMIC FEASIBILITY

A standardized approach should be used, although it may have a choice of formulas. NSRAA has been giving some thought to this area and may offer testimony at the hearings.

3.0 PLANNING

The Southeast Alaska planning effort through the RPT has been very valuable to NSPAA. The commonly agreed upon goals and supporting data has enabled the Association to place its effort where it will bring about the greatest benefit. Duplication has been almost eliminated and cooperation brought to a fruitful level. Internal planning depends on the Phase I documents already produced by the RPT. Exchange of ideas and concerns is very beneficial.

Perhaps even more valuable, however, has been the review process of the team, which has resulted in better projects not only for the Association but also for others operating or starting enhancement activities in northern Southeast Alaska. This screening will mean safer, more productive projects -- a greater likelihood of adult returns benefiting all users. This alone would justify the relatively modest costs of the RPT in our opinion.

Phase I set goals and objectives for the region and surveys what we have to work with to reach them. It does not detail how they will be attained. It is not intended to stand by itself as a strategic plan for determining site selection, or even for guidelines as to what technologies should be applied to what areas. Consequently, Phase I cannot serve effectively to coordinate and direct salmon restoration activities in the region.

It is projected that Phase II will do these things. RPT is inventorying enhancement opportunities. It will look both at what can be done and what it is strategically desirable to do, and combine these elements in minimizing conflicts and false starts by all agencies and PNP's and coordinating activities for attaining common goals. Savings could be in the millions of dollars.

To successfully achieve such a plan requires commitment from all participants at all levels. For a plan to be meaningful, all participants must agree to leave the realm of generalities and to be as specific as possible, both in terms of policies and projects. The RPT will not be able to recommend sites in any definitive fashion, because, in most cases, they will not know enough about technical feasibility of individual sites. But they can clearly formulate what is strategically desirable.

The mechanism of funding regional planning through contracts with the regional associations has been effective. This year it is likely to be increasingly effective now that good working relationships have been established among RPT members and ADF&G and NSRAA staffs. Encouragement is given to assignment of an ADF&G staff member whose primary commitment is to planning. ADF&G has a major role in the planning process in supplying both information and policy input, and a few staff members have put a great deal of time into planning, but they must place it after their other duties. Consequently, it is difficult to get things done in the shortest possible length of time.

Even with effective staffing, it is important to recognize that planning is a lengthy process and is never wholly complete. Extensive additional data must be gathered before recommendations can be made in Phase II. Even then the data will be incomplete. If we wait for perfect data, we will never have a plan. On the other hand, as new information comes in, it should not be ignored. After a draft plan is published, the period for agency and public review should not be considered a formality, but rather an integral part of the continual planning process, to be used in extensive revisions, if necessary. Even after a final plan is published, continual updating and revision is desirable. And, of course,

the RPT should continue with review of proposed projects to determine whether they are compatible with the plan, thus ensuring the plan's effectiveness.

4.0 MANAGEMENT CONCERNS

A good tagging program is vital to the success not only of an individual project but also to proper management of the fisheries and protection of wild stocks. State support should be provided to ADF&G tag recovery programs to provide adequate manpower and equipment. Tag initiation should be done cooperatively, with joint funding so that the most meaningful data will result. Data should be in a form which can be readily utilized by all concerned with minimum delay.

5.0 ORGANIZATIONAL STRUCTURE

As a nonprofit aquaculture association, we feel confident in our ability to choose suitable enhancement techniques and develop these into efficient production-oriented programs. However, during both development and operational phases, we periodically rely on specialized expertise outside the Association to help solve specific problems. FRED has provided assistance with specialized biological questions. The FRED limnology and pathology labs have processed our samples, eliminating the expense of sending these samples to a private laboratory. Individuals associated with these FRED laboratories, specifically Dr. Jeff Koenings and Dr. Roger Grischkowsky, have been very helpful in our development of programs and facilities. We plan to consult with a statistician concerning our tagging program and look forward to working with the FRED statistician on this matter. Having this pool of technical expertise available to all groups working in aquaculture is helpful in ensuring attainment of high biological standards and provides for uniformity among programs.

Our Association benefits from the aquaculture research being conducted at the National Marine Fisheries Service facility at Little Port Walter. We would urge continued support from the legislature for the cooperative State/federal research being conducted there. We feel that this facility is without equal in Alaska and plays a vital role in answering questions that directly affect our choice of enhancement programs and their success.

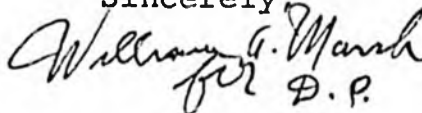
Committee on Resources
March 12, 1981
Page Five

6.0 REGULATORY MATTERS

NSRAA believes that regulations are necessary to establish standards and limits. Application of regulation is subject to interpretation if wording is vague. Prospective regulation needs to be published far in advance of adoption -- current time frames are satisfactory before the regulations are presented to the Board of Fisheries for adoption.

As future enhancement projects come on line and/or additional regulations are adopted, the regulatory laboratory and inspection personal and equipment will probably need to be increased. Timing is critical in matters of release and transportation -- a matter of days in delay in approvals will bring complete disaster to a run of fish with many years of preparation, hundreds of thousands of dollars in investment, and million of dollars in returning runs.

Sincerely

Handwritten signature of William G. Marsh for D.P.

Derek Poon
General Manager

DP/bl

**SOUTHERN SOUTHEAST REGIONAL
AQUACULTURE ASSOCIATION, INC.**

P.O. Box 6916

(907)225-9605

Ketchikan, Alaska 99901

Terry Gardiner, Co-Chairman
House Resources Committee
Pouch V.
Juneau, Alaska 99811

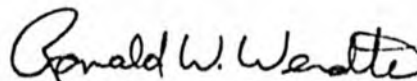
March 18, 1981

Dear Representative Gardiner:

Attached is a written copy of the testimony I intend to address to the House Resources Committee during their Aquaculture and Fisheries Enhancement overview on March 23-25.

I appreciate the amount of time the Committee has committed to these issues. I and my staff stand ready to assist the Committee in following through with the results of these discussions.

Sincerely,



Ronald W. Wendte
Executive Director

Enclosure

PRIVATE NON PROFIT HATCHERIES

Southern Southeast Regional Aquaculture Association (SSRAA) was established in April 1976 under AS 16.10.400-470, Article 8. Salmon Hatcheries, 1974. The formation of SSRAA represented coordination of efforts by seiner, gillnetter, and troller associations in Ketchikan. The region encompasses all of ADF&G fishing districts one through eight which is essentially an area from Petersburg and Wrangell south to Canada.

In 1977, fishermen in Southern Southeast voted in favor of establishing a mandatory assessment of 3% of gross value on their catch. In March 1978, a suit was filed against SSRAA claiming that the royalty assessment was unconstitutional. The Superior Court ruled the mandatory assessment unconstitutional in July 1979 and that decision is under appeal to the Alaska Supreme Court both by SSRAA and the State of Alaska with a ruling expected in the next few months. In December 1980, fishermen voted in favor of establishing a salmon enhancement tax in the region and that tax takes effect on April 1, 1981.

In July 1979, SSRAA completed its first major facility with the opening of its Whitman Lake Hatchery near Ketchikan. This facility has a capacity to incubate and rear up to a range of 25 to 30 million fry with smolt released at three different locations in the region. It utilizes chum, coho, and chinook salmon stocks. After one year of operation, this facility is near its capacity and will have its first returns this fall with the return of coho to Neets Bay and to the hatchery. The hatchery has been constructed with loans from the Department of Commerce totaling \$3,110,000.00. Operations loans from Commerce have totaled \$1,036,500.00 through FY 1981.

In 1979, SSRAA initiated with the FRED Division an aggressive lake fertilization program and began the first application of fertilizer in June 1980. This program has been funded by state grants in the amount of \$50,000 in FY 1980 and \$200,000 in FY 1981 in addition to appropriations for the activities of the FRED Division.

GENERAL COMMENTS

Financing

The structures of the enhancement agencies have an overriding effect on the financial options available to them.

The private non-profit associations, as pointed out in the Miller report, are restricted in attracting private investment due to the lack of any return or profit inherent in the risk capital market. The probability of private loans for the private non-profit association appears to be minimal because (1) the terms that would allow for the development of brood stock are not available and/or (2) the rates of interest necessary to compensate the lenders risk would undoubtedly make the feasibility of the project marginal at best. Therefore, the reliance of the PNP program for a continued role with the state exists.

SSRAA remains committed to the proposition that the PNP facilities be developed so as to pay their own way. Thus, we continue to support the practice of making general fund appropriations into the Fisheries Enhancement Revolving Loan Fund from which loans are received and to which debt service is rendered. We remain opposed to state grants to develop facilities which could generate a return to retire any capital construction costs. An independent financial analysis of our Whitman Lake facility verifies the potential for this system to work quite well.

The fishermen of Southeast Alaska have consistently favored a mandatory contribution to be invested in their fishery. They have formally expressed that position four times over the past four years. They remind the legislature, however, of the very strong moral commitment by the legislature to reinvest their funds into enhancement through the private non-profit organizations. Keep in mind that during this and last session of the legislature when the dominant topic throughout Alaska was the elimination of taxes of all kinds, the fishermen were asking for a tax to invest in their future.

The statutory and regulatory mechanism for private non-profit hatchery operators to harvest hatchery returns to cover operating costs and debt service are in place. It is SSRAA's intent to manage this harvest through the use of all permit holders interested in contracting for harvests in the designated special harvest areas.

SSRAA feels strongly that the enhancement loans are sufficiently secured by the sale of hatchery returns. The enhancement tax receipts are designed for seed money in developing new facilities, for regional and corporate expenses, and support activities.

Just as the private non-profit associations are restricted by the nature of their organizational structure, so to is the state through the Fisheries Rehabilitation Enhancement and Development Division (FRED). Facilities for FRED are limited to either General Obligation Bonds or general fund appropriations. This applies for construction costs and operational costs will continue to draw from the general fund. The fishing community is unalterably opposed to any proposal for the state to harvest state hatchery returns for direct sale to cover the costs of FRED Division facilities. Likewise, the fishing community is unanimously opposed to additional state taxes for purposes of funding the state run facilities. At this time, SSRAA supports the appropriation of general funds in amounts sufficient to develop the FRED Division facilities as they should be developed.

Revenue Potential Projects Versus Non Revenue Projects

The previous discussion is directed primarily at hatchery facilities which through the nature of the program lend themselves to a scheme of generating revenue through the return of hatchery stocks to support the project. These facilities fit into a more standard loan arrangement. However, many other non-revenue generating projects

are important to the enhancement of Alaska's common property fisheries. For example, lake fertilization which is essentially the enhancement of natural stocks by developing the nutrient levels in their lake environment does not provide any scheme to generate revenue back to the project. Still the potential of this project justifies the investment of state grant funds on an ongoing basis with the private non-profit association providing those services to the state. Similarly, the regional planning process discussed later in this testimony is of significant importance to the state and justifies state grant funds channeled through appropriate means to the regional associations on an annual basis.

Private Profit Corporations

While I earlier discussed the limitations on the private non-profit association, I implied the intricate balance between the private non-profit association and its relationship to the common property fisheries. SSRAA and the almost unanimous opinion of fishermen is in total opposition to the development of private profit hatchery operations in Alaska. With the development of profit hatcheries, the responsibility and importance of the common property fishery is desintegrated. It would appear no statutory provision would authorize or prohibit profit hatcheries at this time. I would propose that the committee consider a provision specifically prohibiting private profit hatchery programs in Alaska.

Economic Feasibility and Evaluation

In terms of the resource, the bottom line is a determination of how many adult, harvestable salmon return as a result of the investment in a particular hatchery. From an investors point of view an analysis based on the adult returns to a private non-profit hatchery facility and a state FRED facility are no different except for who is making the investment. From the point of view of the fishermen investing a portion of his fishing earnings into a PNP facility a return on investment based on the model addressed in the Miller report is very useful and determinative. SSRAA has just received an analysis based on that model done by Mr. Miller which indicates that fishermen can expect an annual return of 60% for every dollar invested in the Whiteman Lake facility. A similar return on investment could be done on FRED facilities if the costs associated with each facility could be isolated. With the tax structure in Alaska set as it is and with the lack of a good data on the flow of fisheries dollars through the Alaska economy a thorough cost benefit analysis is difficult and not particularly useful due to its lack of objectivity.

Planning

SSRAA considers the regional planning aspects of the private non-profit program to be one of the most important portions of the program. With the Northern Southeast region we have completed phase I of the comprehensive plan which addresses the general status of Southeast stocks and sets strategic options on a long range basis to obtain the goals and objectives established in the plan. SSRAA is now in the middle of work on phase II which is an area by area and even stream

by stream assessment of the region. Specific strategies that can be applied in each area will be determined. The planning document as determined by Southern Southeast will be very aggressive in setting the course for enhancement in the region. It is fair to say, I believe, that the extent of this work would not have been accomplished without the impetus of the private non-profit associations.

The relationship between the ADF&G and the PNP's is truly a reciprocal one. The fishermen and users are afforded for the first time the opportunity to plan for their future and the ADF&G can benefit from the expertise and interest of the users in developing their programs. The state as a whole benefits from the coordination of the various aspects of the enhancement and management program.

The role of the regional planning team generally has been left to evolve on its own. The existing statute is very vague at best on the ongoing relationship between the RPT and the ADF&G and the PNP's. AS 16.10.375 provides for the establishment of Regional Planning Teams as advisory bodies and established their role in the preparation of the plan. AS 16.10.400 assigns the RPT the role of reviewing PNP applications. The questions develop beyond these specific tasks as to the role of the RPT in monitoring and recommending the development of enhancement and management efforts to attain the goals and objectives set out in the comprehensive plan.

SSRAA sees the benefit to the state's fisheries program in establishing the Regional Planning Team with authority to review and advise the Commissioner of Fish and Game on all aspects addressed in the comprehensive plan including each of the strategy options, harvest management, habitat protection, and enhancement and rehabilitation. This role as we see it includes the state programs as well as the private non-profit programs. This should be addressed within the statutes to clarify the intent of the legislature in establishing the regional planning teams.

I would also appraise the committee of recent developments on the federal level specifically dealing with Southeast Alaska. Congress last year recognized the active role of the regional aquaculture associations, and mandated through congressional action that the Forest Service coordinate all its fisheries related activities in the Tongass National Forest with the appropriate regional aquaculture association.

Management Concerns

Any thorough evaluation of a fisheries enhancement project is reliant on a verifiable assessment of its adult returns including the contribution to the common property fishery as well as the actual return to the hatchery special harvest area. The return on investment or cost benefit analysis is useless without this data. The evaluation of the effectiveness of the program is impossible without this data. SSRAA is sincerely committed to evaluating its projects. The fishermen demand it and prudent management needs it.

S.S.R.A.A.

A hatchery operator can at considerable expense provide for the marking of its fry. This activity must be thoroughly coordinated with the efforts of all agencies conducting mark and tagging efforts. It is clearly the role and responsibility of the state to coordinate this activity and provide for the recovery and evaluation of mark and tag data. No one hatchery or project can assume this role.

However, the complexity of the roles and responsibility dictate that the program be a very well and closely coordinated program. Hatchery operators and commercial fish managers as well as sport fish managers all have different needs and time frames in which to work and therefore the design of the program must be flexible. We have strongly addressed the needs for a well coordinated program to the Commissioner of ADF&G. We understand that a program proposal is in draft form although we have not had access to it. We hope that, as the Commissioner expressed the need, it will not be a splintered program that conforms to the intradepartmental politics of ADF&G. SSRAA supports complete legislative funding of these efforts.

Organizational Structure

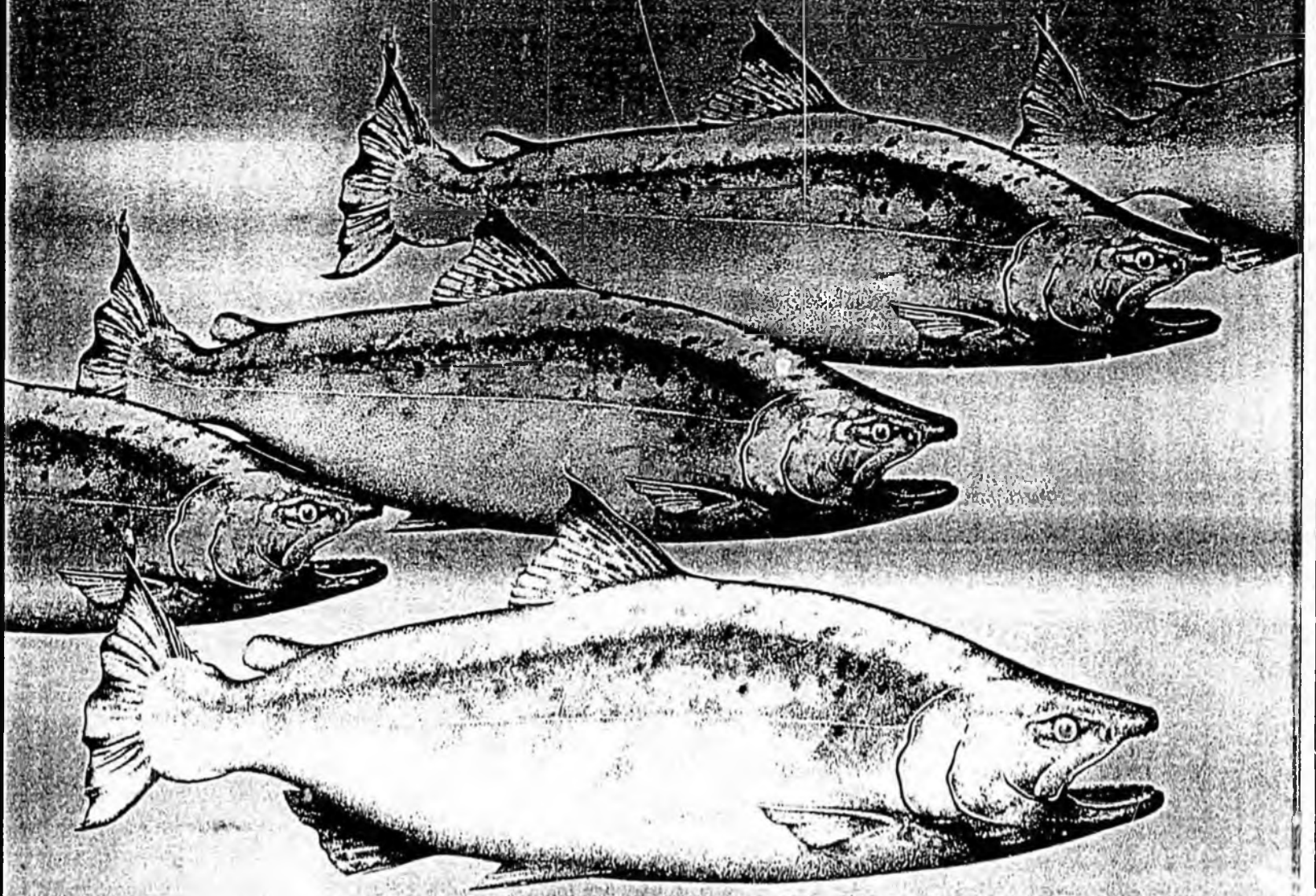
The State of Alaska has benefited by the three level effort in its enhancement activities. In their development phase, each of the three entities have benefited from the existence of the others. The flexibility and indeed the imaginative efforts have had a lasting effect on the future of aquaculture in Alaska. I feel that in the long run that the roles of the various entities will delineate along specific goals and objectives. Generally, I see the role of the private non-profit associations dominating the production aspects of the enhancement program and the state agencies focusing on their research and development activities. As some point in the not too distant future, it would appear that it will be in the State's interest to phase into the turnover of the operation of FRED production facilities to developed private non-profit corporations on a contractual basis and on a facility specific basis. In these areas and specifically in the revenue potential projects addressed earlier in my testimony the role of private enterprise best suits the State's interest.

Specific Recommendations to the Committee

1. Legislature maintain the fisheries enhancement Revolving Loan Fund for the construction and operation of private non-profit hatcheries.
2. Legislative fund to the appropriate level the Fisheries Enhancement Revolving Loan Fund to accommodate existing projects and anticipated new projects.
3. Legislature alter section 16.10.520 Limitations on Loans to provide for loans not to exceed \$10,000,000.00 for a hatchery constructed under a permit to a qualified regional corporation.
4. Legislature establish the proper precedent in appropriating 100% of the receipts from the salmon enhancement tax back to the

appropriate regional association.

5. Legislature clarify the advisory role of the regional planning teams to include both state and private non-profit projects and programs and include all three of the strategy options addressed in the Southeast Comprehensive Salmon Plan.
6. Legislature specifically prohibit the development of private profit hatcheries in Alaska.
7. Legislature fund the Alaska Department of Fish and Game for a comprehensive well coordinated tag and mark recovery and evaluation program.
8. Legislature establish guidelines for contracting the operation of FRED hatchery facilities to private non-profit associations.



SSRAA

1980 Annual Report

Southern Southeast Regional Aquaculture Association



Jim Bray



Lee Burger



Art Demmert



Fred Doberlinsky



John Emde



Pat Gardner



Frank Jaynes



Otto Johansen



Rick Lauber



Ed Linkous



Robert Rooney



Pat Roppel



Lyle Simpson



George Smith



Carl Thynnes



Pat Williams

Dear Fishermen:

This annual report is submitted to all Southeast Alaska commercial fishermen and to the public at large to document the activities and finances of Southern Southeast Regional Aquaculture Association, Inc. (SSRAA). To accommodate a change in the fiscal year for SSRAA operations, this report provides a detailed account of your corporation's progress during the 18-month period from January 1, 1979, through June 30, 1980. In succeeding years a similar report will be published for each 12-month period ending June 30. It is the policy of the Board of Directors to continue to provide its supporters with this regular accounting of its progress.

The period covered by this report marked the end of the developmental or start-up phase of SSRAA growth. Since the founding of SSRAA in April 1976, preparations have been made to develop a competent, experienced management and technical staff, a sound financial footing, an informed board of directors and realistic plans for the future. This has provided the foundation for SSRAA's present and future activities.

During this period the corporation entered its operational phase. It saw the initiation of an aggressive and productive range

of programs to enhance all Southern Southeast salmon fisheries using the most effective enhancement and rehabilitation techniques available. This period saw the completion of a major hatchery at Whitman Lake which the Alaska Department of Fish and Game has labeled "a model of cleanliness and design." Our operations plan includes enhancement for coho, fall and summer runs of chum, and the first private chinook program in the State of Alaska.

With its initiation of a comprehensive lake fertilization program, SSRAA has proven to be a moving force behind the development of natural enhancement programs in the state. The effort has progressed into a joint program with ADF&G's Fisheries, Rehabilitation, Enhancement and Development division. Application of the fertilizer, which began in June 1980, is primarily targeted to benefit sockeye salmon, but stream and estuary fertilization also may have profound impacts on other salmon species. SSRAA and ADF&G have formed a good working relationship with this program.

Working hand-in-hand with NSRAA (Northern Southeast Regional Aquaculture Association) and ADF&G, the combin-

Directors



Roger Ingman

Jake Jacobsen

Not pictured:
Brian Wartman
Bill Gilbert
Jim Jones

Officers

Roger Ingman, president
Jake Jacobsen, vice-president
Lee Burger, treasurer
Pat Roppel, secretary

ed Regional Planning Teams completed Phase I of a Comprehensive Salmon Plan for Southeast Alaska. For the first time in Alaska, this activity has provided direct participation from commercial fishermen and other fisheries resource users in planning for the future.

SSRAA's key organizational strengths come from its flexibility, non-profit status and the broad representation of its Board of Directors. Through the board, all fishermen have a voice. We have made extensive efforts to keep you abreast of our activities.

The corporation's overall goal remains "to put more fish in the water and to place them where the fishermen will catch them without significantly harming natural stocks." We are striving to smooth out the ups and downs of the fishery cycles that have characterized our Southeast harvests. However, we fully realize that the enhancement of our fisheries is a long-term commitment and no great results are going to appear overnight. Nevertheless, with your continuing support we are beginning to see the vast potential to control our own future. We look optimistically to the future.

Respectfully submitted,

**Roger Ingman, President
Board of Directors**



SSRAA directors conduct full board meetings each month.



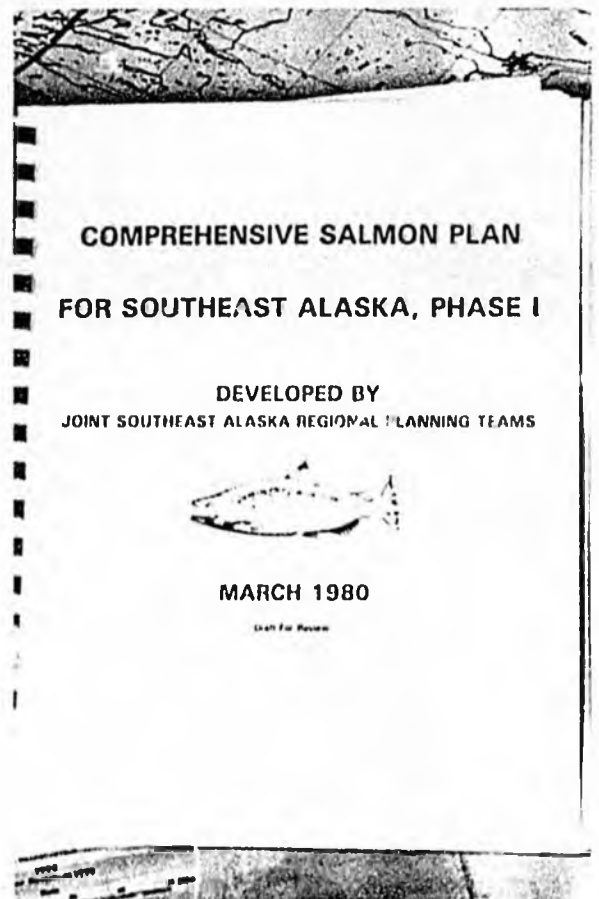
Roger Ingman, President of the Board.



Whitman Lake Central Incubation Facility (CIF) was dedicated Aug. 17, 1979.

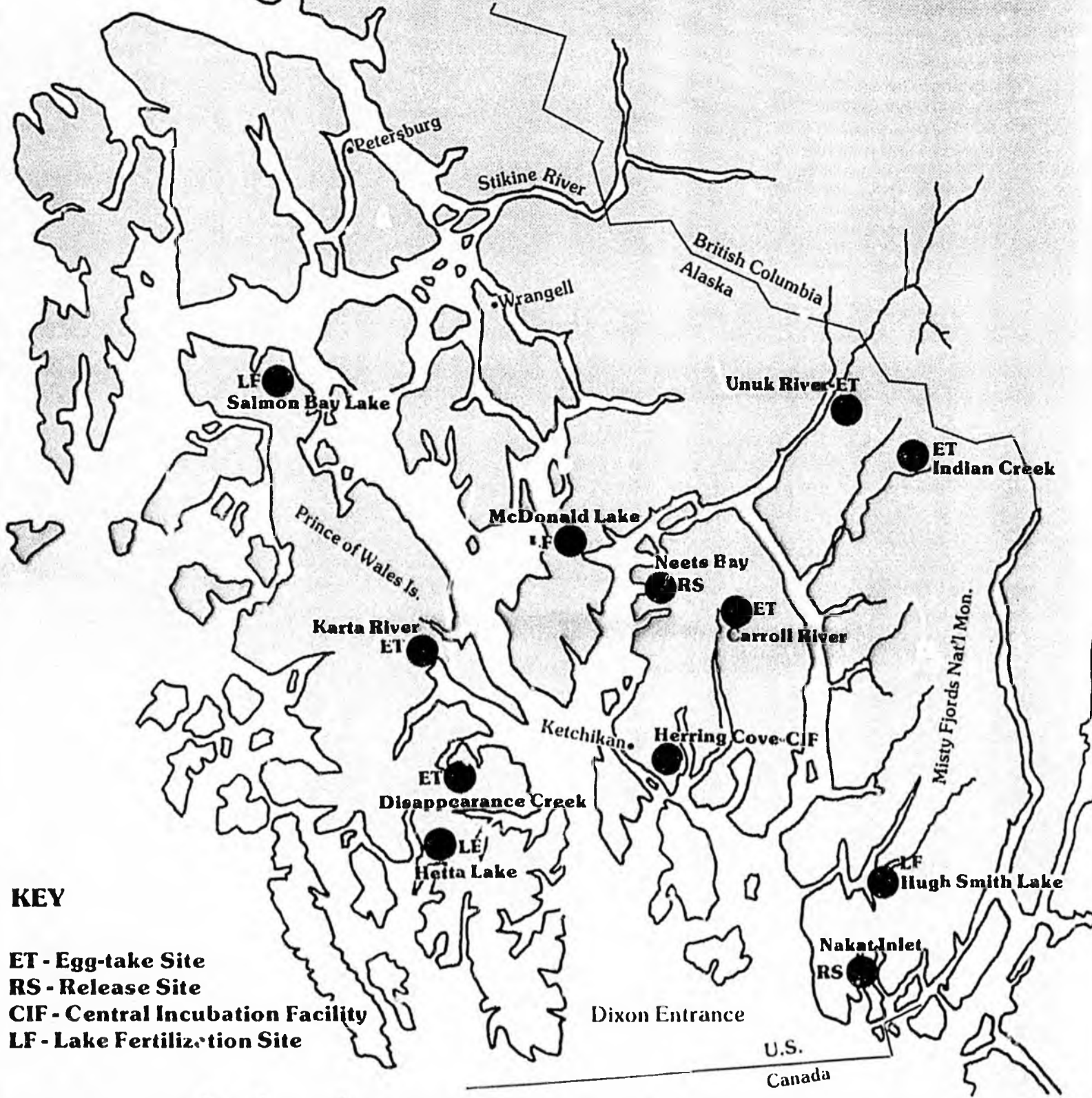


SSRAA launches lake fertilization studies in April 1979.



Phase I, Comprehensive Salmon Plan was completed Spring 1980.

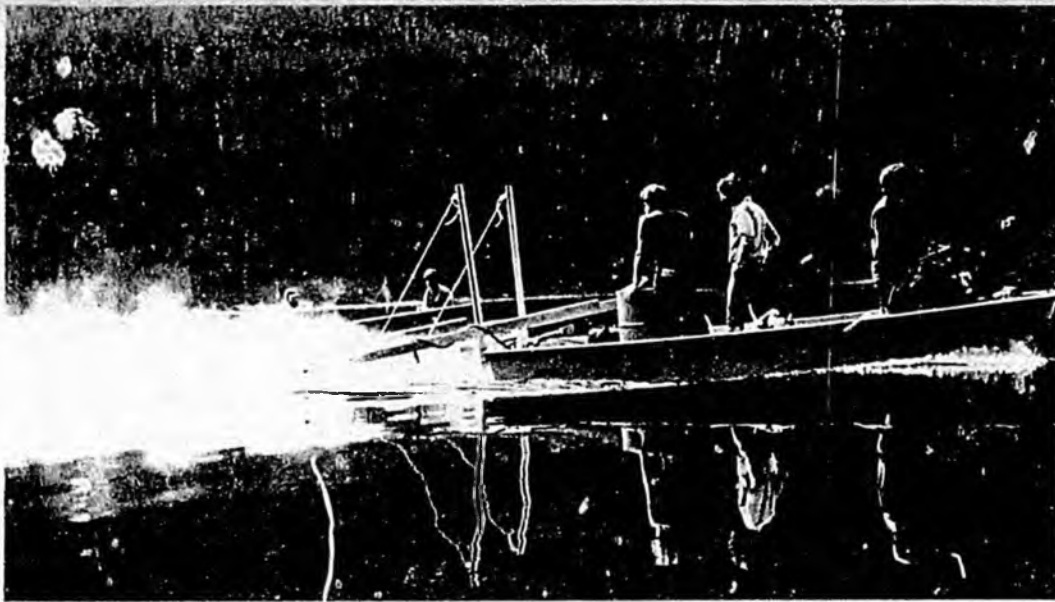
SOUTHERN SOUTHEAST ALASKA



KEY

- ET - Egg-take Site
- RS - Release Site
- CIF - Central Incubation Facility
- LF - Lake Fertilization Site

AREA MAP



First application of fertilizer was June 30, 1980.



SSRAA launches lake fertilization studies in April 1979.



Barrels of fertilizer await use at Hugh Smith Lake.

Lake Fertilization

In an effort to increase the size of sockeye salmon runs in Southern Southeast Alaska, a cooperative lake fertilization program was initiated by SSRAA and launched by both SSRAA and the Fisheries Rehabilitation, Enhancement and Development (FRED) Division of the Alaska Department of Fish and Game. After selection of candidate lakes—based upon historic runs and consideration of biological, physical, management and socio-economic factors—four lakes were chosen for surveys during 1979. Two lakes, Hetta and Hugh Smith, became "Pre-Fertilization" study sites, while McDonald and Salmon Bay lakes became feasibility study sites.

SSRAA initiated the lake fertilization studies in April 1979, and the joint SSRAA-FRED project commenced in July 1979. SSRAA is responsible for compiling limnological data (lake nutrient levels, water depth, water temperature) as well as applying the fertilizer and conducting follow-up investigations. FRED crews count, tag and sample in- and out-migrating sockeye salmon, as well as enumerate other fish species in the lakes.

During 1980, lake fertilization began at Hugh Smith Lake, located in Boca de Quadra, and studies continued at McDonald and Salmon Bay lakes. Hetta Lake, on southern Prince of Wales Island, has been removed from present consideration as a lake fertilization site.

Historically, sockeye salmon were the most valuable salmon species harvested in Southeast Alaska. However, because of increased harvests and a subsequent decline in the productivity of nursery lakes, sockeye abundance is presently low. Decaying adult sockeye carcasses associated with higher salmon runs once greatly contributed nutrients that provide food for microscopic plants and animals. These tiny plankton, in turn, provide food for young sockeye salmon.

In theory, lake fertilization supplements a lake's level of nitrogen and phosphorous. This stimulates the food chain and increases the amount of food organisms for all lake fish species, including juvenile sockeye salmon. The greater food supply increases the growth of young sockeye and results in larger and younger smolts leaving the lake, which in turn increases the ocean survival and number of returning adult salmon. Detailed and lengthy studies of all fertilized lakes will ensure that lakes remain healthy throughout fertilization and post-fertilization phases.

Hatchery

In August 1979, with the completion of SSRAA's hatchery at Herring Cove, six miles south of Ketchikan, our crews began work in a fully-modern facility which has an egg incubation capacity of over 29 million eggs.

With valves tested and water flushed through the entire system by August 10, 1979, the hatchery received its first fish—about 600,000 coho fry. Shortly thereafter, SSRAA held an open house and dedication for the new hatchery with fishermen and residents attending.

Technically, the SSRAA facility is called a Central Incubation Facility (CIF), using a concept that utilizes eggs from a remote donor stock, then transfers those eggs to the hatchery where they are incubated and fry reared. Fish are released in strategic areas so that returning adult salmon pass through traditional harvest areas.

During 1979, SSRAA incubated three stocks of salmon at the CIF. A total of 6,893,000 eggs from summer chum, fall chum and coho stocks were processed through the new hatchery. Also, crews removed 150,000 pink salmon eggs from Ketchikan Creek, fertilized them at a temporary hatchery, during August 1979 when low water level threatened the run. Eyed eggs were returned to the stream.

At the SSRAA CIF 2,600 Heath incubating trays are housed in a 40-foot by 120-foot building. Water from Whitman Lake flows to the hatchery via two pipelines, each 2,270 feet long. Intake from the lake can be regulated so that warmer or cooler water can be used when either the lake's thermal conditions or hatchery requirements change. At full capacity, the twin pipeline has a capacity of 42 cubic feet per second, or 18,500 gallons per minute. In addition to the incubating trays, there are 20 intermediate raceways, six large raceways and two Fiberglas rearing ponds.

A CIF alters the conventional approach to hatcheries, as most hatcheries are built on streams from which broodstock is taken. Hatchery fish return to the hatchery to spawn. With SSRAA's CIF, some fish are released at the CIF while most are released at remote sites. A primary advantage of the CIF is that it can create new runs in areas where there is little or no salmon activity. It can also build broodstock faster and before money is spent to construct and operate facilities at unproven remote areas. While costing more initially—because of the expenses of remote camps and transportation costs—the CIF, in the long run, will prove cheaper than constructing a conventional hatchery at each terminal release site and then waiting years for broodstock to build to production levels.

Remote Egg Takes Fry, Smolt Releases

With the successful release of 3.2 million coho smolt and chum fry this spring, SSRAA crews are proving that their mode of operation works. Set-up time for egg-take camps is decreasing with each remote camp. Getting crews and materials to some of the camps by small boat has helped cut down costly floatplane charter expenses. In 1979, three camps (Indian Creek, Carroll River and Disappearance Creek) provided broodstock for the newly completed Central Incubation Facility (CIF).

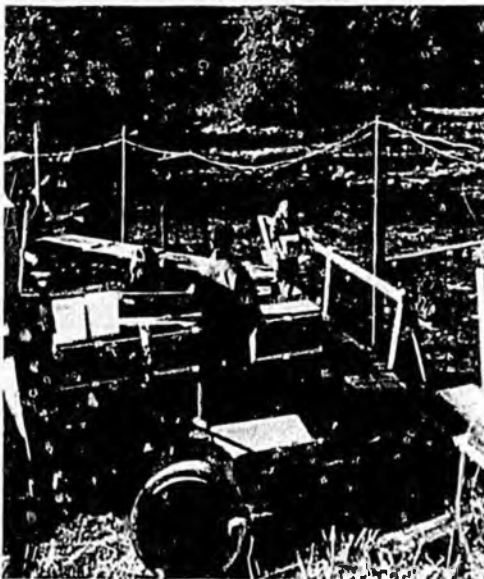
This year SSRAA established two remote release sites, one in Nakat Inlet and one at Neets Bay. Three million fry and smolt traveled from CIF to release sites in oxygen-fed, Fiberglas tanks placed aboard a barge. Fry then were fed in saltwater net pens for up to five weeks. Fry releases were timed to coincide with plankton and estuarine conditions.

This year SSRAA released 1,342,000 summer chum fry into Nakat Inlet (May 7, 1980), 1,330,000 fall chum into Neets Bay (June 14, 1980), 278,000 coho into Neets Bay (May 21, 1980), and 271,000 from the CIF (a majority of which were released May 28, 1980).

Although remote egg-take sites are considered short-term—being used for only three to four seasons—all camp materials must be removed after the annual operations. After the adult fish return to release sites in sufficient numbers to generate broodstock for the hatchery program, there is no need to remove more eggs from the natural streams.



Ketchikan news personnel visit a release site.



Crews handle eggs at Disappearance Creek.



Floatplanes fly eggs in ice chests from egg-take sites to Herring Cove.

Field crews range from 2-10 persons depending on the number of tasks to be performed. During egg-takes, when large numbers of fish are handled, crews are larger than at times, such as at remote release sites, when the only chore is to hand feed fry prior to their release.

1980 Operations

During the third year of egg takes, SSRAA crews will attempt to fill the hatchery to capacity—about 29 million eggs. SSRAA is looking at Carroll River for summer chum eggs, to Karta River or Disappearance Creek for fall chum eggs and to Indian Creek for coho eggs.

SSRAA plans to gather about 200,000 chinook salmon eggs from the Unuk River system. This research program will evaluate the production of these salmon released after one and after two winters of rearing. All released fish will be tagged.

SSRAA is investigating a pink-salmon research project, which could lead to a large-scale enhancement program for this species. Eggs would be removed from a donor stream, fertilized and incubated at the hatchery, then replanted in a suitable stream.

Other SSRAA projects include the continuation of lake fertilization of Hugh Smith Lake and feasibility studies at several other lakes. Two lakes may be fertilized in 1981. Phase II of the Comprehensive Plan is underway; the plan will identify short-term goals for salmon production in Southern Southeast Alaska.