

ALASKA LEGISLATURE SPECIAL COMMITTEE / SUBJECT FILE 8672
1819 SCOMM 74: SEN. SPEC. COMM. ON DOMESTIC & INTL. FISH., 1991-92.

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Possible harm, contd.

(from page 7)

Kodiak.

Some biologists are now speculating that the gigantic releases of pink salmon fry in Prince William Sound are getting first crack at the food supply and leaving too little for the fish from regions downstream where runs have suffered the last two years.

According to Nick Dudiak, an enhancement biologist with ADF&G, PWS fry are released several weeks prior to the natural emergence of wild stocks and release of hatchery fry downstream where the climate is colder. Those regions, say Dudiak, rely on the Gulf coastal current plankton production to supplement local plankton production.

"With that in mind," said Dudiak, "there definitely has to be less plankton available because of the intensive feeding going on by increased numbers of pink salmon fry being released from PWS prior to the current reaching other areas."

Indeed, last year's runs in Cook Inlet and Kodiak were fractions of their predicted strength. They had to compete with a near doubling of PWS hatchery production in

"How much [hatchery production] is too much? That's a question a lot of people are asking. And it's not being asked just in terms of the carrying capacity of the ocean. How much is too much in terms of the economics of the fishery? And how much is too much in terms of what we can manage?"

—Hal Geiger

1989.

The Cook Inlet return to the Tutka Bay hatchery which forecast a harvest of 830,000 fish, is being called a "bust" for the second year in a row. This year the return was so meager, they barely recovered their brood stock and almost no cost recovery or commercial fishing occurred on that run. The wild stock may be in as bad shape. With a projected harvest of 2.3 million pinks, only

425,000 had been landed by August 5. Last year only about one-third of the projected return made it home by season's end.

And for the second year in a row, pinks are smaller. Pinks landed in Kodiak, where the normal average weight has been 3.6 pounds, now average 2.8 pounds, with some weighing as low as 1.9 pounds. Chums are even skinnier. The statewide average weight is down from nine to six pounds. In Cook

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Inlet, only 8,500 chums had been landed from a projected harvest of 167,000. Minimum escapement levels have not been met in a single stream.

The picture is not so dismal further downstream in Kodiak. Still, it is not a pretty picture. Last year only half the projected pink run returned. This year's weak showings have already caused fish and game biologists to reduce their preseason forecast from 20 to 14 million.

And of the 700,000 chums predicted, only 570,000 were landed last year. With 350,000 in the hopper so far this year, the run will probably fall short of the 800,000 projection.

While these numbers are conspicuous, most biologists say they are little more than circumstantial. Prince William Sound Aquaculture Association director Heather McCarty calls any correlation between declining runs and hatchery production "ridiculous."

"Wild stocks are traditionally very cyclical with many peaks and valleys having occurred in the past century — long before hatchery production was introduced. So it's ridiculous to insinuate that hatchery production has caused the recent ups and down of salmon runs statewide," McCarty said.

Nevertheless, PSWAC seconds the call for beefed-up investigation of the interrelationship of hatchery and wild stocks. Already, the aquaculture association shells out \$170,000 annually in a labor-intensive tagging study that helps evaluate early marine survival and growth rates as well as the intermingling of stocks when harvested.

"We agree there should be more investigation, but with an open mind. We don't want to start out with an hypothesis that hatchery stocks are taking all the food away from the poor wild stocks. That's not very scientific," McCarty said.

Existing collection of data is complicated by declining water temperatures that historically have corresponded with weakened run cycles. And to confound things further, these declines in weight and mortality coincide with the EXXON VALDEZ oil spill. Fish returning this year are the young produced by fish who swam through oil infested waters in 1989. Unfortunately, oil spill litigation has delayed the release of research data that might help answer these troubling questions.

Certainly no one is prepared to point an accusatory finger at Prince William Sound or other regional aquaculture production or enhancement projects statewide. But people are beginning to ask, how much is too much?

(See: *Hatchery harm*, page 21)

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Hatchery harm, contd.

(from page 8)

Where to draw the line

According to ADF&G biometrician Hal Geiger, who penned a paper on management problems incurred by hatchery returns, increased production has also caused



gear conflicts to flare. These conflicts, said Geiger, are often solved, not by divvying up current production, but by increasing hatchery production.

"How much [hatchery production] is too much? That's a question a lot of people are asking. And it's not being asked just in terms of the carrying capacity of the ocean. How much is too much in terms of the economics of the fishery? And how much is too much in terms of what we can manage?" Geiger said.

The Alaska Board of Fisheries has been given no guidance in how to settle enhanced-run gear conflicts or solve mixed wild and hatchery harvest problems. For the most part, the Board has exercised a hands-off policy and left the refereeing to aquaculture associations. That may no longer be possible, however.

"We're betting quite a bit of money we're not doing any damage," said Geiger, "so we have to get some answers...we need a management policy," he said.

It's hoped that is what will emerge from the Senate investigation headed by Senator Dick Eliason.

According to Molly McCannon, aide to the Senate Committee on Fisheries, legislators will be taking a comprehensive look at the whole array of enhancement policy, management, and costs.

"We don't have a hidden agenda. We don't know where this will take us...but looking at this issue now is more timely than ever," she said.

ASMI marketing

Grocery stores in select areas around the country have kicked off the summer with a promotion that features Alaska salmon in in-store demonstrations. To date consumers in Denver and New Orleans have sampled salmon that have been microwaved with a bit of lemon and butter.

The response has been overwhelming. Retail prices have ranged from \$5.49-\$8.49 per pound for steaks and \$5.99-\$8.99 per pound for fillets.

ASMI says it is important to note that the salmon was sold as Alaska salmon and not differentiated by species.

The salmon in the market was purchased in 1990 when ex-vessel prices for salmon were considerably higher for the product.

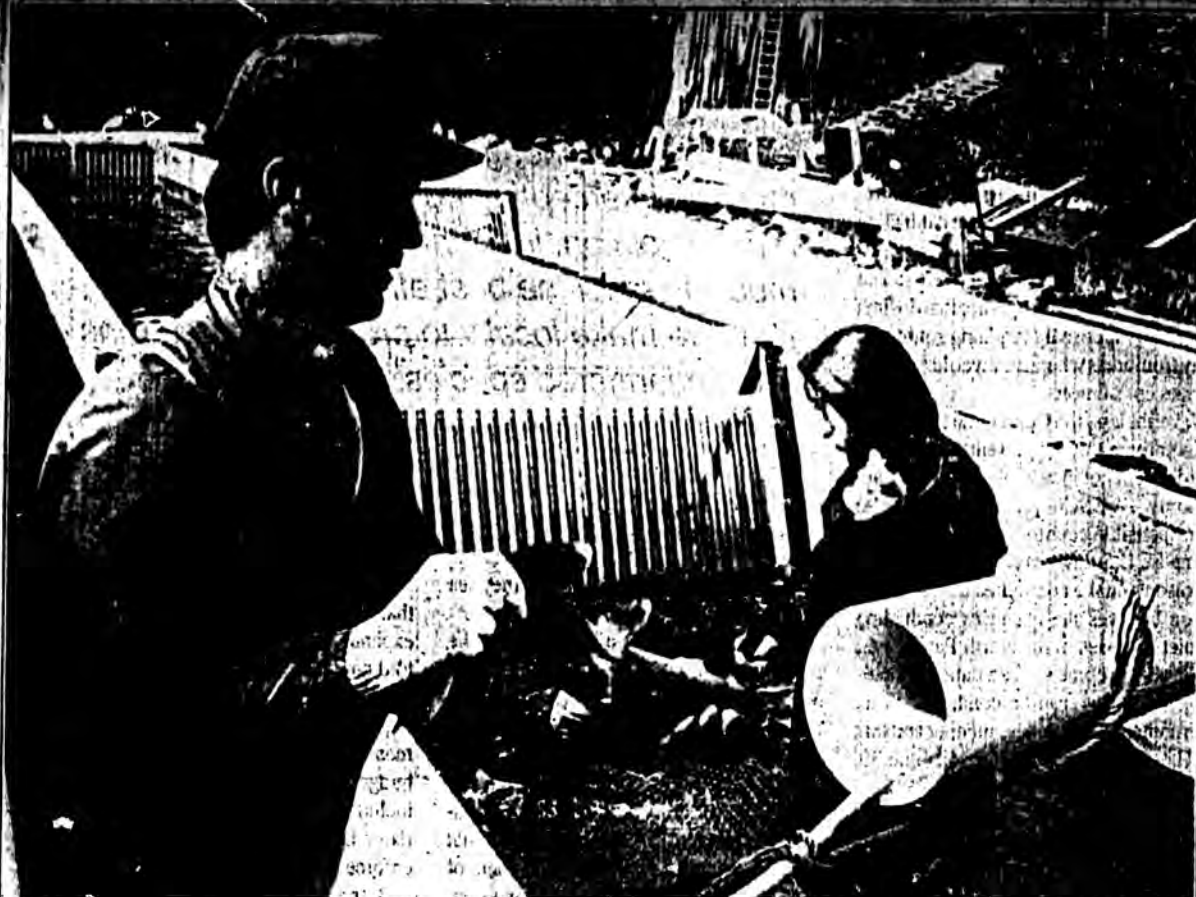
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(Photo by MATT MILLER)

KITOI BAY HATCHERY MANAGER TIM JOYCE prepares to send a salmon down to a pipe chute on its way to be slaughtered as Jim Latimer dips for more chums during a recent egg take.

Kitoi hatchery one of region's most successful

by MATT MILLER

The Kitoi Bay hatchery, located on Afognak Island north of Kodiak and one of southcentral's most successful hatcheries, is currently gearing up for this September's high volume pink run.

Owned by the state, Kitoi Bay is operating at a fairly comfortable level compared to other hatcheries which may be struggling, primarily because its funding is provided by the Kodiak Regional Aquaculture Association. In 1989, a cost recovery fishery netted nearly eight million pinks and put almost \$10 million into the bank — enough principal to fund most of the hatchery's \$800,000 yearly operating costs.

The hatchery was initially built in 1953 for federal sockeye research and, as a state facility, progressed to studying smolt stocking and ladder development techniques while developing rainbow trout, king, silver, and pink fry in the mid '60s through the early '80s.

The numbers of emergent pink fry rarely topped 25 million fish and returning fish averaged about 400,000 a year during the early part of the last decade.

But then in the mid-80s, between 75 and 98 million fry were incubated each year, and corresponding returns fluctuated wildly between 519,000 and 7.62 million fish.

And later, Kitoi Bay began rearing a majority of the fry for an extra six weeks before releasing them — a technique that hatchery manager Tim Joyce says increases their survival rates by at least 200 percent.

In addition to a 175-million pink egg take planned for next month, Joyce says they'll also be attempting to raise nearly 25 mil-

lion chum, five million red, and one million silver fry. The hatchery is normally maintained by four year-round staffers, but that will jump to a total of 16 employees during the height of the pink run.

Joyce believes much more hard data are needed to determine the impact of hatchery fish on wild ones.



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Trouble in Salmon City

by Donna Parker

Ocean temperature, plankton shortage or too many hatchery fish?

All indicators were pointing toward premier pink runs in Prince William Sound and Kodiak; temperature conditions, great plankton blooms, fry virtually boiling in near-shore waters. But as run peaks approached in early August, the predicted record returns weren't showing up. And in Cook Inlet, where the season was already wrapped up, fishermen were chalking up 1991 as a total bust.

Not only weren't the fish coming back in the big numbers predicted, they were coming back small. And not just pinks, but chums too. The two species have similar early life-cycles, both entering the saltwater as fry at the same time. So for the second year in a row, a lot of underweight fish were wandering home and there were fewer of them.

What's going on?

It's a question on the lips of fishermen and fish managers alike.

Some are wondering whether the dramatic increase in Prince William Sound hatchery production during the past two years has maxed out the carrying capacity of the ocean.

In 1988, 296 million pink fry were released from pink salmon hatcheries in PWS. That nearly doubled to over 531 million the following year and has remained at that level since. It conspicuously corresponds with eroding wild stock runs within PWS and in Cook Inlet and Kodiak, too.

This year PWS hatcheries released 700 million salmon fry of all species and there are plans to increase production in the future. Some biologists speculate that the increased production may be depleting available plankton supplies, both within the Sound and in Gulf areas downstream.

But the whole issue is complicated by a near-shore temperature decline. According to research being conducted by the Cooperative Fisheries and Oceanographic Studies program at the University of Alaska, the near-shore temperature in the north Gulf has declined by two degrees. The warmer Gulf temperature of the past decade has corresponded with increased wild and hatchery runs. The temperature decline now corresponds with weakened runs.

That temperature decline also affects the production of plankton as well as early life mortality of salmon made more vulnerable to predation. And according to oceanographer Ted Cooney, there is now speculation that the reduced temperature, noted most dramatically this year in the Gulf, may be confusing salmon and causing them to return late. It may also be affecting offshore mortality rates and average weights of returning fish.

"This ocean cooling may have interrupted normal migration, causing this year's return to be late and perhaps weak. But this year's fry entered even colder waters, so

next year's return may be even worse," Cooney said.

To complicate things further, these declines in weight and, in some cases, mortality, coincide with the Exxon Valdez oil spill. Fish returning this year are the young produced by fish who swam through oil-infested waters in 1989. Unfortunately, oil spill litigation has delayed the release of oil spill research.

At a recent conference in Vancouver, it was learned that the exponential increase in Japanese chum hatchery production to 50 million in the past decade has caused weights to decrease but does not seem to be affecting mortality. However, hatchery programs in Washington have already decimated some local wild stocks. Some of the problem is caused by the interception of wild stocks when targeting on strong hatchery runs. Progressively, escapement levels of wild runs decline, causing increased reductions in wild stock returns.

To determine whether Alaska hatchery production is affecting the return of wild stocks, a "think tank" of the leading experts is being assembled by the Prince William Science Center and the University of Alaska to take a hard look at hatchery programs in Prince William Sound and Southeast.

According to Gary Thomas, director of the PWS Science Center and one of the organizers of the "think

tank," it's time to take a hard look at hatchery production in a responsible fashion.

"What we're beginning to see may produce alarmists who run around saying 'the sky is falling.' Unfortunately, that usually causes reactionary measures. But instead of shooting from the hip, it's time to come up with a technical and accurate assessment of what's going on so that we can have intelligent management that will sustain the resource as well as the communities dependent on it," Thomas said.

The state legislature has also created a Senate special committee to investigate hatchery production and policies, with a final report due at year's end.

While there are many troublesome questions being raised, at least some are looking for answers in hopes that Alaska's hatchery systems, the second-largest in the world, will remain an international model of how to do it right.

State biomatrician Hal Geiger authored one of the two ADF&G papers on hatchery and wild stock interaction presented at the Vancouver conference. Perhaps his comments will spur state agencies to timely action.

"It's a very complicated issue and where we are now is kind of confused. . . . We're betting quite a bit of money that we're not doing any damage so we have to have some answers."

□

Central Salmon Late, Weak, or What?

by Donna Parker

The projected salmon bonanza for 1991 hasn't exactly panned out as anticipated—at least not in central Alaska. After the first commercial opening in Kodiak, biologists reduced their forecast estimate of pink salmon from 20 to 14 million fish. Meanwhile, Cook Inlet fishermen were calling their season "a bust," and the situation in Prince William Sound was looking iffy, as well.

Prince William Sound

A forecast run of 42 million pink salmon for Prince William Sound helped amass a record statewide projection of 110 million humpies. But those numbers were nowhere in sight when fishermen took their first crack at Prince William Sound Aquaculture Corporation fish on August 5.

The run of returning wild stocks should have peaked by the first week in August, but by August 5 the run was so poor that minimum escapement goals were far from being met.

Nearly 90 percent of the fish returning to the Sound are hatch-

ery salmon. Those fish weren't showing up either. PWSAC, which produces most of the region's salmon, has a cost recovery goal of \$7 million. By August 5, PWSAC had anticipated a harvest of 3 million of its hatchery pinks. But by that date only 729,000 pinks had been caught in cost recovery openings, including fish used as brood stock. And PWSAC had accumulated only \$674,000 in cost recovery revenue. A common property fishery on PWSAC fish was not permitted until August 5. Though catches had not been determined by the time this JOURNAL went to print, ADF&G biologists had seen very little indication of run build-up in an aerial survey conducted the day before.

"So far, it's not looking very good. We should be seeing excellent build-ups now, but it's just not happening," said PWS assistant area biologist Ellen Simpson.

Two reasons remain for fishermen to hold out hope that the run is more late than it is weak. The return to Solomon Gulch Hatchery in Valdez came in as predicted at about 7 million fish, which may

indicate good overall marine survival for pinks on the high seas. And the sex ratio of the run continues to be dominated by males, a sign that the run is still far from peaking.

Meanwhile, the Sound's hatchery and wild chum runs were coming in at only 30 percent of their projected level. And that is on a run forecast at only 39 percent of the average run strength from 1974 to 1989. This year's sad return is being blamed on poor plankton blooms in 1986 and 1987 when those fry were released from hatcheries or emerged from natal streams.

Cook Inlet

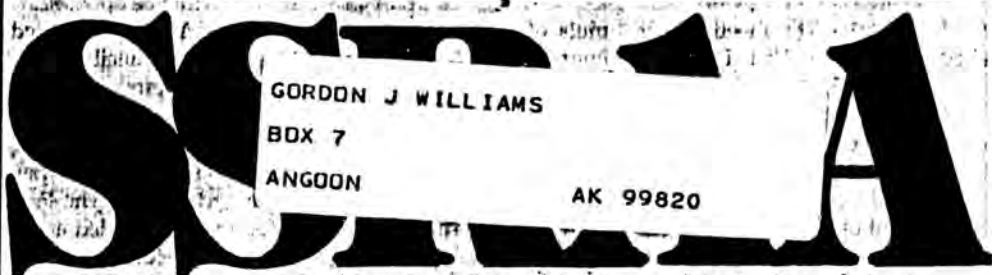
Cook Inlet's salmon season was in trouble from the outset. Low prices prompted fishermen to boycott three sockeye openings in the Upper Inlet. Though they eventually got \$1.00 a pound when everyone else in the state was getting \$.70 and \$.80, the expected run of 3.2 million reds never materialized.

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GORDON J WILLIAMS

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S P A W N I N G N E W S

'91 releases largest in history

This spring saw the largest release of SSRAA fish in history. The 74 million salmon fry and smolts released were 1.5 million more than this year's goal and 41 per cent higher than last year's releases. The previous high, in 1989, was topped by nearly 21 per cent.

Almost two million kings, 3 million coho, 39 million summer chum, 30 million fall chum and about 500,000 sockeye were released this year.

Each site's release goals were generally met, although Neets Bay's chinook release at nearly a half million was lower than expected. (Overall, Neets Bay releases exceeded the goals for the hatchery.) SSRAA's board will get more details on that shortfall later in the year, according to General Manager Don Amend.

Coho releases, at about 2.8 million annually, have remained stable since 1985. The

year's chinook release was lower than last year's, with releases at Whitman Lake about the same and Carroll Inlet up by about 100,000 fish. The Earl West Cove king release was down about 86,000, but that number is controlled by the number the Crystal Lake Hatchery was able to provide to SSRAA. In the future, SSRAA should be releasing about 2.6 million kings annually, Amend said.

The summer chum release, at 38.9 million, was the largest ever. It included the highest-ever release at Earl West Cove and the first release from Kendrick Bay, where 6.2 million were released. Neets Bay released nearly 21 million summer chum as expected. Future summer chum releases are expected to be slightly higher.

The fall chum release at 29.7 million was the second largest (Turn to back page)

SE enhancement still a priority: FRED director

When Jeff Koenings was named director of the Alaska Department of Fish and Game's Fisheries Rehabilitation, Enhancement and Development (FRED) Division in early May, his hope was that SSRAA would take over the FRED Beaver Falls sockeye facility. To accomplish that, the state would budget both operating funds for the year, and enough capital monies to improve the facility so that it could become self-sufficient.

That would have amounted to about \$3 million, which was to come out of ADF&G's \$10 million capital improvement projects budget. SSRAA's Board was to vote on the take-over contract in September.

By early June, the game plan had changed. ADF&G's capital monies shrank to \$5 million, and the funds for the Beaver Falls sockeye improvements were nowhere to be found.

According to Koenings, the remaining \$5 million was split two ways: Prince William Sound Aquaculture Corporation (PWSAC) would receive \$3 million to upgrade the Main Bay sockeye facility.

The other \$2 million was to go to the Cook Inlet Aquaculture Association for the Tutka pink facility in lower Cook Inlet, just outside of Homer.

Why did Beaver Falls drop out?

"When \$5 million fell out," (Turn to back page)



Jeffrey P. Koenings

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INDEPENDENT AUDITOR'S REPORT

To the Board of Directors
Southern Southeast Regional Aquaculture Association, Inc.
Ketchikan, Alaska

We have audited the accompanying balance sheets of Southern Southeast Regional Aquaculture Association, Inc. ("SSRAA") (a nonprofit organization) as of December 31, 1990 and 1989, and the related statements of revenues, expenses, capital additions, and changes in fund balance, and changes in cash for the years then ended. These financial statements are the responsibility of the Organization's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with generally accepted auditing standards, governmental auditing standards issued by the Comptroller General of the United States, and the provisions of the Office of Management and Budget Circular A-133, "Audits of Institutions of Higher Education and Other Non-Profit Organizations". Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of SSRAA as of December 31, 1990 and 1989, and the results of its operations and its cash flows for the years then ended in conformity with generally accepted accounting principles.

Our audits were made for the purpose of forming an opinion on the basic financial statements taken as a whole. The supplementary information presented in Schedules I and II is presented for the purpose of additional analysis and is not a required part of the basic financial statements. Such information has been subjected to the auditing procedures applied in the audits of the basic financial statements and, in our opinion, is fairly stated in all material respects in relation to the basic financial statements taken as a whole.

May 29, 1991

Annual report information

Information from Hogan Mecham Richardson and Company's audit of SSRAA's books from Jan. 1 through Dec. 31, 1990 begins on page 3.

BOARD MEETING NOTES

March 8, 1991 - The meeting was called to order by Vice President Dave Pitcher at 7 p.m. at the Super 8 Motel in Ketchikan. Directors Kelly and Street were excused; 19 directors attended.

Under old business, after discussion, without objection, the Cost Recovery Committee was shelved until such time as the need for it might resurface. Director Robert George suggested that SSRAA might become involved in a small joint venture with the Klawock Hatchery. Without objection, the issue was referred to the Planning Committee, and Amend was asked to bring back a report developed a few years ago with information on other hatcheries.

Brian Wartman moved with George's second to accept the recommendation of the Finance Committee to approve the employee disability plan. Motion passed unanimously.

Chuck Cohen, with Pat Roppel's second, moved to accept the Finance Committee recommendation to retain management consultant Harvey A. Meier. Motion passed with six opposed.

It was the recommendation of the Regional Planning Committee not to take action regarding changes at Earl West Cove until there was a specific request in writing from the Wrangell Advisory Committee, and then to solicit additional input.

Under new business, General Manager Don Amend reported that a few hours earlier, the Board of Fish had approved an earlier opening date, June 15, for Earl West Cove fishing, and that a minimum 18-hour break between rotations had been approved. There was discussion of possible rotation schedules, with several board members suggesting, as the RPC had, a troll-only fishery in Earl West Cove before the net fisheries began.

Cohen moved, with a second by Doug Elwell, that the General Manager check on the constraints of the Fish Board and within those constraints, develop a rotational fishery for Earl West Cove which has a four-day troll-only opening, followed by two net fishery rotations with a for-

mula of 24-hour gillnet fishery; 42 hour break; 12 hour seine fishery; then go to a 24:18:12 rotation from approximately June 27 through the beginning of September; and then return to the 24-42-12 formula for the remainder of the season, with the plan to be returned to the board for approval at its April meeting. Motion passed with five opposed.

An amendment moved by Wartman with Ken Duckett's second to amend the Chin Point closure portion of the management plan to read "summer chum broodstock" and to change "obtained" to "assured" passed with five opposed.

On a motion and second by Cohen and Wartman's, the Carroll Inlet portion of the management plan was amended, replacing "set net" with "barrier net," and to deleting the last sentence regarding applying for a set net permit.

Duckett moved, with a second by Rich Andrew, to approve the 1991 Harvest Management Plan as amended. Motion passed with one opposed.

Management consultant Bob Weyant made a presentation and was asked to put his comments in writing.

The RPC recommended that the increased chinook production from Whitman Lake be placed in Carroll Inlet. Wartman moved with George's second to follow the RPC recommendation. Motion passed with one opposed.

The RPC recommended switching to a Chickamin-only stock at Neets Bay using Whitman Lake brood. George moved, with Wartman's second, to accept the RPC recommendation. Motion passed with three opposed.

The Finance Committee recommended that the general manager request debt deferment of \$600,000 for a minimum of six years, with a preference for eight years, in return for SSRAA's taking over the FRED Beaver Falls Hatchery. George, with a second by Benkman, moved to accept the recommendation. Motion passed with four opposed.

George moved, with a second by Wartman, to accept the RPC recom-

mendation for 1991 mitigation project priorities. Motion passed with one opposed.

Amend explained the Ketchikan City Council suggestion that the city and borough use raw fish tax monies to jointly fund maintenance and insurance costs of the Whitman Lake dam, passing ownership of the dam to SSRAA. The Finance Committee recommended accepting ownership of the dam with those conditions, at no cost to SSRAA.

Roppel moved, with Wartman's second, to accept the Finance Committee recommendation. Cohen moved, with Tom Fisher's second, to amend the motion to include a strategy to capitalize the costs up front (including bringing the dam up to some level of industrial specification) or to get a written agreement for maintenance cost funding. The motion to amend and the main motion as amended passed unanimously.

Wartman, with a second by Bob Rooney, moved to record names on ayes and nays on board votes. After discussion, the motion was withdrawn. At George's suggestion, without objection, it was agreed that directors would notify the recording clerk at the time of the vote if they wanted their dissent noted. Wartman moved, with Roppel's second, that smoking be allowed in areas other than the meeting room, beginning with the May 1991 meeting. Rick Lindblom moved with Curtis Tucker's second to amend the motion to say that a break would be taken every hour or so. Amendment passed, with three opposed. The main motion passed, with seven opposed. George asked that his dissent be noted on both votes.

The board recessed its regular meeting at 11:30 p.m. and convened in Executive Session at 11:34 p.m. At 12:01 a.m. March 9, 1991, the board reconvened in open session. Cohen moved to rescind the motion passed at the Jan. 19, 1991 meeting regarding a retirement annuity for the General Manager. Wartman seconded; motion passed unanimously. Cohen moved with Rooney's second to approve an 8 per cent annual salary bonus for the general manager effective Jan. 1, 1991, funding through an insurance annuity plan designated by the manager and acceptable to the Executive Committee, or in cash, at the manager's option. Motion passed with George, Lindblom and Wartman opposed. Cohen moved with a second by Duckett to authorize the Executive Committee to settle with Alaska Crown Seafoods. Motion passed, with George abstaining.

The meeting was adjourned at 12:10 a.m.

April 19, 1991 - Pitcher called the meeting to order at 7:15 p.m. at the Westmark Cape Fox Lodge in Ketchikan. Directors Cohen, George, Gregory, Helfrich, Street and Tucker were excused; 15 directors attended.

Pitcher introduced Howard Ferren of the Prince William Sound Aquaculture Corporation. Ferren made a presentation on PWSAC's al-

location plan process and answered questions from board members. Rooney reported on the UFA and noted that he had a list of lawmakers to write to regarding subsistence for anyone who was interested. Benkman reported on the Regional Planning Team meeting, and asked that copies of the Annette Island agreement with the Bureau of Indian Affairs be included in the next board packet for directors' information.

Under old business, Chris Guggenbickler of the Wrangell Advisory Committee spoke about his committee's position on the proposed Earl West Cove rotation schedule. Benkman, with a second by Elwell, moved to approve the Earl West Cove Special Harvest Area rotation schedule as submitted. The motion passed with five opposed.

Amend outlined current funding status for the possible takeover by SSRAA of the Beaver Falls FRED facility, and the process he would follow if so authorized by the board. Andrew moved, with a second by Louie Munch, to accept the plan as submitted. The motion passed with five opposed; Wartman asked that his dissent be noted.

Under new business, Andrew and Fisher moved and seconded the Finance Committee recommendation for self-health insurance for a five-year period. Motion passed with two opposed.

Regarding a resolution supporting region-wide allocation of hatchery fish, Benkman, who serves on the joint allocation committee, said he believed by trying to solve allocation problems regionally, the end result would be to get rid of a lot of headaches and would help many seiners feel better about SSRAA.

Benkman moved with a second by Roppel to pass the resolution on allocation as presented. The motion passed with two opposed. Wartman asked that his dissent be noted.

Duckett moved, with second by Pat Kelly, to approve the FY 1992 budget to be submitted to DOCED as presented. Motion passed unanimously.

Amend outlined a proposal from Cape Fox regarding Mahoney Lake enhancement. Duckett moved, second by Roppel, to continue discussion with Cape Fox regarding possible Mahoney Lake enhancement if Cape Fox will agree that there be no monetary compensation to Cape Fox resulting from the enhancement activity. The motion carried with one opposed; Fisher abstained.

Under directors' comments, Lindblom said he had voted no on the allocation resolution because he saw no control on the scope of the committee to strictly limit its application to enhanced fish; he did not want the Board of Fish to apply what was meant to be an allocation plan for enhanced fish to the common property fishery.

The meeting was adjourned at 11:05 p.m. The next meeting was set for May 17, 1991.

BOARD OF DIRECTORS

Seine representatives:

Bryan Benkman, Seattle, *Kona Rose*
Rick Lindblom, Marysville, Wa., *Alma J.*
Dave Street, Seattle, *Foremost*
Brian Wartman, Seattle, *Ariel*

Gillnet representatives:

Ken Duckett, Ketchikan, *Katie D.*
Doug Elwell, Seattle, *Willow*
Louie Munch, Ketchikan, *Sisu*
Rich Andrew, Ketchikan, *Defiance*

Power troll representatives:

Thomas Fisher, Ketchikan, *Antares*
Harold Helfrich, Ketchikan, *Sand Dollar*
Dave Pitcher, Ketchikan, *Nevada*
Robert Rooney, Wrangell, *Dorothy*

Hand troll representative:

Curtis Tucker, Ketchikan, *Havoc*

Municipalities:

Jeff Meucci, Petersburg

Chambers of Commerce:

Harry Sundberg, Wrangell

Native Corporations:

Robert George, Jr.,
Klawock

Processors:

Pat Kelly, Metlakatla

Sportfish:

Ralph Gregory, Ketchikan

Subsistence:

Chuck Cohen, Wrangell

Public at large:

Pat Roppel, Sitka
Lyle Simpson, Ketchikan

1990's Annual Financial Report

The annual audit of SSRAA's books was conducted by Hogan, Mecham, Richardson and Company of Ketchikan. It covered the period Jan. 1 through Dec. 31, 1990.

statements, notes and supplementary information are reproduced exactly from that audit.

The letter on page one, and following balance sheets,

Additional information is available at the SSRAA office, 1621 Tongass Ave. No. 103, Ketchikan.

BALANCE SHEETS

December 31, 1990 and 1989

	1990	1989
ASSETS		
CURRENT ASSETS		
Cash and cash equivalents	378,117	900,774
Marketable securities, at cost which approximates market	1,365,741	1,057,508
Grants receivable	93,613	4,162
Interest receivable	32,211	38,838
Prepaid insurance	80,754	83,313
Refundable deposits	1,355	770
TOTAL CURRENT ASSETS	2,474,448	1,562,708
PROPERTY AND EQUIPMENT		
Net of accumulated depreciation	8,161,748	8,606,195
	\$10,636,196	\$10,168,903
LIABILITIES AND FUND BALANCE		
CURRENT LIABILITIES		
Accounts payable	204,616	51,836
Current portion long-term debt	184,144	
Interest payable	614,158	
Accrued vacation payable	52,386	49,254
Deferred grant revenue		7,232
TOTAL CURRENT LIABILITIES	1,055,304	108,322
LONG-TERM DEBT	11,802,879	11,541,683
OTHER LIABILITIES		
Interest payable	590,837	605,067
FUND BALANCE (DEFICIT)	(2,812,824)	(2,086,169)
	\$10,636,196	\$10,168,903

See accompanying notes to the financial statements.

NOTES TO FINANCIAL STATEMENTS

December 31, 1990 and 1989

STATEMENTS OF REVENUES, EXPENSES, CAPITAL ADDITIONS, AND CHANGES IN FUND BALANCE

Years Ended December 31, 1990 and 1989

	1990	1989
REVENUE		
Enhancement tax proceeds	2,188,889	1,409,209
Grants from Federal government (passed through State of Alaska)	106,339	102,477
Grants from Federal government	56,941	9,338
Terminal fish proceeds	1,178,799	412,158
Other	51,514	65,312
	<u>3,582,482</u>	<u>1,998,494</u>
EXPENSES		
Regional activities	75,561	78,823
Whitman Lake Hatchery	341,004	322,711
Neets Bay Hatchery	667,964	576,036
Tagging and quality control	215,691	251,427
Special projects	526,560	581,829
Neets Bay Harvest	198,719	81,609
Administration	488,902	427,305
Grants and contracts	173,265	1,111,816
Disallowed grant expenditures	82,035	
	<u>2,769,701</u>	<u>2,431,556</u>
Income (loss) before depreciation ..	812,781	(433,062)
Depreciation	(728,180)	(708,807)
Operating profit (loss)	<u>84,601</u>	<u>(1,141,869)</u>
OTHER INCOME (EXPENSE)		
Interest income	132,291	120,875
Interest (expense)	(1,045,268)	(675,263)
	<u>(912,977)</u>	<u>(554,388)</u>
Excess (deficiency) of revenues over expenses before capital additions	(828,376)	(1,696,257)
CAPITAL ADDITIONS		
Federal grants (passed through State of Alaska)	101,721	102,477
Excess (deficiency) of revenues over expenses after capital additions	(726,655)	(1,593,780)
FUND (DEFICIT) TO BEGIN	<u>(2,086,169)</u>	<u>(443,135)</u>
Prior period adjustment		(49,254)
Fund (deficit) to begin, restated	<u>(2,086,169)</u>	<u>(492,389)</u>
FUND (DEFICIT) TO END	<u>\$ (2,812,824)</u>	<u>\$ (2,086,169)</u>

See accompanying notes to the financial statements.

NOTE 2

TROUBLED DEBT RESTRUCTURING

During 1989, SSRAA negotiated with the Alaska State Department of Commerce to restructure SSRAA's debt. The restructuring delayed payments on all loans until January, 1991, extended the loan period for some of the loans, and changed the annual payments for some of the loans. Interest accruing during the period when no loan payments were required was added to the loan's principal balance on January 1, 1990 and paid over the life of the loan. Accrued interest was \$1,204,995, and \$605,067, respectively at December 31, 1990 and December 31, 1989.

NOTE 3

NOTES PAYABLE

1990 1989

Long-term debt consists of the following:

Note payable to the Department of Commerce, State of Alaska, at 9.5% interest. Annual payments of \$35,103, maturing in January, 2009. Secured by Whitman Lake Hatchery, assignment of surplus fish, and assignment of assessments.

303,606 277,247

Note payable to the Department of Commerce, State of Alaska, at 8% interest. Annual payments of \$277,357, maturing in January, 2009. Secured by Whitman Lake Hatchery, assignment of surplus fish, and assignment of assessments.

2,663,561 2,466,104

Note payable to the Department of Commerce, State of Alaska, at 9.5% interest. Annual payments of \$49,368, maturing in January, 2010. Secured by Whitman Lake Hatchery, equipment, assignment of surplus fish, and assignment of assessments.

435,038 397,276

Note payable to the Department of Commerce, State of Alaska, at 9.5% interest. Annual payments of \$24,067, maturing in January, 2011. Secured by assignment of surplus fish, and assignment of assessments.

215,646 196,926

Note payable to the Department of Commerce, State of Alaska, at 9.5% interest. Annual payments of \$63,572, maturing in January, 2010. Secured by assignment of surplus fish, and assignment of assessments.

560,208 511,582

Note payable to the Department of Commerce, State of Alaska, at 9.5% interest. Annual payments of \$42,547, maturing in January, 2011. Secured by assignment of surplus fish, and assignment of assessments.

381,245 348,142

ADDITIONS,

1989

1,409,209

102,477

9,338

412,158

65,312

1,998,494

78,823

322,711

576,036

251,427

581,829

81,609

427,305

111,816

2,431,556

(433,062)

(708,807)

(1,141,869)

120,875

(675,263)

(554,388)

(1,696,257)

102,477

(1,593,780)

(443,135)

(49,254)

(492,389)

\$2,086,169

STATEMENT OF CHANGES IN CASH

Years Ended December 31, 1990 and 1989

	1990	1989
OPERATING ACTIVITIES		
Excess (deficiency) of revenues over expenses after capital additions	(726,655)	(1,593,780)
Adjustments to reconcile net income to net cash provided (used) by operations:		
Depreciation	728,180	708,807
Addition of accrued interest to note principal	445,341	
Investment income		
Included as operating item	(47,989)	
Loss from write off of long-term interest receivable		18,662
Gain on sale of fixed assets	(5,950)	
Decrease in accounts receivable		6,298
(Increase) decrease in prepaid expenses	2,559	(13,115)
Decrease in interest receivable	6,627	5,920
(Increase) decrease in refundable deposits	(585)	1,170
(Increase) in grants receivable	(89,451)	(288)
Increase (decrease) in accounts payable	152,780	(25,564)
Increase in interest payable	599,928	173,056
Increase in accrued vacation payable	3,132	
Increase (decrease) in deferred grant revenue	(7,232)	7,232
Cash provided (used) by operating activities	<u>1,060,685</u>	<u>(711,602)</u>
INVESTING ACTIVITIES		
Proceeds from investments	3,557,508	2,644,388
Purchase of investments	(3,817,782)	(2,257,501)
Capital expenditures with unrestricted cash	(176,063)	(224,286)
Capital expenditures with cash from grants	(101,721)	(102,477)
Cash provided (used) by investing activities	<u>(538,058)</u>	<u>60,124</u>
FINANCING ACTIVITIES		
Principal payments on long-term debt		(155,174)
Cash (used) by financing activities		<u>(155,174)</u>
Increase (decrease) in cash and cash equivalents	<u>522,627</u>	<u>(806,652)</u>
CASH AND CASH EQUIVALENTS TO BEGIN	<u>378,117</u>	<u>1,184,769</u>
CASH AND CASH EQUIVALENTS TO END	<u>\$900,744</u>	<u>\$378,117</u>

See accompanying notes to the financial statements.

Note payable to the Department of Commerce, State of Alaska, at 9.5% interest. Annual payments of \$21,332 maturing in January, 2011. Secured by assignment of surplus fish, and assignment of assessments.

191,149 174,552

Note payable to the Department of Commerce, State of Alaska, at 9.5% interest. Annual payments of \$122,545 maturing in January, 2012. Secured by land and leasehold improvements at Neets Bay, assignment in trust of Term Special-Use Permit, and an assignment of future revenues and proceeds of sales of surplus fish and eggs.

1,114,758 1,080,512
(Continued on next page)

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Note payable to the Department of Commerce, State of Alaska, at 9.5% interest. Annual payments of \$59,590, maturing in January, 2013. Secured by assignment of future revenues and proceeds of sales of surplus fish and eggs.

549,470 517,000

Note payable to the Department of Commerce, State of Alaska, at 9.5% interest. Annual payments of \$105,384, maturing in January, 2014. Secured by Deed of Trust on Neets Bay real property, Neets Bay leasehold improvements and equipment, assignment of U.S.D.A. Forest Service lease, and an assignment of future revenues and proceeds of sales of surplus fish and eggs.

900,000 900,000

Note payable to the Department of Commerce, State of Alaska, at 9.5% interest. Annual payments of \$62,240, maturing in January, 2009. Interest will not begin to accrue until June 20, 1990. Secured by Deed of Trust on Neets Bay real property, Neets Bay leasehold improvements and equipment, assignment of U.S.D.A. Forest Service lease, and an assignment of future revenues and proceeds of sales of surplus fish and eggs.

538,342 538,342

Note payable to the Department of Commerce, State of Alaska, at 9.5% interest. Annual payments of \$40,581, maturing in January, 2009. Interest will not begin to accrue until June 20, 1990. Secured by equipment at Neets Bay and Whitman Lake hatcheries and an assignment of future revenues and proceeds of sales of surplus fish and eggs.

351,000 351,000

Note payable to the Department of Commerce, State of Alaska, at 9.5% interest. Annual payments of \$472,931, maturing in January, 2013. Secured by Deed of Trust on Neets Bay real property, an assignment in trust of Term Special-Use Permit, Neets Bay Hatchery equipment and an assignment of future revenues and proceeds of sales of surplus fish and eggs.

3,783,000 3,783,000

11,987,023 11,541,663

Less current portion

184,144 0

\$11,802,879 \$11,541,663

Principal maturities on long-term debt over the next five years are as follows:

For the year ended December 31:

1991	\$184,144
1992	238,204
1993	259,792
1994	283,348
1995	309,051

NOTE 5

SALMON ENHANCEMENT TAX

The 1980 Alaska State Legislature enacted legislation for adoption and implementation of a salmon enhancement tax. Under the legislation, processors are required to collect a 3% enhancement tax from sellers of salmon and transfer it directly to the State. Each year the State may appropriate the tax receipts to each aquaculture association in the State of Alaska. Revenue from the salmon enhancement tax is recognized by SSRAA as appropriations are received. Appropriations received for the years ended December 31, 1990 and 1989 totaled \$2,188,889 and \$1,409,209, respectively.

NOTE 7

INVESTMENT IN TIME CERTIFICATES OF DEPOSIT, REPURCHASE AGREEMENTS AND MARKETABLE SECURITIES

SSRAA has designated investment in time certificates of deposit, repurchase agreements, and marketable securities to be used for the purpose of meeting debt service requirements and to provide for funding of normal operations, if the need should arise. At December 31, 1990 and 1989, SSRAA had \$525,000 and

\$200,000, respectively, invested in repurchase agreements, all of which had original maturities of less than three months and are included in cash and cash equivalents. SSRAA had \$1,365,741 and \$1,057,508 at December 31, 1990 and 1989, respectively, in marketable securities, which are included as current assets.

There were no realized or unrealized gains or losses relating to SSRAA's marketable securities during the years ended December 31, 1990 and 1989.

SCHEDULE I — PROPERTY AND EQUIPMENT

December 31, 1990 and 1989

	1990	1989
Beaver Falls Hatchery	534,066	363,985
Whitman Lake Hatchery	4,747,327	4,747,327
Neets Bay Hatchery	7,365,400	7,190,136
Remote operating and field equipment	767,721	729,730
Office furniture and equipment	54,917	54,918
Construction in progress		106,351
	<u>13,469,431</u>	<u>13,192,447</u>
Less accumulated depreciation	<u>(5,307,683)</u>	<u>(4,586,252)</u>
	<u>\$8,161,748</u>	<u>\$8,606,195</u>

See accompanying notes to the financial statements.

SCHEDULE II — EXPENSES

Year Ended December 31, 1990

	Regional Activities	Whitman Lake Hatchery	Neets Bay Hatchery	Tagging and Quality Control	Special Projects	Neets Bay Harvest	Administration	Grants and Contracts	Total
Casual and contract labor	24,709		3,490	36	1,153	23,063			52,451
Charters		10,138	34,243	5,570	97,419	137,110	3,375		287,855
Committee fees and expenses	3,488						5,260		8,748
Consultants							8,500		8,500
Employee benefits		19,173	25,532	11,549	11,895		17,446	4,146	89,741
Property and equipment								101,721	101,721
Fish food		61,902	261,554		34,688				358,144
Fuel		1,346	20,912		19,426		35		41,719
Insurance	5,993	14,410	20,979	2,008	14,594	858	84,276	3,740	146,858
Laboratory analysis				1,164					1,164
Leases		1,310	2,470		885				14,665
Other	1,975						1,383		3,358
Payroll taxes		13,997	22,147	12,084	15,029	1,267	16,158	3,889	84,571
Printing and advertising	5,738	1,035			204	1,036	427		8,440
Professional services					30,297		64,365		94,662
Rent	527	60	713		7,203		34,574		43,077
Repairs and maintenance		737	5,964	1,399	110,868	22,303	3,167		144,438
Salaries		148,320	231,645	130,215	158,189	10,634	193,266	41,210	913,479
Supplies	3,270	41,909	33,055	50,796	19,493	2,448	29,778	13,266	194,015
Travel	29,861	2,077	4,732	870	1,619		12,562	2,713	54,434
Utilities and telephone		14,590	528		3,598		14,330	2,580	35,626
	<u>75,561</u>	<u>341,004</u>	<u>667,964</u>	<u>215,691</u>	<u>526,566</u>	<u>198,719</u>	<u>488,902</u>	<u>173,265</u>	<u>2,687,666</u>
Depreciation		<u>260,268</u>	<u>406,677</u>		<u>26,006</u>		<u>5,229</u>		<u>728,180</u>
	<u>\$75,561</u>	<u>\$601,272</u>	<u>\$1,074,641</u>	<u>\$215,691</u>	<u>\$552,566</u>	<u>\$198,719</u>	<u>\$494,131</u>	<u>\$173,265</u>	<u>\$3,415,846</u>

See accompanying notes to the financial statements.

FRED likes transfer idea - later '91 releases

(Continued from Page 1) "we were looking at making some of the transfers go forward with the remaining \$5 million. (The Tutka and Main Bay projects) looked like they could hit the street running."

That didn't mean the other projects were "ranked" higher than the Beaver Falls transfer, he said. Operating funds were still available for SSRAA to operate Beaver Falls for the state (as happened last year); but there were no operating funds budgeted for Main Bay, for instance.

"We are just extending the transfer process until next year's (capital budget), at which time the Commissioner has voiced the opinion that it will go through," Koenings said. "We are certainly carrying forward our mission of doing sockeye enhancement in southern Southeast and it will continue to be a high priority

item."

Koenings called the Beaver Falls program "obviously viable - We intend to go fully forward with it. I am heavily involved in sockeye enhancement - that's what I do, that's what we do best. We intend to carry forward on sockeye in the Southeast."

FRED support for sockeye will include continued lake plants to restore runs (such as at Hugh Smith and Virginia Lake) and also the lake fertilization work that has provided a strong run at MacDonald Lake. As a result of that program, MacDonald has the biggest run in a given system in Southeast, Koenings said.

He said FRED also is looking at coho rehabilitation on Prince of Wales Island, working closely with the U.S. Forest Service, studying the carrying capacity for coho in some of the streams and looking at the ef-

fects of logging there.

Koenings, 44, was ADF&G's principal limnologist since 1980, overseeing the department's lake stocking and lake enrichment projects, as well as running the limnology lab in Soldotna. He holds a bachelor's degree in water resources, a master's in water resources and a doctorate in natural resources.

In naming him FRED Director, ADF&G Commissioner Carl Rosier called Koenings a respected scientist with a "vision for where the FRED Division needs to go in the '90s."

That vision includes continued close ties with SSRAA without duplication of efforts. "We want our resources to go as far as possible. Our missions are complementary, not at cross purposes," Koenings said, adding, "I feel this delay (in the transfer of Beaver Falls) won't shake this premise."

(Continued from Page 1)

ever, though lower than 1985's record release of nearly 42 million. Future fall chum releases are expected to be about 37 million.

Sockeye releases were about the same as 1990, more than a half million, with the most releases ever at Shrimp Bay, and lower releases at Beaver Falls.

The coho and chinook were released about the same size and at the same time as last year. However, chum and sockeye were small this year due to lower spring water temperatures.

Summer chum release timing was good, during an excellent plankton bloom, Amend said. The fall chum were smaller but released in May. The sockeye averaged nearly 5 grams when released May 31.

Although that is within the time and size "window" considered optimum, Amend said the general belief is that larger fish released in mid-May would have been better.

Except for the slightly smaller size of some fish, Amend said there were not unusual conditions which should affect ocean survival. No pollack were observed; quality control observations were good; and a net washer new to Neets Bay last year provided the best environment in years for rearing chum. "There was little sign of disease and overall the fish looked very good," Amend said.

Most of the fish released this year will return in 1994. "If survival rates are anywhere near average, this should provide for the largest return of salmon back to SSRAA facilities," Amend said.

New address?

If you are a permit holder whose address has changed, and you want your *Spawning News* sent to the correct address, you must send the address change to: State of Alaska, Commercial Fisheries Entry Commission, 8800-109 Glacier Highway, Juneau AK 99801. The CFEC fax number is 789-6170. We cannot change your address.

Notes to financial statements

(Continued from page 7)

NOTE 9

DEFINED CONTRIBUTION PENSION PLAN

SSRAA offers an employee sponsored defined contribution pension plan covering substantially all employees. Any employee is eligible to participate in the plan upon completing an amendment to their employment agreement, which authorizes payment of up to 20% of the employee's gross annual wage (not to exceed \$9,500) through payroll deductions.

SSRAA also offers an employer sponsored defined contribution plan for eligible employees. Employees working at least 1,000 hours a year who are 18 years of age or over are eligible for plan coverage upon completion of 12 consecutive months of ser-

vice, provided they are employed on December 31 of the year in question. Contributions to the plan are determined annually by the Board of Directors, with the final decision being made in December of each year. For the years ended December 31, 1990 and 1989, SSRAA contributed 2% of all eligible employees' wages to the plan, for a total of \$12,293 and \$13,367, respectively.

NOTE 11

SUBSEQUENT EVENT - DISALLOWED PRE-AWARD EXPENDITURES

In a letter, dated 4-25-91, SSRAA was informed by the State of Alaska, Department of Fish and Game, that "pre-award" expenditures made prior to December 1, 1990 for various US/Canada mitigation grants were disallowed. The total of the disallowed expenditures is \$82,035, and is reported as disallowed grant expenses. The contract specifically stated the starting date was October 1, 1990. However the federal granting agency allowed only expenditures on or after December 1, 1990, using the dates the documents were signed rather than the stated effective date noted on the Grant agreement. SSRAA is currently negotiating to completely recover the disallowed costs.



Anglers see decline of wild fish as more than loss of sport

© 1991 Seattle Post-Intelligencer

By Rob Taylor
P-I Reporter

SKYKOMISH RIVER, NEAR GOLD BAR — A wall of firs and white mist looms behind the river. Three mergansers shoot past, bank left with the stream and are gone. Pete Soverel's eye returns to his fly, angling across a green ripple 80 feet downstream.

Soverel's hat brim drips with drizzle — perfect weather for a fly-fishing fanatic. And Soverel, who spends 50 days a year up to his thighs in rushing green water, is certifiable.

His target is the wild steelhead, a silvery ghost that can explode from smooth water like a bolt of lightning. One swirls by Soverel's No. 8 caddis fly. "Yeahh," exclaims the fisherman. He gathers armloads of line to cast again.

Chairman of the steelhead committee of the Federation of Fly Fishers, Soverel worships fish that have never eaten pellet food or milled about in rearing ponds.

Wild fish "take their time" returning from the sea, he says. They disperse along the river to lie in fast-moving, streamy water. They hit a fly more aggressively and fight harder than their domesticated cousins.

Hatchery fish, Soverel figures, behave more like nervous commuters. Returning adults rush back to their hatchery site, leaving anglers crowding by the outlet pipes to catch them.

They behave unnaturally, rushing toward men, expecting food. "There's just something wrong there," he says.

Here in the Skykomish, he says, wild runs are depressed.

Soverel calls hatcheries "perhaps the worst" of the calamities that have befallen Northwest salmon and steelhead. His distaste is part science, part aesthetics and part "Pete theories," accumulated in 30 years casting lines.

Soverel wants hatcheries phased out where they conflict with wild runs and their budgets converted to repairing habitat.

His group favors making anglers release wild steelhead until studies show runs are healthy. Anglers could keep hatchery fish, which can be marked.

In a step in that direction, the Wildlife Department proposes to require the release of wild steelhead caught in Western Washington from June to November 1992.

For every Pete Soverel, there appear to be plenty of fishermen who are glad to have hatchery fish. The fact is that about 80 percent of steelhead caught in the Northwest come from hatcheries, and the proportions for coho and chinook are almost as high.

Hatchery fish "are just as big and fight just as hard as natural-spawning fish," says John Kelly of the King County Outdoors Sportsman Council.

"We need hatcheries," agrees Geoff Lebon, president of the Washington Trollers Association, an ocean-fishing group.

"We've ruined our habitat," Lebon says, "especially in the middle of the Puget Sound. Without hatcheries, we wouldn't have much of a fishery."

But many anglers take Soverel's approach, revering wild fish and viewing their peril as an index of environmental damage.

Bruce McNae, president of Washington Steelhead Flyfishermen, says, "They're the coal miner's canary."



Imon hatcheries awning danger state's wild fish

Seattle Post-Intelligencer

by Taylor

PH

Wild salmon waited patiently, dispersed logs and behind boulders, facing upstream, watched for food to float by.

Suddenly, fry burst in like a mob. Milling in dense packs, they shunned the natives' feeding technique. They raced after drifting food, mistaking it for food. They let the current hem downstream. And in what some call "the Piper effect," about half the wild fish joined the stampede.

The scene, watched by snorkeling scientists, was the Leavenworth Hatchery's release of spring chinook into Icicle Creek and the Snake River a few years ago. It illustrates problems with hatchery fish. Compared with wild cousins, they are ill-suited for survival yet by sheer strength of numbers, they displace wild fish.

Hatcheries "take eggs and make schmucks of them," grumbles one fishery biologist. Behavior is completely different from wild.

Hatcheries are, to be sure, usually a substitute habitat trashed by dams, logging and growth. They greatly expand fish survival in the early months of life. That has helped meet a rising demand for fish, but at a cost. Hatchery programs contribute to the decline of wild fish and often provide poor substitutes. Scientists worry that the decline of wild runs could lead to a kind of genetic bottleneck that depresses entire fisheries. This year, as the Endangered Species Act has been invoked to protect three wild salmon runs on the Snake River, agencies are taking a new look at hatcheries' benefits and costs.

Hilborn, a University of Washington professor of fishery biology, claims the costs are in dollars and lost wild fish — and that benefits have been overstated. Many hatcheries' adult survival rates are low, Hilborn says. The Leavenworth Hatch-

ATCHERIES, Page A4

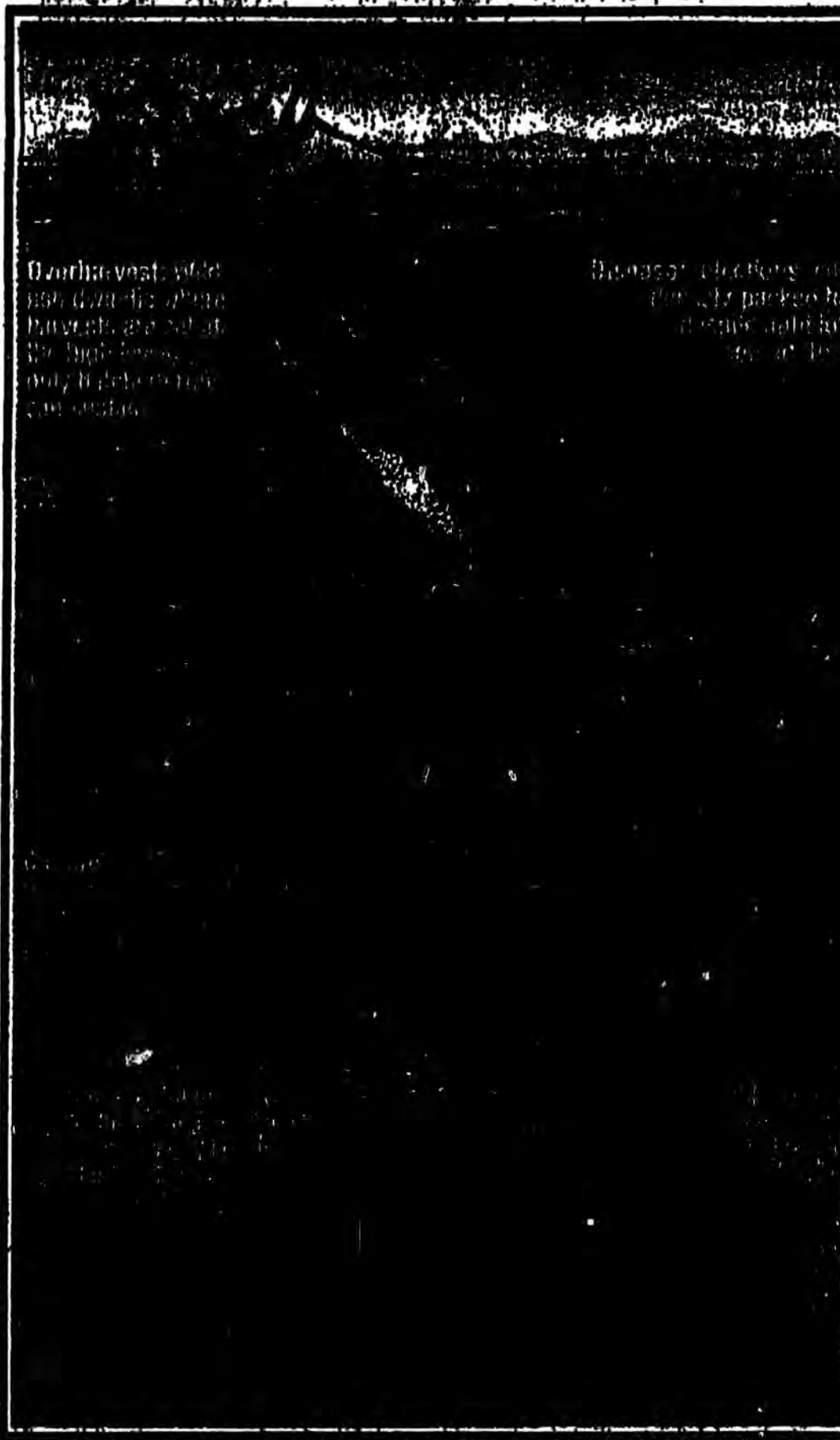
Idea: Some recreational fishermen release wild fish.

Warning: Fishery managers are considering changes to boost wild runs.

Warning: Hatcheries help fishermen push wild fish toward extinction.

Over the vast, wild
north down the Snake
River, hatcheries are set at
the high end of the
scale. Hatcheries are
notorious.

Because of the danger of
the fish being packed in
the same hatchery
and released.



hcheries: bate of costs benefits

Page 1

roduces only about three fish — caught or returned to — for each 1,000 released.

ew returns can drive the cost h far above their market

A UW study of four British ible hatcheries found that adult catch from one, the r River's Quamel Hatchery, about \$800 per fish. Hilborn

The cheapest, he asserts, about \$3 a pound even with- out the costs of catching, ing and selling the fish.

me justify the costs as the of urbanization or cheap electricity. But Hilborn con- the money would be better on improving habitat.

he Leavenworth Hatchery, ys, "is not doing anybody any It's just driving the wild fish he ground."

the wild, superiority of wild is well-documented. Studies shown they produce two to times more returning adults hatchery fish mating in the

Wild fish survive better at and return more surely to native spawning grounds.

t the extreme, hatcheries can cause a net loss of fish. A year Oregon study compared tal streams seeded with ary fry with those that were The seeded streams suffered

percent drop in wild fish, despite a slight increase in initial adult returns, seeded ms contained 33 percent few- ish overall in the second ration.

hat study shook Oregon's ry programs. They cut back ing of coastal streams and ed hatcheries and harvests e to protect wild fish.

Where hatcheries do succeed, orn contends, they usually e out wild fish but have ble sustaining their initial uction. "Ten years down the l, they get half or a quarter of t they initially got."

Since the early 1960s, for in- os, hatcheries from southern ington to northern California, e doubled their output of coho its, but their returning adults e dropped since the mid-1970s. Scientists are divided on the re of such declines. Some- ne factors such as ocean con-



GRANT M. HALL

"There's just something wrong there," Pete Sovarel says of hatchery fish, which rush toward men, expect food — an unnatural behavior. He wants some hatcheries phased out and their budgets used to repair habi-

fire. A state Department of Wild- life effort to breed bigger steel- head produced a lot of albino fish. Taking eggs and sperm from the first fish to return, once a com- mon cost-cutting move, has re- duced survival rates of hatchery fish in the wild; their eggs hatched during winter floods.

Another harmful practice has been the transfer of eggs and fish from one watershed to another. The Columbia River's Bonneville Hatchery has received chinook eggs from as far away as Eastern Washington, Southern Oregon and even Alaska.

Such exchanges are now more tightly controlled, but throughout the Northwest they have eroded genetic differences among both hatchery and wild stocks.

Agricultural science has dem- onstrated the costs of such unifor- mity, as new hybrids gave farmers higher yields but new vulnerabil- ity. The National Academy of Sci- ences blamed genetic similarity for an epidemic of corn blight in 1970 and 1971. Corn plants "had become as alike as identical twins," the academy said. "What- ever made one plant susceptible made them all susceptible."

The Lyons Ferry Hatchery provides an unusually clear exam- ple of how hatcheries can orn-

There are signs the same thing has happened in the wild. Stream surveys last year found that hatch- ery fish made up as much as three-quarters of the fish on Snake River spawning grounds.

Interbreeding "severely con- taminated what we have known as wild Snake River fall chinook," Schmitten says. The incident "raises the question of whether we even have any wild chinook left."

Schmitten's agency has pro- posed listing the run as "threat- ened" under the Endangered Spe- cies Act and said in a report that hatchery operations "pose clear and immediate threats" to its genetic integrity.

Fred Allendorf, biology profes- sor at the University of Montana, Missoula, warns that many such losses "will lead to disastrous losses of biodiversity." If remain-

ing fish are left with a nar- range of genes, he warns, l could fail to adapt to chan- conditions and collapse.

Bill Hopley, assistant chief salmon culture at the Depart- of Fisheries, dismisses the th- of a crash as "theoretical."

Research is so sketchy "nobody can claim for a fac know" that salmon stocks crash, he says. If it were happen, he suggests, such a catastrophe would be far dis- "We're talking evolutionary scales here."

Jim Lichatowich, former t of research for Oregon's De- ment of Fish and Wildlife, waiting for irrefutable proof : disaster.

"To prove it," Lichato- says, "you would have to bring resource close to collapse. T not a responsible policy."



EDD

stages, hatcheries from southern Washington to northern California have doubled their output of coho smolts, but their returning adults have dropped since the mid-1970s. Scientists are divided on the cause of such declines. Some blame factors such as ocean conditions rather than hatchery shortcomings.

Not all areas are seeing production fall. Bill Koss, assistant director of the Washington Department of Fisheries salmon program, says the state's total salmon production has grown, thanks largely to hatcheries, to an average of about 8 million salmon in the late 1980s from 5 million in the early 1980s.

"We can have coexistence of wild fisheries and hatchery fisheries, without having one negatively affecting the other," Koss asserts.

Hilborn calls that claim "one of the great lies."

Despite their differences, both sides agree that in many places more hatcheries would bring diminishing added returns, if any. The Columbia River system, for example, now receives more juvenile fish each year than ever by Hilborn's count. Its returning adults, however, have dropped to between one-fifth and one-eighth of their historic abundance.

Bob Francis, head of the UW's Fisheries Research Institute, argues that hatcheries may have bumped against the limit of the Columbia's present capacity.

For hatchery fish, low survival stems partly from conditioning. Fed pellets in crowded pools, they fail to recognize predators and know little about scavenging in the wild. They charge food, wasting valuable energy.

Genetically, non-native hatchery stocks tend to be less adapted to local conditions than natives. Human management may exacerbate the problem. And narrow genetic heritage may reduce their ability to adapt to future change.

Selective breeding can back-

fire an epidemic of corn blight in 1970 and 1971. Corn plants "had become as alike as identical twins," the academy said. "Whatever made one plant susceptible made them all susceptible."

The Lyons Ferry Hatchery provides an unusually clear example of how hatcheries can promote such uniformity. Built by the Washington Department of Fisheries to compensate for the toll dams had taken on the Snake River fall chinook, Lyons Ferry, instead, may have helped push the run into extinction.

The Snake River's fall chinook run once was one of the most productive in the Northwest, but it dwindled in the 1960s and '70s as seven huge dams converted pools and rapids to a chain of tepid lakes. By last year, the late-summer flood of quicksilver had tailed off to a trickle of 78 fish.

For several years, even as the run declined, the hatchery steadily culled almost one-third of the wild spawners in a vain effort to meet its assigned production goal: replacing 18,300 returning fall chinook lost to the dams. It never came close.

"They've been taking way too many of the wild fish," says Roland Schmitt, regional administrator of the National Marine Fisheries Service.

If the Lyons Ferry managers erred, Oregon officials did worse. They flooded the Snake River with genetic outsiders: strays from a mismanaged effort to restore runs in the Umatilla River.

Adult fish returned to find irrigators had left only a trickle of water in the Umatilla. Spawners didn't have a chance of staying there, says Larry Peck, director of salmon culture for the Washington Fisheries Department.

Since the mid-1980s, countless Umatilla hatchery fish have glided past the river's parched mouth and up the Snake River, where Lyons Ferry managers unwittingly mixed them with the fall chinook they bred in captivity.

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Alaska State Legislature

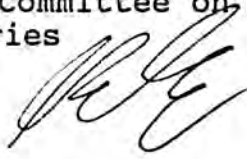
SENATOR RICHARD I. ELIASON

President of the Senate

P.O. Box V
Juneau, Alaska 99811
(907) 465-3755

MEMORANDUM

TO: Members of the Senate Special Committee on Domestic and International Commercial Fisheries

FROM: Senator Dick Eliason, Chairman 

DATE: December 21, 1992

RE: Final action on Hatchery Review Project

The Special Committee on Fisheries which was established by Senate Resolution for the duration of the 17th Alaska Legislature, will be officially disbanding at the close of the interim. It is time to conclude the committee's review of the Alaska Salmon Enhancement Program which we have been working on for over a year and a half.

The economic studies (benefit-cost analysis) contracted to the University of Alaska have taken considerably longer than expected, so our original plan to hold public hearings during the interim on those studies has not been possible. The draft of the economic report is finally nearing completion and should be ready to distribute very soon.

Legislative staff members are continuing to work on the overall project and expect the rest of the report (all but the economic study) to be ready to publish in final form within the next week. As you recall, after the draft report was distributed statewide last winter, our committee held a long teleconference to take public comment on the draft, and received numerous written comments from the public which were circulated to the committee. Staff have made minor revisions to the chapters in the report based on public comment.

In order to complete this project, I propose that we publish the report in "final," minus the economic study, and to simultaneously publish the economic study in "draft." Together, the two documents will then be sent to everyone on the original mailing list of interested parties. The two documents would also be sent to both incoming House and Senate Resource Committee chairs and chairs of

Memorandum to Senate Fisheries Committee
December 21, 1992
Page 2

any special committees on fisheries. A cover letter to those committee chairs will explain the history of the project and urge them to carry on the work, further explore the options which we have laid out for legislative consideration, as well as facilitate the public review and comment process for the economic study.

From the very beginning of this project, we have assured the public that they would be given ample opportunity to review and participate in the review process of the enhancement program. Since the findings of the University's economic study are likely to be significant and possibly controversial, I believe they should undergo scientific peer review as well as review by the interested public. At the end of each of the other chapters in our project report we have listed "options to consider," based on the content of the chapter. Such a list of options for the economic portion of the report should not be labeled "final" until public comments are made and considered. For these reasons, the chapter on economics will remain in draft form.

I hope that this plan for the conclusion of the Senate Fisheries Committee's work meets with the approval of committee members. If you have any questions or objections, please contact my office at 465-4916 before December 29. A copy of the two documents will be sent to you as soon as they are available.

ALASKA STATE LEGISLATURE SENATE

SENATOR RICHARD I. ELIASON

PRESIDENT OF THE SENATE
LABOR & COMMERCE COMMITTEE
RESOURCES COMMITTEE
RULES COMMITTEE
CHAIRMAN, SPECIAL COMMITTEE ON
DOMESTIC & INTERNATIONAL
COMMERCIAL FISHERIES

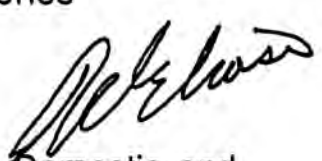


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TO: Bob Clasby, Director
Division of Commercial Fisheries
Dept. of Fish and Game

FROM: Sen. Dick Eliason, Chairman 
Senate Special Committee on Domestic and
International Commercial Fisheries

DATE: August 26, 1992

RE: Alaska Salmon Enhancement Program Review Commercial
Fishery Management Cost Guidelines/Net Management Costs
of Enhancement Program

As outlined in my July 16 memo to you, the Senate Special Committee on Domestic and International Commercial Fisheries has been looking forward to your continuing assistance with the Salmon Enhancement Review project in the form of management cost estimates and review of the enhancement facility cost surveys. The information the Committee is relying on your division to provide is required for the completion of research being conducted by University of Alaska researchers.

Enclosed is a memorandum from Ginny Fay providing suggestions for deriving fair and accurate estimates of management costs. I believe these are valuable guidelines and I recommend that they be incorporated into your approach to the task at hand. Ms. Fay proposes that the Division of Commercial Fisheries compile the information by September 18. I recognize that the task is one of significant magnitude, and that it will be a challenge to meet this target, however I hope that you will make every effort to do so. I believe that the information which you will have in hand upon completion of the task will prove to be of lasting value to the department (especially at a time of shrinking budgets), in addition to

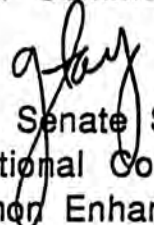
Bob Clasby
August 26, 1992
page two

proving valuable to the hatchery review project being conducted by the Legislature.

Thank you for your help, and please let me know if you have questions or concerns, including concerns about the division's ability to make the target date for completion.

cc: Jeff Koenigs

TO: Senator Dick Eliason, Chairman
Senate Special Committee on Domestic and
International Commercial Fisheries

FROM: Ginny Fay 
Staffperson, Senate Special Committee on Domestic
and International Commercial Fisheries
Alaska Salmon Enhancement Review Project

DATE: August 26, 1992

RE: Alaska Salmon Enhancement Program Review
Commercial Fishery Management Cost Guidelines

The review of the Alaska salmon enhancement program being conducted by the Senate Special Committee on Domestic and International Commercial Fisheries includes an economic benefit-cost analysis of the program.

A comprehensive survey process was undertaken as part of the analysis to determine the level and cost of enhanced salmon production in Alaska. In reviewing the original legislative study plan, the Alaska Department of Fish and Game, Division of Commercial Fisheries expressed concerns that the additional costs of managing enhanced fish stocks not be overlooked.

The guidelines outlined in this memorandum provide some suggestions for deriving fair and accurate estimates of the management costs. Any costs that are shared by the divisions should be discussed and an agreed-upon methodology established that avoids double- or under-counting costs.

The ultimate objective of the exercise is to determine the additional net management costs imposed by the enhancement program. "Net" is emphasized because the enhancement program has undoubtedly benefitted, as well as complicated, the management of commercial fisheries. For example, information provided by the coded-wire tag laboratory program has also assisted in the management of wild stocks. In addition, the net management costs should only include the additional costs of enhanced production for commercial fisheries'

Sen. Dick Eliason
August 26, 1992
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harvests.

While enhanced production has complicated fisheries management, most of the fisheries were a management challenge prior to enhancement and would continue to be even if enhancement did not occur. The management costs to be identified are the incremental management costs or the amount the Division of Commercial Fisheries budget could be reduced if enhanced production were eliminated.

It may be argued that without enhanced production, wild stocks could be more effectively managed with existing funding, however, current fisheries management funding includes enhanced production costs and could arguably be reduced without these costs.

The enhanced-production cost survey asked private facility and state facility operators to estimate their costs under a variety of circumstances. These included current, actual planned, and hypothetical decreased and increased production scenarios (see the attached survey and cover letter with instructions for more detailed information).

The Division of Commercial Fisheries is best able to estimate management costs for each of these scenarios. The management cost estimates should be consistent with levels the legislature is likely to fund given the various production cases. It should be noted that some of the cases refer to the elimination of portions of the salmon enhancement program and may result in negative net management costs.

To facilitate this review, copies of all the production and cost surveys are provided. The cost surveys contain a space for the estimation of net management costs. However, ultimately the management costs used in the benefit-cost analysis will be net commercial fisheries management costs by species and region, for example: pink salmon in Prince William Sound or sockeye salmon in Cook Inlet. Since there is more than one facility operating in many regions, it may be simpler to ignore the facility or aquaculture survey results and instead identify management costs by

Sen. Dick Eliason
August 26, 1992
page three

species and region.

Estimating these costs may be difficult, but research deadlines require that this information be provided to the University of Alaska researchers as soon as possible. If Fish and Game can provide the information by September 18, we will be able to pass it along to the University researchers. Otherwise, I would suggest using the following assumptions: net management costs equal 5 percent of facility operating costs and any increases or decreases in production would result in a five percent increase or decrease in facility net operating costs. Management costs will be allocated between commercial and personal use fisheries in proportion to the harvest by these user groups.

I have appreciated the continued assistance and cooperation of the Division of Commercial Fisheries on this project.

ALASKA STATE LEGISLATURE SENATE

SENATOR RICHARD I. ELIASON

PRESIDENT OF THE SENATE
LABOR & COMMERCE COMMITTEE
RESOURCES COMMITTEE
RULES COMMITTEE
CHAIRMAN, SPECIAL COMMITTEE ON
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COMMERCIAL FISHERIES



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Dear :

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

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

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

As with the more intensively modeled production survey, a separate survey form is included for each "project." The first page of each production survey has been partially completed based on ADF&G, FRED Division staff identification of salmon enhancement projects. If you have any

corrections to the project name or other identifying data, or if there are additional projects not included in the surveys provided, please make the appropriate corrections or additions. Blank forms are attached.

The second (blue) form is a cost-of-production survey for each facility identified under FACILITY NAME in the SALMON ENHANCEMENT PRODUCTION SURVEY. This form is called the **FACILITY OPERATING, CONSTRUCTION, AND MANAGEMENT COST SURVEY** and is designed to be similar to budget forecasting that your facility probably does for any upcoming fiscal year. Only one of these production cost survey forms is to be completed for each facility. You also should not adjust any future costs for inflation.

It is important to note that in completing the one production cost survey form for your facility that "years" in this form refers to state fiscal years (July 1 - June 30) while the production surveys refer to calendar years. However, if your fiscal year does not begin on July 1, please indicate the starting date on your survey form.

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

Operating and construction costs for some increased production scenarios are also requested in the survey form. These production increases are combined together by species (not projects) while production survey forms have been completed on a project basis. Some facilities will have more than one project and release location for a given species; this may cause some confusion in determining how to apportion these costs between projects. In these cases, the total incremental production costs (for the 15 percent increase scenario) should be estimated for the most likely and efficient combination of production from each project that would result in

the increased production. For all of the hypothetical cases in questions 4 and 5, the total annual costs for a facility should be entered on the survey form rather than the estimated change in annual costs. For example:

Two sockeye projects (Project 1 and Project 2) are carried out at Facility Z. Together they produce 20,000 sockeye harvests in 1996 and are projected to produce 30,000 harvests in 1999 to 2021.

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

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

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

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

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

Again, thank you for your time and cooperation.

Sincerely,

Senator Dick Eliason
Senate President

Jeff Koenings, Director
Division of FRED

SALMON ENHANCEMENT FACILITY OPERATING, CONSTRUCTION, AND MANAGEMENT COSTS

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- [illegible]

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

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

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

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

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

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

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

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

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

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

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

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

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

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

ALASKA STATE LEGISLATURE SENATE

SENATOR RICHARD I. ELIASON

PRESIDENT OF THE SENATE
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February 25, 1992

Rhonda Wolfe
630 Chatham
Ketchikan, AK 99901

Dear Ms. Wolfe:

Thank you for your letter regarding the problems facing the troll fishery. I am a troller myself, and have been one for most of my life, so I certainly share your frustrations and concerns about the direction the troll fishery is heading.

The U.S./Canada Salmon Treaty (and the chinook quota which it imposes) is one of the most crucial elements in the determination of the troll fishery's future. It is important that we all keep urging the Governor and the Department of Fish and Game to get tough in the negotiation process and keep fighting for an increase in the quota for Alaska.

There is also the growing charter boat problem. We are all tired of trollers making sacrifices in the name of rebuilding the stocks and then losing quota share to the burgeoning charter industry. I am very hopeful that the Board of Fish will make a firm allocation to the troll fishery at their March meeting. I believe it is an issue of fairness and common sense, and I have written to the Board of Fisheries to urge them to act.

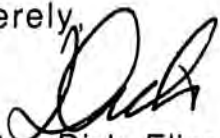
Whether the Board makes a troll allocation or not, there is still another angle on the growth of the charter industry that I believe needs to be dealt with. That is the need to give the Board of Fisheries the tools it will need to guide the future growth in the charter industry. To that end, I have introduced SB 397 which simply spells out that the Board may treat "sportfishing" and "guided sportfishing" as two separate fisheries in making regulations or allocations.

Rhonda Wolfe
February 25, 1992
page two

It is another fairness issue in that the traditional Alaskan sportsman is going to be in the same predicament that trollers are in now, if they have to continuously lose their share to the uncontrolled growth of the charter industry. This bill would give clear statutory direction to the Board that the legislature sees sport and guided sport as two different fisheries and supports the concept of differential regulation if and when the Board finds it necessary. I think this is a good first step in getting a handle on current and future problems.

Many of us are concerned about the current status of the troll fishery and challenges it is facing. There must be ways to preserve the troll fishery without causing harm to the sport and charter fisheries. All three are important. There are no simple answers or quick-fixes so we need to all keep working together to find some solutions. Please feel free to keep in touch with my staff and with me to share your ideas and concerns.

Sincerely,

A handwritten signature in dark ink, appearing to read "Dick", written over the word "Sincerely,".

Senator Dick Eliason

ALASKA STATE LEGISLATURE SENATE

SENATOR RICHARD I. ELIASON

PRESIDENT OF THE SENATE
LABOR & COMMERCE COMMITTEE
RESOURCES COMMITTEE
RULES COMMITTEE
CHAIRMAN, SPECIAL COMMITTEE ON
DOMESTIC & INTERNATIONAL
COMMERCIAL FISHERIES



P.O. BOX 143
SITKA ALASKA 99835

P.O. BOX V
JUNEAU ALASKA 99811
907 485 4916

FAX 907 465 4928

February 25, 1992

Guy Anthony Kalkins
P.O. Box 5012
Ketchikan, AK 99901

Dear Mr. Kalkins:

Thank you for your letter regarding the problems facing the troll fishery. I am a troller myself, and have been one for most of my life, so I certainly share your frustrations and concerns about the direction the troll fishery is heading.

The U.S./Canada Salmon Treaty (and the chinook quota which it imposes) is one of the most crucial elements in the determination of the troll fishery's future. It is important that we all keep urging the Governor and the Department of Fish and Game to get tough in the negotiation process and keep fighting for an increase in the quota for Alaska.

There is also the growing charter boat problem. We are all tired of trollers making sacrifices in the name of rebuilding the stocks and then losing quota share to the burgeoning charter industry. I am very hopeful that the Board of Fish will make a firm allocation to the troll fishery at their March meeting. I believe it is an issue of fairness and common sense, and I have written to the Board of Fisheries to urge them to act.

Whether the Board makes a troll allocation or not, there is still another angle on the growth of the charter industry that I believe needs to be dealt with. That is the need to give the Board of Fisheries the tools it will need to guide the future growth in the charter industry. To that end, I have introduced SB 397 which simply spells out that the Board may treat "sportfishing" and "guided sportfishing" as two separate fisheries in making regulations or allocations.

Guy Anthony Kalkins
February 25, 1992
page two

It is another fairness issue in that the traditional Alaskan sportsman is going to be in the same predicament that trollers are in now, if they have to continuously lose their share to the uncontrolled growth of the charter industry. This bill would give clear statutory direction to the Board that the legislature sees sport and guided sport as two different fisheries and supports the concept of differential regulation if and when the Board finds it necessary. I think this is a good first step in getting a handle on current and future problems.

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Sincerely

A handwritten signature in cursive script, appearing to read "Dick", written in dark ink.

Senator Dick Eliason

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

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

AREA	HATCHERY NAME, ADDRESS, PHONE NUMBER. & MANAGER	SPECIES
Kodiak (remote) (Afognak Island)	Kitoi Bay Hatchery* 211 Mission Road Kodiak, AK 99615-6399 <u>Manager:</u> Tim Joyce <u>Phone:</u> (907)486-6559 <u>Fax:</u> (907)269-5468 (call first)	Pink, chum, sockeye, and coho salmon, and rainbow trout
Klawock (Prince of Wales Island)	Klawock Hatchery P.O. Box 101 Klawock, AK 99925-0101 <u>Manager:</u> Steve Hansen <u>Phone:</u> (907)755-2232 <u>Fax:</u> (907)755-2440	Coho and sockeye salmon, and steelhead trout
Baranof Island (remote)	Little Port Walter Research Station Little Port Walter P.O. Box 9040 Sitka, AK 99835-9040 <u>Manager:</u> Frank Thrower (NMFS & ADF&G)** <u>Phone:</u> Marine Radio WRY8219 <u>Fax:</u> none	Chinook salmon and steelhead trout (pen-reared)
Cordova (remote) (Northwestern Prince William Sound)	Main Bay Hatchery P.O. Box FLJ Cordova, AK 99574 <u>Manager:</u> Prince William Sound Aquaculture Corporation* <u>Phone:</u> (907)269-5451 <u>Fax:</u> (907)269-5452 (call first)	Sockeye and pink salmon
Kodiak	Pillar Creek Hatchery 211 Mission Road Kodiak, AK 99615-6399 <u>Manager:</u> Chris Clevenger <u>Phone:</u> (907)486-4791 <u>Fax:</u> (907)486-4969	Sockeye salmon
Cold Bay (Alaska Peninsula)	Russell Creek Hatchery P.O. Box 50 Cold Bay, AK 99571-0050 <u>Manager:</u> Richard (Butch) Cobb <u>Phone:</u> (907)532-2373 <u>Fax:</u> (907)532-2450	Sockeye and pink salmon

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

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

AREA	HATCHERY NAME, ADDRESS, PHONE NUMBER. & MANAGER	SPECIES
Kotzebue (remote) (Noatak River)	Sikusuilag Springs Hatchery P.O. Box 1030 Kotzebue, AK 99752-1030 <u>Manager:</u> Peter Rob <u>Phone:</u> (907)485-2160 <u>Fax:</u> (907)485-2160 (call first)	Chum salmon
Juneau (remote)	Snettisham Hatchery P.O. Box 20 Douglas, AK 99824-0020 <u>Manager:</u> John McNair <u>Phone:</u> (907)586-3838-11 <u>Fax:</u> (907)586-3838-34	Chum, coho, sockeye, and chinook salmon
Moose Pass (Kenai Peninsula)	Trail Lakes Hatchery P.O. Box 49 Moose Pass, AK 99631-0049 <u>Manager:</u> Cook Inlet Aquaculture Association* <u>Phone:</u> (907)288-3606 <u>Fax:</u> (907)283-9433	Sockeye, chinook, and coho salmon
Homer (remote) (Kachemak Bay)	Tutka Lagoon Hatchery 3298 Douglas Street Homer, AK 99603-1942 <u>Manager:</u> Cook Inlet Aquaculture Association* <u>Phone:</u> (907)235-8486 <u>Fax:</u> (907)235-8486 (call first)	Pink, chum, and sockeye salmon

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

**ADDRESSES OF PRIVATE NONPROFIT AQUACULTURE
ASSOCIATIONS CURRENTLY CONTRACTED TO OPERATE SEVEN STATE FACILITIES**

Cook Inlet Aquaculture Association

HC 2, Box 849

Soldotna, AK 99669-9707

Office: (907)283-5761

Fax: (907)283-9433

Tom Mears, Executive Director

State Hatcheries Operated: Trail Lakes Hatchery and Tutka Hatchery

Kodiak Regional Aquaculture Association

P.O. Box 3407

Kodiak, AK 99615

Office: (907)486-6555

Fax: (907)486-5932

Larry Malloy, Executive Director

Norma Holt, Administrative Assistant

State Hatchery Operated (partially): Kitoi Bay Hatchery

Northern Southeast Regional Aquaculture Association

1308 SMC Road

Sitka, AK 99835

Office: (907)747-6850

Fax: (907)747-1470

Peter Esquiro, General Manager

State Hatchery Operated: Hidden Falls Hatchery

Prince William Sound Aquaculture Corporation

P.O. Box 1110

Cordova, AK 99574

Office: (907)424-7511, 7512

Fax: (907)424-7514

Bruce Suzumoto, President

State Hatcheries Operated: Cannery Creek Hatchery and Main Bay Hatchery

Southern Southeast Regional Aquaculture Association

1621 Tongass Avenue, #103

Ketchikan, AK 99901

Office: (907)225-9605

Fax: (907)225-1348

Donald F. Amend, General Manager

State Hatchery Operated: Beaver Falls Hatchery

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

AREA	HATCHERY NAME, ADDRESS, PHONE NUMBER, & MANAGER	SPECIES
Ketchikan	Beaver Falls Hatchery 2030 Sea Level Drive, Suite 205 Ketchikan, AK 99901 <u>Manager:</u> Southern Southeast Regional Aquaculture Association* <u>Phone:</u> (907)225-9605 <u>Fax:</u> (907)225-1348	Sockeye salmon
Big Lake	Big Lake Hatchery P.O. Box 520509 Big Lake, AK 99652-0509 <u>Manager:</u> Dan Moore <u>Phone:</u> (907)892-6816 <u>Fax:</u> (907)892-7513	Sockeye and coho salmon
Whittier (remote) (Northern Prince William Sound)	Cannery Creek Hatchery P.O. Box 788 Whittier, AK 99693-0788 <u>Manager:</u> Prince William Sound Aquaculture Corporation* <u>Phone:</u> (907)424-7511, 7512 <u>Fax:</u> (907)424-7514	Pink and chum salmon
Clear (60 miles SW of Fairbanks)	Clear Hatchery P.O. Box 40219 Clear, AK 99704-0219 <u>Manager:</u> Dave Parks <u>Phone:</u> (907)582-2964 <u>Fax:</u> (907)582-2964 (call first)	Rainbow and lake trout, Arctic grayling, Arctic char, and sheefish
Kasilof (Kenai Peninsula)	Crooked Creek Hatchery P.O. Box 430, Route 2 Kasilof, AK 99610-0430 <u>Manager:</u> Bob Och <u>Phone:</u> (907)262-4159 <u>Fax:</u> none	Sockeye, coho, and chinook salmon, and steelhead trout

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

Meeting ~~Review~~ Review

Feb. 14 - 9:00 AM
Mar. 11

1. Economic development examples - Point River

2. Green - has much new production

3. Send copy of your summary to all UTA members.

4. Gen group ~~of~~ out day research report

5. Tim D, Pat & Jonathan

6. Green - have it FRED budget submission

Wangye Sunnie
Paterbury Post
874-2301 - loc
772-9393 - Louis Thompson

all are meeting @ Monday meeting.

all meeting - 2017
Green & Tim Permit process
can request this year - 2510
Mountain Ridge

1. Dong River
case 45 MI
near 586.2902 km
1. Florida Sun - 2017
Logan & Sun Day

Hatchery Review Teleconference 2/4/92

John McMullen - PWS 4C - written testimony

oppose loan forgiveness, but not loan deferrals.
covered there by contingency funds.
differential level - on loan deferrals - based
on species (longer level for sockeye chinook)

~~James May - Dillingham - Bristol Bay tribal conf.~~
~~Fred Ziegler -~~

Don Ament - SSRAA

funding -

2 concerns - no written policy or regulation
for 6.10% interest rate
6 yr deferment + 9.5%.

Bart Watson - Armstrong - Keta

loan fund - not up to full production. Still depend on
revolving loan fund for operating costs.
don't get 3/10 tax & mitigation money.

need to look at lowering interest rates, but
need to make sure loan fund stays solvent.

marketing - ^{hatcheries} can enter into long-term contract for
value added products - give price stability

PNP: - share profit sharing ventures -
can take lead in marketing
channel efforts into areas that don't compete
w/ traditional markets.
fund AFDP

tagging important for in season mgmt.
stock is most viable.

has to be a state program - our tags show up
in a dozen processors - we can't be in charge of
recovery. has to be state-funded for recovery.

no tagging so can't determine actual #'s of
contribution to common property fishing.

peaks paying bill
chenook - who - more for common property.

have board of dir - no slots allocated by gear groups
make point of consulting w/ gear groups.

pro forma

peaks generate cash flow guidelines - 2 yrs
who - 3 yrs
chenook - 4 yrs

Henry Mitchell, BSFA - Anchorage

in western AK - small, but important commercial fisheries
complements subsistence lifestyle.

low-tech enhancement -

not much money available
had to use other funds.

Chenok, Hooper Bay, Nelson I, Nunivak I

small scale projects.

↑ funding to FRED

will respond in writing.

similar to Gulkana R. projects. - river egg boxes.

NSRAA - has done a lot.

Robert Giger Anchorage - Greenpeace.

1989, 90, 91 -

Estu I Hatchery -

small pink salmon 4-5" long. hundreds of
millions.

algae bloom

Nancy Hillstrand - Homer

concerned @ other species - crabs + shrimp,
all competing for same food source.

major predator control problem at hatcheries -
land otters, birds, fox bears. - put something

in permitting system to protect them.

quality over quantity -

until we know more, should be more cautious.

support moratorium on hatcheries.

problem w/ carcasses.

feeding in spring

taking eggs - don't get young males w/ females.

take smaller fish -

health of natural stocks - #1 priority.

agree w/ repairing systems & habitat over hatcheries



mitigation - should repair streams as mitigation instead of use hatcheries.

SE Series - Jim Bacon

success of state enhancement program has made mgmt more complicated.

major component is wild stocks - needs to be primary focus. wild stock priority needs to be in statute.

costs more money to raise fish in hatcheries -

cost recovery goals - economic development -

hatchery need for fish can supersede our ability to access wild stocks.

tighter language "significant" contribution.

try to better segregate stocks
skeptical of ability to do that.

Chris Chasse, Homer

hatchery program at inception good.

give bird of fish clear statutory authority to
protect wild stocks.

identify wildstock rearing ground - protect
habitat.

carrying capacity -

report is species specific - include impacts on all
species in ecosystem.

concerned that already impacted bird species.

- 1) restrict hatchery rearing & releases -
- 2) provide adequate authority for wild stocks
- 3) & id depressed wild salmon stocks.

provide statutory authority for emergency action
climate change impacts, ozone change impacts
sterilization of disease
id pollution sources.

disaster assistance

decrease in birds from 72 baseline studies,
not directly related to oil spill.

Fred File, Petersburg -

salmon planning must be done on regional basis
On NSRAA RPT for 6 yrs - done " " "
my only regret - needed bigger teeth & haws?
little done on rehab of wild stock. most
effort on hatchery production.
should be plan to rehab natural systems.

Dave McFadden, P'burg - trapper

chap. 11 - treaty mitigation.

problem w/ trappers. - much has gone to ADIFG.
no real intent -

Kris Noroz - P'burg - will send written

wild stock priority, cleanup not recovery & better
significant contribution of.
need mechanism for doing hatcheries that aren't contributing
need way for gear groups to opt out of agree assn
or to pay proportional to benefits.

Debra Lyons - Bur of Fish

Pete Esquivel, NSRAA - will send written testimony

1) need mark recovery program securely in place year to year. not consistent in past.
should be required whenever wiped stock occurs.
but sometimes - no big concern - ^{due to} run timing.

2) legal issues

broodstock - pretty clear, eggs are necessary.
cost recovery - never assumed it was guaranteed.
must be opportunistic in years of abundance.

3) plan + permit

regional planning is best.
permitting - FRED but chairs should have same permits.
reg. planning - state grants.
- should be state funded.

4) funding

didn't see "audits" mentioned. Payment of taxes should be audited.

groups w/ loans should have independent audits
raise 3% tax - no

Larry Malloy, Kodiak - will send written

- 1) priority for wild stocks
- 2) traditl. fishing patterns recognized & ^{sacred} protected by user group & kind of fish.
- 3) rehab efforts - must define how that stock will be maintained to keep healthy
- 4) ^{sh} impacts of hatchery production on wild stocks. protect fishery reprod baseline programs. protect trawl

supplemental production - should be closely monitored. bycatch can be addressed early on.

Oliver Holmes, Kodiak

new salmon treaty - should look at carrying capacity of ocean
Japan - has capped chum program
Russia -

need to look at whole N. Pacific.

need wild stock priority & protect traditl fisheries.
problems w/
non-regional POPs - area to be managed for west
recovery should be specified in plan early on.

— needs to be evaluation of non-profit status.
half of money goes back into operating budget.

RPT in Kotick works well.

still hamstrung by lack of clarification—
once we approve permit — management

FRED not always followed own rules. on genetics.
eggs from Kibri. to Russell C. to St. George.

w/ some more effort, enhancement can be positive.

Bruce Eagle, Wrangell.

Tom Means Soldotna CIAA — no written testimony.
overwhelming.

Tutka — lucky to get broodstock, no fish came back.

Chap 4 & 5 — should be priority on wild stocks.

Upper Cook Inlet — always assumed wild stock
should be high priority.

define term "significant contribution to common
property."

~~F.P. intercept~~

regional is only way to go.

CORRECTION

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

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should be high purity.

define term "significant contribution to common
property."

~~F.P. intercept~~

regional is only way to go.

Bruce Eagle, Wrangell

former SSRAA brd,
much of income from enhanced fish.

~
planning - extremely important
RPTs be changed to include other users groups
and federal agencies.
must be able to recommend allocations
to board.

small hatcheries. need RPT review.

restructure loan program. need more cost
recovery to make loan payments.

siting - impacts on communities.
— need to look at spreading benefits around.

Paul ~~Van~~ Callum, Valdez Fish Develop Assoc
support PWSA comments written

chap 4. mgmt.
need for regional control.

mixed stock

user pay philosophy - concept is vague,
where are we going for this?
can't keep changing hatchery program.

quality - 1989 - oil spill.

91 - late run, considered ^{local processing requirements}
both years were disaster.

run all fish thru cost recovery process,
pay flat -

avoid build up in matching harvest areas.

cape fishery - SE

terminal fishery PWS

tagging - vicious circle. can't tag unless get
cost recovery.

put mass marketing in production.

PWP policy - make cost recovery ^{guaranteed} ~~required~~ once you
give out a permit. especially ^{critical} to non-
regional since no assessment funds

funding - need flexibility - loan deferment or
emergency loans.

marketing - support Kerkira bill - want it ^{top} voluntary
restructure ASME Bd - more fishermen

historical fluctuation of wild stocks -

John Carter - pres of DIPAC

marking - many of problems come from lack of info.

DIPAC done tagging to determine contribution,
then no tag recovery work done

if you require tagging, must ensure there
is a recovery program.

if you add costs to hatching, adds to need for
cost recovery.

encourage product development -

farmed salmon not being canned.

moratorium - don't object. hope it doesn't include
moratorium on funding existing projects.

permitting - difficult process.

wel more fishermen on ASMR bonds*

→ Jerry McGatchem, Anchorage
too many fish temporary.

FISH Committee

3/18/92

Elison

Cotten

Hoffman

approved introduction of legislation.

- Loan Fund.

6-10 yrs.

no loans issued beyond 6 yr period.

6-OK for pinks

- not OK for soybean & chicken.

Drafting

commerce

draft regulations -

Dir of Investments,
structured loan payment to

SSERAA - used reserve funds to too

interest rates - maximum -

→ letter of intent - to work w/ f'g -
commerce -
never been followed thru.

work
w/ Mary

draft letter from committee - to Comm.

paper to deal w/ these issues, -

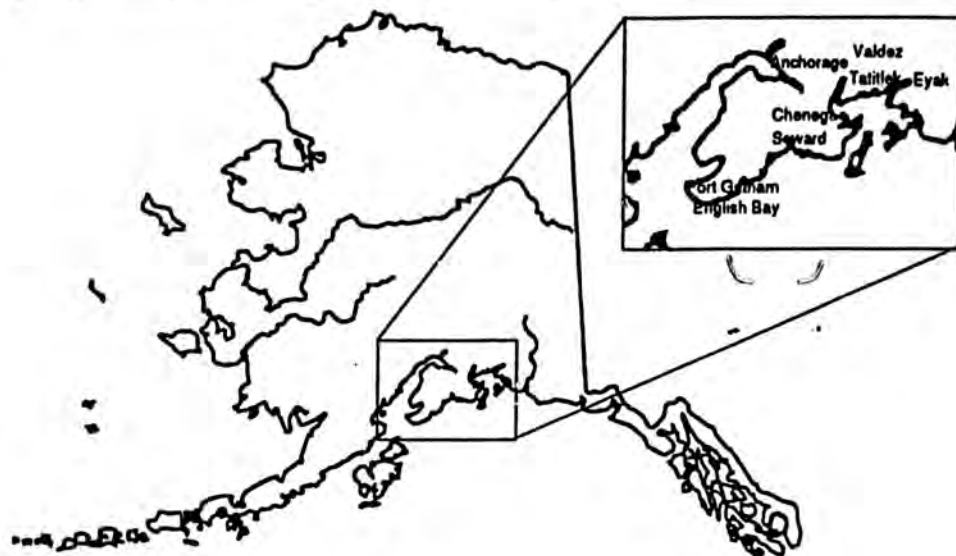
entire problem/ refer to report.

Cash flow



CHUGACH REGIONAL RESOURCES COMMISSION NEWSLETTER

Spring 1992 Vol. I No. 1



CRRC NEWSLETTER

Welcome to the first edition of the Chugach Regional Resources Commission (CRRC) Newsletter. CRRC is a native tribal organization concerned with natural resource issues in the Chugach Region of Southcentral Alaska. Its seven member board has one representative from each of the following native villages and two associations: Chenega Bay, English Bay (Nanwalek), Eyak, Mt. Marathon Native Association (Seward), Port Graham, Tatitlek, and Valdez Native Association.

In 1990 CRRC initiated a fisheries development program. Its goal is to enhance Native economic well-being by providing local employment and business opportunities to native village residents and native association members through the development of the local fisheries resource. Each project in this program is designed to pay for itself beyond the development stage. With the aid of grants and a congressional appropriation, this program has gotten off to an excellent start.



OYSTER FARMS

Mariculture projects began in Tatitlek and Chenega Bay in 1991. The objective is to train residents in shellfish mariculture techniques and have viable operations going in each village producing 1000 dozen oysters per week by 1995. So far, it looks like the oyster farms in Tatitlek and Chenega Bay will be very successful. Over 30 Tatitlek residents participated in the training last year and 15 are signed up to work on the project in Chenega Bay. The oysters in Tatitlek will be harvested this summer, one year ahead of schedule. Chenega Bay is one year behind Tatitlek's schedule.

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Port Graham Hatchery Newsletter.....	2



NANWALEK SCKEYE SALMON ENHANCEMENT PROJECT

In cooperation with the Alaska Department of Fish and game, the process of building the Nanwalek (formerly known as English Bay) sockeye run from its current depressed level of 3 - 5 thousand to historic levels of 60 - 100,000 has begun, the potential for a sockeye hatchery is also being investigated. See article "Next door in Nanwalek" in the Port Graham Hatchery Newsletter (final issue).



SHELLFISH HATCHERY

As we begin to expand production, we may run into problems getting a reliable source of seed for the project. Shellfish do not spawn in the cold Alaska waters, and seed must be imported from one of two lower 48 sources that is allowed to import into the state. If expansion of the farms goes as planned, we will have enough demand to justify building a shellfish spat hatchery of our own projects. However, others are also interested in obtaining shellfish seed in Alaska. As demand for the seed increases, it will be tougher and tougher to find. To get around the problem, we are proposing to construct our own shellfish hatchery. Seward seems to be an ideal place for the hatchery. In fact, the state compared several locations, and Seward emerged as one of the best. We are working with cooperation of the University of Alaska and the Department of Fish and Game, and hope to reach an agreement with them for the state to construct a research and development center adjacent to our hatchery where the state does research and we will build the hatchery. It will be built on Institute for Marine Science land owned by the University. We are currently pursuing funding for the project.

This newsletter is published quarterly by TNPR to keep you updated on the progress of CRRC. Look for the Summer 1992 issue due out in June. For questions or comments concerning this publication, or to be added to the mailing list, please contact:

CHUGACH REGIONAL RESOURCES COMMISSION
3300 C STREET
ANCHORAGE, AK 99503-3920
(907) 562-4155
FAX (907) 563-2891

PORT GRAHAM HATCHERY NEWSLETTER

A final Port Graham Hatchery Newsletter is being published concurrently with CRRC's first newsletter. From now on all stories and information regarding Port Graham's Salmon Development Project, including the hatchery will be contained in CRRC's new newsletter.

THE NORTH PACIFIC RIM
CHUGACH REGIONAL RESOURCES COMMISSION
3300 C STREET
ANCHORAGE, ALASKA 99503-3920

ADDRESS CORRECTION
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SENATOR LYMAN HOFFMAN
ALASKA STATE SENATE
PO BOX V
JUNEAU AK 99811

HATCHERY TIMELINE

The following timeline is a brief outline of the cycle that will occur each year in the hatchery.

SUMMER 91
Year One Egg Take

FALL/WINTER 91
Incubate Year One Eggs

SPRING 91
Year One Egg Release

SUMMER 91
Year Two Egg Take

FALL/WINTER 91
Incubate Year Two Eggs

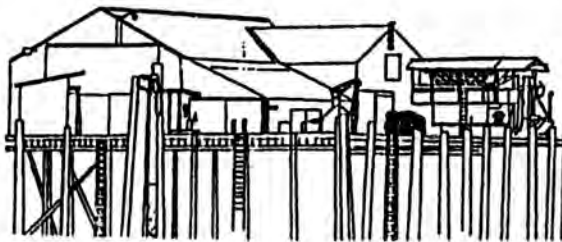
✓ SPRING 92
Year Two Egg Release

SUMMER 92
First Year Return
Year Three Egg Take

and so on...

make their sockeye salmon project work. Household surveys will be conducted and a community profile created that surveys skill levels, job interests, infrastructure needs, and processing potential. The project will include a joint meeting with the village of Port Graham in May, the object of which is to look into how the villages can work together on their fisheries projects.

About 1/2 million sockeye fry are incubating in the Big Lake Hatchery and when ready, will be transported to Nanwalek. Some of the fry will be released directly into the water and some will be put into pens and reared into smolt, and be released later in the year. We have hired Mark Schollenberger as Project Leaders. Mark, a biologist by training, will be spending most of the summer in Nanwalek setting up the program and training the village crew.



CEDC: Management and Administration of Grant, Funding. Davis Nashalook
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This newsletter was published quarterly by TNPR to keep you updated on the Hatchery. As stated on page 1, the Chugach Regional Resources Commission Newsletter will keep you updated from now on. Questions or comments concerning this publication, or to be added to the mailing list for future updates, please contact:

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NEXT DOOR IN NANWALEK...

English Bay is in the process of changing its name to the Native Village of Nanwalek, which means "place by the lagoon". Nanwalek Traditional Council received an ANA grant in October to help fund studies to look into what is required of the village to

STATUS OF PRIVATE NON PROFIT PERMIT

We are applying for a nonprofit hatchery permit. Last June we submitted our application. Step 1 was a review by Fish and Game and there were no big problems. Step 2 was a review by Cook Inlet Regional Planning Team who's responsibility it is to see if this fits in with overall plan for Cook Inlet. Although the application does fit with the overall Cook Inlet plan, there were some reservations expressed about the commercial fisherman not getting their fair share. Step 3 is to develop a management plan for the hatchery's returning fish. During step 4 public hearings will be held where residents will have a chance to comment whether or not they think the hatchery is a good or bad idea. Finally, in step 5 the Commissioner of Fish and Game decides whether or not to award the hatchery permit. We are still expecting to receive the permit in June or July of this year.

Where are we at in the process? Right now we are at step 3, developing a management plan. It is very important that there is some vocal support for the hatchery in the community during the public comment period in a couple of months. We will keep you posted as to when the hearings are held.



Port Graham Hatchery

Newsletter funded by a grant from the U.S. Department of Health and Human Services, Office of Community Services, Discretionary Grants Program

Spring 1992

LAST ISSUE OF NEWSLETTER

The federal grant from the Department of Health and Social Services that initiated this project is coming to a close. *This will be the last issue of the Port Graham Hatchery Newsletter*, and Community Enterprise Development Corporation (CEDC) will no longer be involved in the project. However, the Chugach Regional Resources Commission (CRRC) will begin a quarterly newsletter about natural resource issues and fisheries projects in the Chugach Native region, of which the Port Graham Hatchery is a big part, so we will still be able to keep you updated about the hatchery's progress.

MARKETING

We are going forward with a marketing study, the results of which will tell us the kind of salmon products the processing plant should create and what sort of revenues to expect. This will help us determine how to renovate the processing facilities to create value added pink salmon products.

SPRING / SUMMER ACTIVITIES

Three million eggs are currently being incubated in the hatchery, the fry will emerge in mid April and be held and fed in pens until the plankton densities in the water are optimum, at which point the fry will be released (around May 20th or so).

We will be increasing the capacity of the hatchery to 15 million eggs. That means we will need 27 new incubators to put all those eggs into. We did receive funding from BIA to purchase the incubators.

We also hope to dam off Cannery Creek and build a water line so that the fish will have a fresh water area to "ripen" in, before the eggs are taken. Extra workers will again be hired for the egg take this year.



FUTURE HATCHERY FUNDING

It was our hope to receive some grants for funding various aspects of the salmon project, however 2 requests have been denied recently for the hatchery project. The bulk of funds are coming from a congressional appropriation made to the Chugach Regional Resources Commission and will pay for basic operating expenses this year. Things will be tight, and we will continue to look for funding until the hatchery is able to generate its own income.

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THE FOLLOWING DOCUMENT MAY NOT FILM
LEGIBLY BECAUSE OF THE POOR QUALITY OF THE
ORIGINAL

City settles drowning lawsuit

3.19.92
JLV

JUNEAU — The city has agreed to pay \$25,000 to the family of a 5-year-old girl who drowned at Twin Lake three years ago. Vanessa Villandro drowned July 10, 1988, when the popular park near downtown was crowded with families swimming, boating and picnicking. Parents Kathy and Dale Villandro claimed the city had developed the area for wading and swimming and had a duty to provide safety equipment and supervision. No lifeguard is assigned to the area, and on the day of the accident a sign warning of potential danger was missing. The city, however, did not admit liability for the accident. In a recent out-of-court settlement, city attorneys had argued that the couple and their baby sitter were at least partly responsible for the accident. The Villandros asked for more than \$3 million in expenses and punitive damages in the lawsuit filed last May in state Superior Court. The lawsuit also named as defendants the state and the killer, Denise Sattarfield, now of Paso Robles, Calif.

Shelter set up for children

JUNEAU — A five-bed emergency shelter for runaway children is set to open April 1 in Ketchikan. The non-profit Juneau Youth Services will run the shelter, funded by a \$56,000 grant from the state Department of Health and Social Services. The group bought a three-bedroom house to use as the shelter in a residential area near Ketchikan High School. It will employ three people, with at least one staff member in the house at all times. Patricia Chambers, staff manager for the Southeast regional office of the Family and Youth Services Division, said the shelter is needed because Ketchikan runaways now must go to Juneau or Sitka for emergency stays. As many as one-quarter of the children in Juneau's emergency shelters are from Ketchikan, said Jody Engelman, Juneau Youth Services' executive director.

Borough faces \$3.5 million shortfall

FAIRBANKS — The Fairbanks North Star Borough faces a \$3.5 million shortfall in the budget year starting July 1, even without an increase in services. Mayor Jim Sampson said, Sampson said he will present a balanced budget proposal to the assembly April 2, but he did not say how he will erase the shortfall. "Our challenge is to deliver services in a time of declining revenues. And we may have to make some difficult decisions," Sampson said. Some of the shortfall stems from the \$1.9 million the borough received from the state for the current fiscal year as reimbursement for putting up a school office building. The assembly spent the money to help run borough government. But in the coming fiscal year, the assembly won't get more such money from the state. And a borough tax cap prevents it from collecting more taxes to replace the \$1.9 million. An additional \$150,000 of the shortfall is caused by lower interest rates cutting earnings on borough investments, Sampson said. About \$800,000 is the additional amount the borough will have to pay on its school debt. Sampson said the borough must divert its tax base. He said property owners are paying more than a fair share.

EPA exemption to save city money

JUNEAU — An exemption from new federal regulations will save the city as much as \$14 million in filtration equipment at Salmon Creek reservoir, officials said Wednesday. The U.S. Environmental Protection Agency last week told Juneau it would not have to build a filtration plant. Instead, the city will have to modify its current treatment plant, but at a much lower cost. The federal government's drinking water regulations are intended to prevent viruses and parasites from reaching consumers. Salmon Creek reservoir has been plagued at times by a large amount of suspended material in the water, but the reservoir's water quality is relatively high, compared to some systems elsewhere in the nation, said Bill Cissel of EPA.

TAKING A STAND

Cut down on size of Permanent Fund dividend to close fiscal gap

Is the sky falling on Alaska's state government? No, at least not yet, but don't throw away your padded hat.

Those who follow the news, which almost certainly includes those reading these editorial pages, should know that by some estimates the state is facing a \$300-million to \$900-million shortfall in state revenues in the next fiscal year. If that shortage fell on us all at once, it might indeed take a chunk of the economic sky with it.

But what Alaska needs is wise leadership and some difficult policy calls by government and the people it represents. There are no easy answers. Slashing the budget abruptly, for instance, would just make the problem worse, since it would require laying off large numbers of government employees and cutting back on programs that now support the economy. Change is essential and now is the time to start if we are to avoid disaster in the future.

As usual, Alaska is not entirely in charge of its own fate. Consider these factors:

• The price of oil worldwide, including that from Alaska, is set by the Organization of Petroleum Exporting Countries, in international cartel dominated by



Larry Baker

Middle Eastern countries.

• The rapid lowering of barriers to international trade and investment has created brisk competition for petro dollars that could otherwise be spent in Alaska.

• The decision on opening the coastal plain of the Arctic National Wildlife Refuge to oil and gas exploration will be made by members of the U.S. Congress, many of whom put the interests of Alaskans far down on their priority lists. ANWR could create jobs in virtually every state in the union, but with a presi-

dential election this year, drilling supporters may need to keep their heads down until some time around Groundhog Day of 1993.

• Construction of a natural gas pipeline from the North Slope depends on factors mostly outside the control of Alaskans, including market prices, the international economy, gas availability, investor interest and the salesmanship of those with Alaska gas or investment positions.

Some of these questions may be resolved in Alaska's favor, but we are unlikely to get any near-term economic relief from the unavoidable problems that oil production from existing fields is on the decline — and significant new production is years away, at best. Since oil provides 85 percent of all state revenues, a crunch seems inevitable.

I reject the idea of reviving the personal income tax now because it would simply take more money out of an already tight economy. There is very little loose cash floating around which could be captured by such a tax; it would be a self-defeating way to shift the state spending burden.

These appear to be our best near-term

options:

• Draw down on the legislative reserve funds this year and begin a systematic reduction in state spending.

• Use reserves judiciously over the next few years to cushion the effect of continuing spending reductions.

• When spending is reduced to cover essential state services and whatever non-essentials the public is willing to support, a ceiling could be set on the size of the Permanent Fund dividend checks. A portion of Permanent Fund earnings could then be used to fund state government.

Certainly before voters will accept a cap on Permanent Fund dividends, they must be convinced that government spending is under control and that the additional fund earnings will be well used.

At present, the state has approximately \$600 million in its budget reserve. Spending it all — or a major portion of it — in a single year would be irresponsible and merely postpone the crisis. And postponing a problem is often the best way to turn it into a disaster.

It will not be possible to do more with less money, believe it or not, most state employees do work hard. Adding signif-

cantly to their workload would accomplish nothing. If the state has less money, it must cut services and gradually reduce the size of the state work force.

When the coffers are bulging, new services and programs were added to the point where our per-capita expenditures lead the nation. With less cash to work with, we must get realistic about which services are essential, which can be cut back and which can be eliminated altogether.

Making such cuts will require some difficult policy decisions. Every program has its own constituency. I doubt there is any state program which doesn't have friends, people who support or benefit from it who will howl loudly if it is trimmed.

We will not be able to afford the same government we have for long. If we don't address the problem now — and phase in cutbacks gradually — we will eventually face an emergency which we cannot avoid, and the pain will be far greater than if we start facing it now.

Republican Larry Baker represents Anchorage District 10-A in the State House. Opinions expressed in Taking a Stand do not necessarily reflect the editorial position of The Anchorage Times.

BEATING UP ON SALMON

Another blow

3-19-92

HERE WE GO again. On Feb. 27, The Los Angeles Times published a story on seafood that threatened to further taint the image of Alaska's salmon, albeit indirectly.

But the story was wrong, according to the FDA. The reporter incorrectly linked data from one FDA survey of plant sanitation and manufacturing to another more recent survey of seafood samples. The reporter applied statistics from one survey to reach conclusions on the other survey.

Then the story went out over the wire nationwide.

The California newspaper asserted that the FDA's survey of seafood processing facilities showed that "as many as 20 percent" of the samples analyzed "showed evidence of microbiological contamination, decomposition and filth."

Within a day, the FDA said the Los Angeles Times statement "was in error."

IF ONLY WE could philosophically shrug our shoulders and say, "bad reporting — it happens." But we can't, not when it comes to one of Alaska's most important industries.

It's a replay of the bad press salmon got when Consumer Reports published a sweeping indictment of seafood in its February issue.

Incidents like these do not help Alaskans struggling to promote seafood in general, and salmon in particular, to a larger Outside market.

But it looks like it's not going to stop. The National Fisheries Institute has alerted the industry that continued assaults on seafood safety are in the works.

A small group called Public Voice for Food and Health Policy reportedly is planning more attacks over the next few months using the media. In March look for a challenge to the FDA and Centers for Disease Control statistics on seafood-related illness. In April, expect a release of "victims' case studies." And in May, another challenge to the FDA when it releases its major diet study.

THE SEAFOOD industry makes up one-sixth of the state's economy, according to Kim Elton, executive director of the Alaska Seafood Marketing Institute. Mr. Elton spoke to a Resource Development Council meeting in Anchorage following the Los Angeles story.

Fish are the second-largest revenue generator in the state, and Alaska's annual harvest represents approximately 55 percent of all seafood landings in the United States.

Alaska seafood gets lumped in with Lower 48 problems at the very time it is striving to tempt more palates. World production of salmon exceeds 2 billion pounds annually, with world consumption at about 1.8 billion pounds — thus the glut on the market.

What's needed is a strong coalition between fishermen, the industry and the state to mount an effective communications campaign about Alaska's seafood. At the same time, there needs to be a stronger federal seafood inspection program — one that works in cooperation with the state Department of Environmental Conservation — to assure consumers they're getting a wholesome product. The FDA currently has a program, but its resources are primarily aimed at imports. It needs to turn its attention to domestic seafood as well.

A strong inspection program combined with effective public information will convince consumers that Alaska seafood, in particular salmon — as we can testify — is safe and nutritious.

Lawmakers move on school bond measure

ASSOCIATED PRESS

3-19-92

JUNEAU — Lawmakers are considering a statewide bond issue to raise money for school construction and repairs, as it appears less likely there will be much of revenue for such projects next year.

A new version of a House bond bill Wednesday moved out of a committee where it had been stuck for two months. And two similar Senate bills also are getting attention.

Lawmakers have to find a way to fund new classrooms because of the increasing number of school-age children in Alaska, said Sen. Jay Korttula, D-Palmer, and co-chairman of the Senate Finance Committee.

Two years ago the Legislature adopted a new system for funding school construction projects. School districts annually submit a yearly list of their construction needs to the Education Department, which ranks them. Priority for full state funding is given to projects that replace or repair schools so old or damaged that they are dangerous.

The problem is little money has been available to fund any but the top several projects.

Hickel's \$300 million public works budget proposes about \$27 million in school spending, only enough to pay for work on six schools. The full list of projects submitted to the department totals about \$640 million.

To raise more money, Korttula and several other legislators are advocating a statewide bond issue of between \$170 million and \$383 million.

Sen. Pat Pourchot, D-Anchorage, and the other Finance co-chairman, said that approach is gaining popularity because bond issues do not take money out of the public works budget. Bonds are loans that must be paid back from future state revenues.

Rep. Mark Boyer, D-Fairbanks, advocates a bond issue with payments of seven to 10 years.

"We're not talking about future generations, we're talking about us," Boyer said. "I think there's more and more interest all the time."

But administration officials say they are concerned about the long-term costs. The state already faces a \$600 million share of municipal school bond debt over the next 20 years, Education Department spokesman Harry Gamble said.

Under the old system, communities were reimbursed by the state for most of the cost of school construction and renovation financed by bond issues. The state, however, did not choose the projects.

That lack of full control was behind the 1990 legislative push in favor of full state funding with tighter control.

Hickel budget director Shelby Stusny said the administration might consider bonds for construction as long as local communities pay a share of the cost and lawmakers pursue some of Hickel's legislation.

There is no guarantee a bond issue will be passed this session for submission to the voters. For a bond issue to pass, it must provide projects to all of the state and not just the most needy Bush communities, said Sen. Jim Duncan, D-Juneau.

"The challenge is going to be to put together a package in the Legislature that will get political support," he said.

Rep. Fran Utner, D-Juneau, said that is part of the problem with bonds.

"They become Christmas trees people hang things on because you have to keep adding things to gain support," she said. "I think we're a long way from getting a big bond issue together this year."

The Legislature is considering three school bond proposals. Korttula has a \$170 million plan; Sen. Paul Fisher, R-Soldotna, has a \$200 million package; and Boyer has a \$383 million bill.



INSTACOOOL FRESH: MINI MOBILE PROCESSING UNIT

In addition to ex-vessel business, fishermen can now sell value added products to the ever growing, premium quality, domestic seafood market targeted by the "InstaCool Fresh" marketing network. Where 10,000 lbs round weight has an ex-vessel value of \$8,000.00 the "InstaCool Fresh" H&G market would be \$20,160.00.

The additional cost of packaging and labor to produce H&G product will be off-set by selling roe as shown in the following proforma. Value added steak and filet sales as well as post harvest use of the Mini Mobile Processing Unit will only enhance the overall profit picture.

Ideally suited for remote locations, InstaCool's 24' Mini Mobile Processor can convert 10,000 lbs/day of round weight sockeye salmon into value added, "InstaCool Fresh" H&G, steak and filet products.

InstaCool's 24' Mini Mobile Processing Unit will have a positive economic impact on rural and under developed fisheries. InstaCool's marketing network, "InstaCool Fresh", puts even the remotest fisherman into a direct contact customer relationship.

PROFORMA

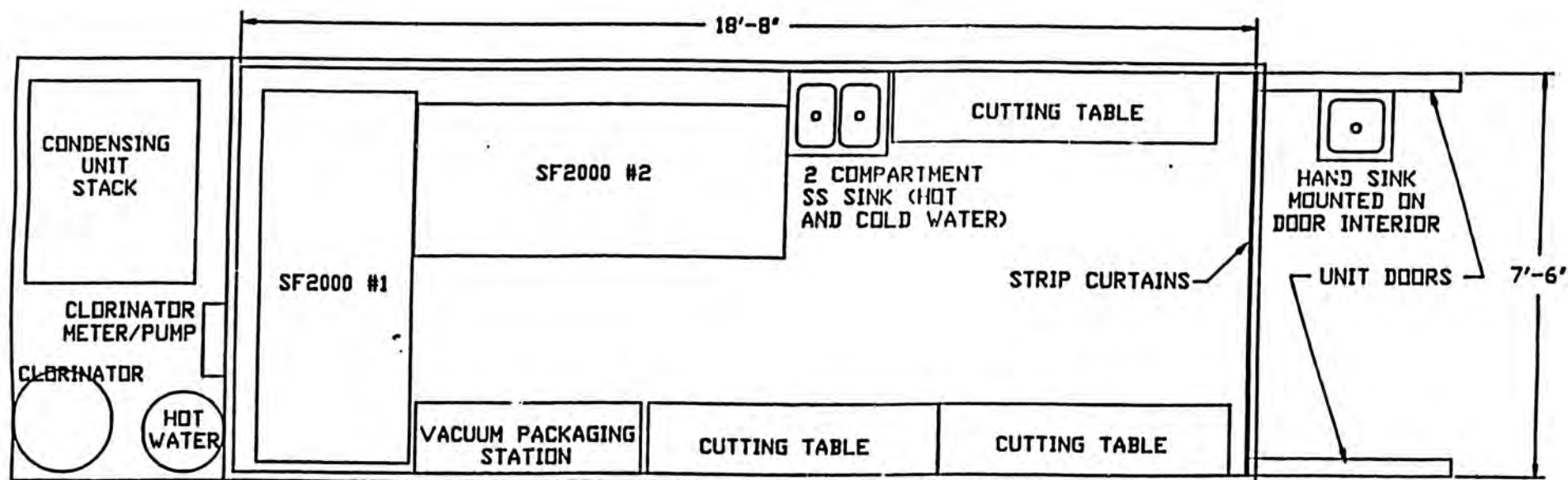
Limited Entry: Sockeye Salmon Fishery: 50 Day Season: 500,000 Pounds Total Round Weight

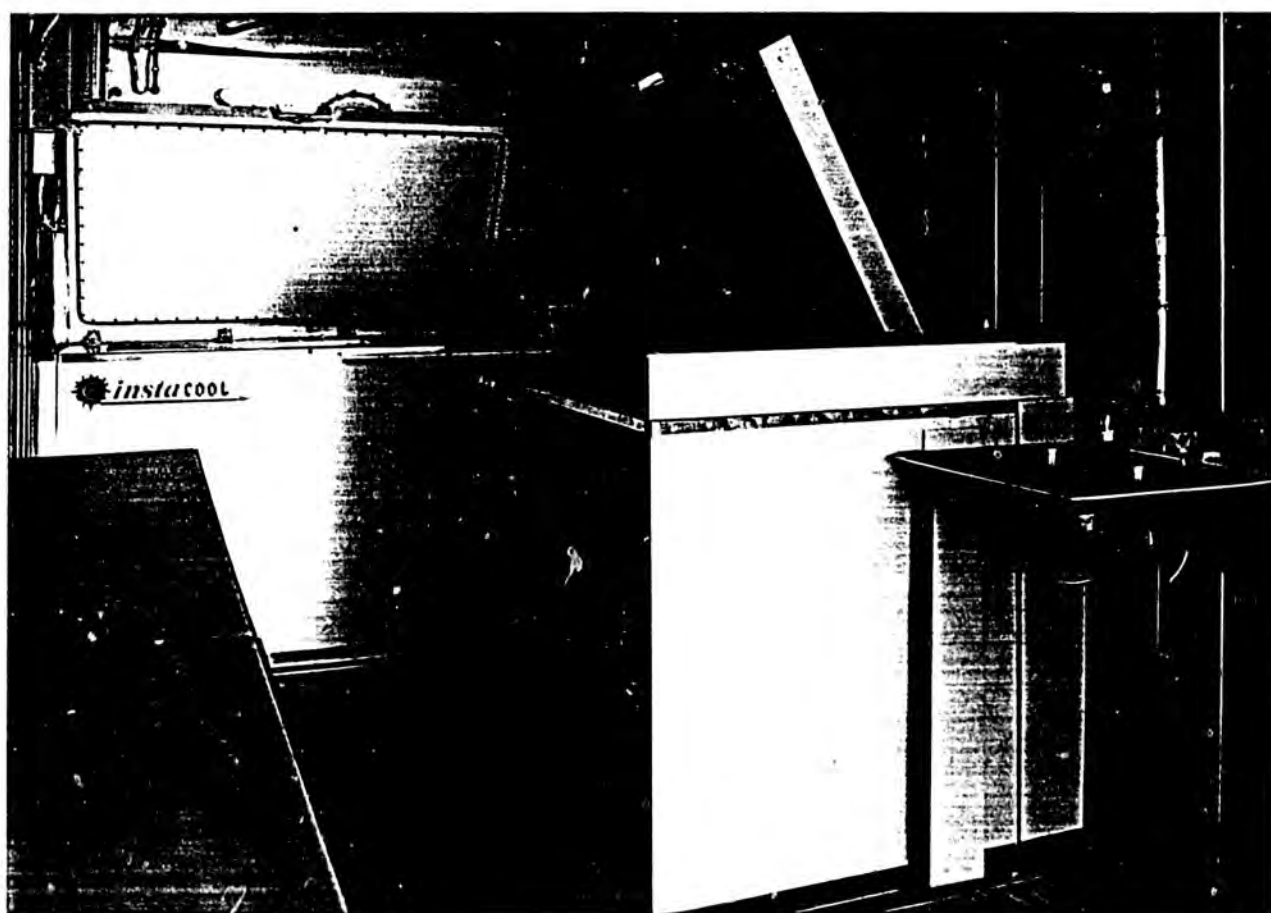
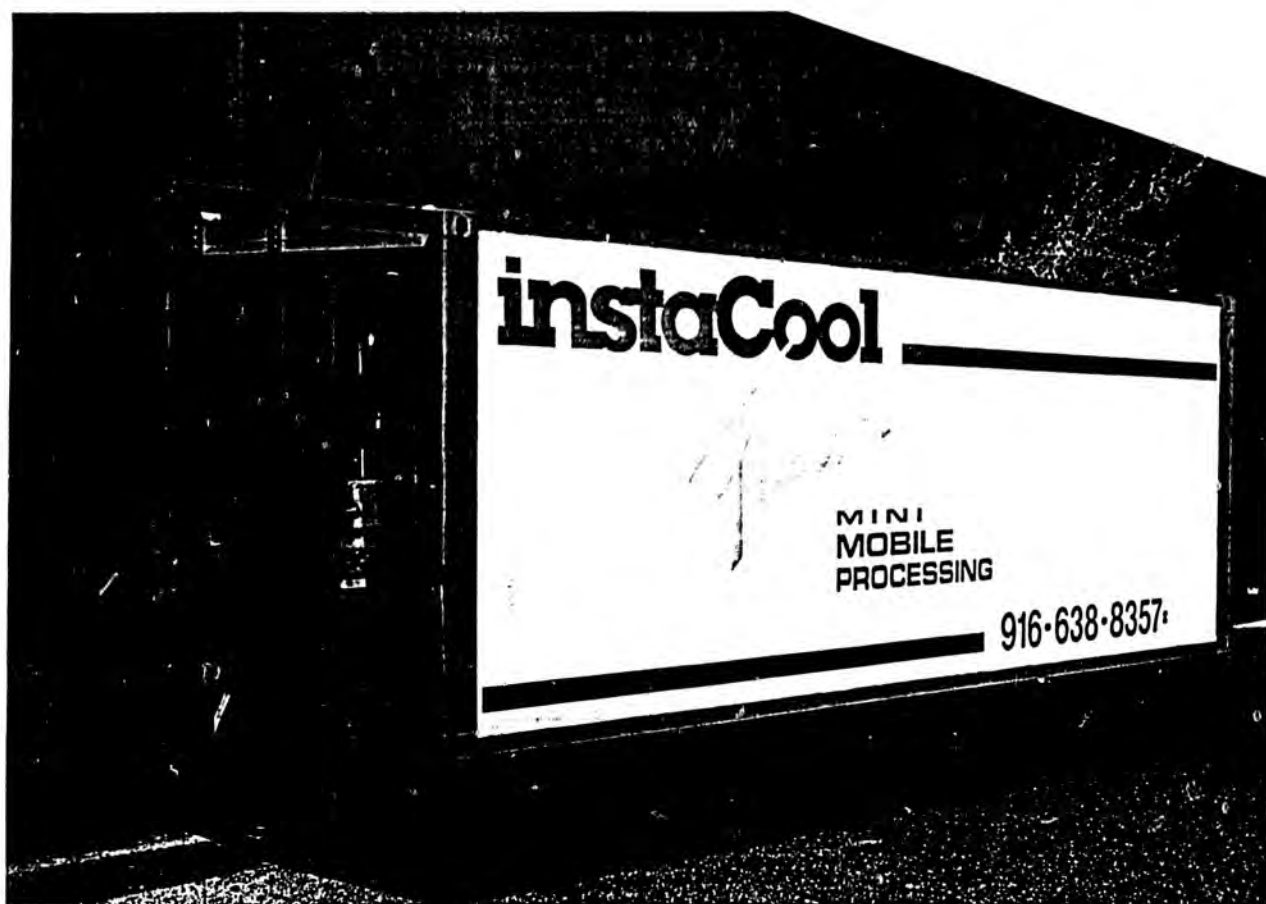
H&G, "InstaCool Fresh" sales @ \$2.52	\$ 1,008,000
Green Roe Sales to AK Processor @ \$4.65	<u>116,250</u>
Total Revenue	\$ 1,124,250
Round Weight Value @ .80/lb	\$ < 400,000>
Local Labor	< 80,000>
InstaCool Freezing	< 63,000>
Packaging	< 20,000>
Storage & Shipping	< 20,000>
Fuel/Utilities	< 9,000>
Completed Products Insurance	< 5,000>
Licn, Fees, Permits & Misc.	< 3,000>
Total Cost	\$ < 600,000>
Net Before Tax	<u>524,250</u>

The "InstaCool Fresh" total revenue of \$1,124,250.00 presumes several things:

1. The Mini Mobile Processing plant in question was designed for a 400 lb/day through-put of frozen H&G product.
2. The intensity of an Alaskan fishing season will necessitate a 24 hr/day plant operation.
3. Fish sold "InstaCool Fresh" will bring \$2.80 per pound as per the Umer Barry Seafood Price Current Publication. Marketing costs of 10% will result in a net "InstaCool Fresh" H&G sales price of \$2.52 per pound.
4. Green roe production of 1/2 pound per female fish can be sold for \$4.65 per pound to local AK processors.
5. Local labor: burden rate of \$20.00/hr. 100 man hours/24 hour plant operation.
6. An InstaCool 60 month lease with \$10,500.00 down and \$5,250.00/month minimum usage fee or \$.05/pound of product frozen whichever is greater would allow a fisherman to process 1,260,000 pounds per year. The Alaskan season is short and intense, resulting in under-utilization of the capital equipment. Therefore, the minimum usage fee (\$63,000.00) also becomes the effective maximum usage fee.
7. Utilities are calculated based on a 28¢/kwhr electrical cost and a known yield of 12.8 pounds of frozen fish per kwhr. The other expenses are taken from vender quotes for services rendered.

MINI MOBILE PROCESSING UNIT LAYOUT SHOWING DOORS OPEN





Crab Pot Limits in AK

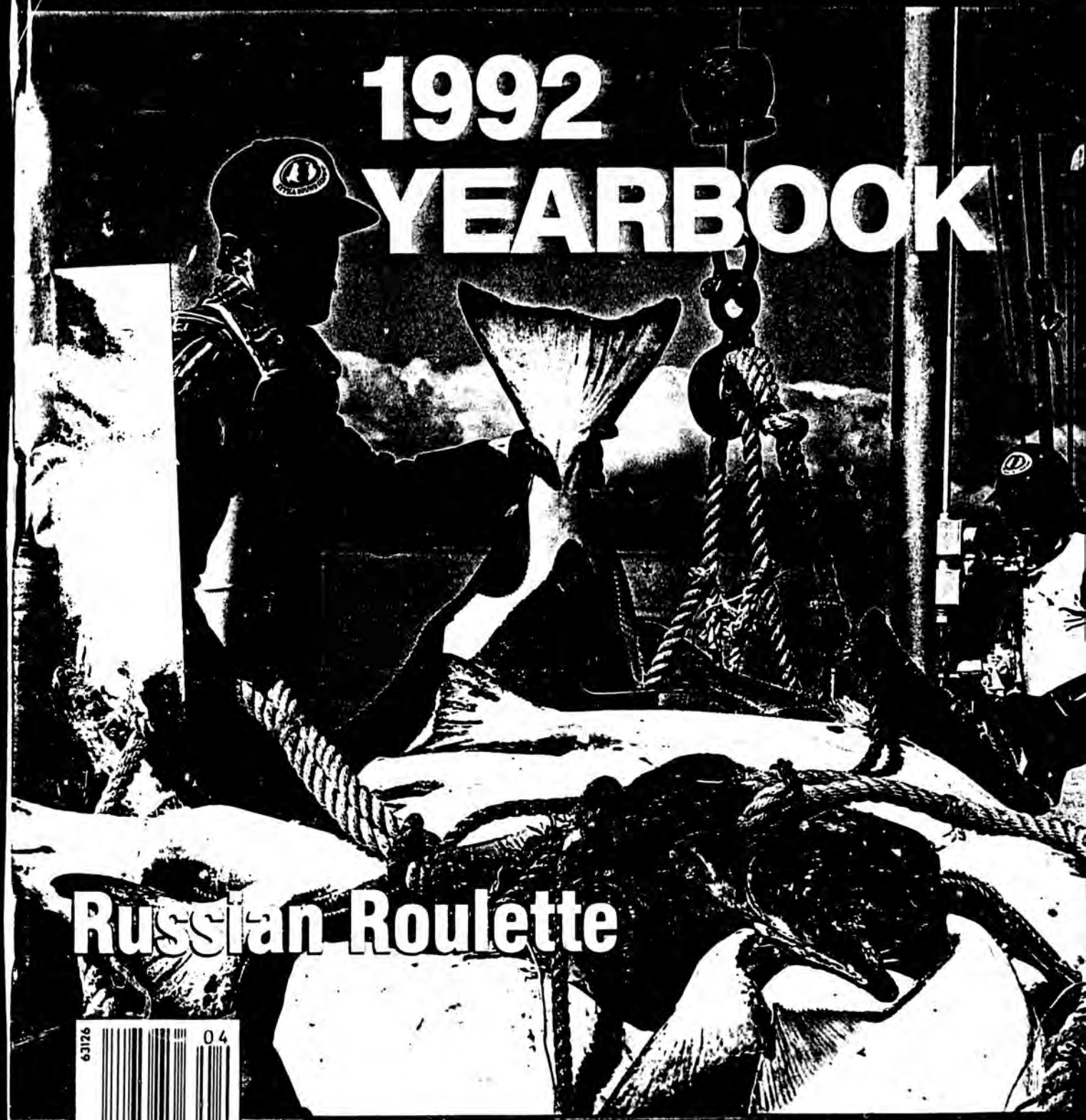
Halibut Quota Up

Coastal Coho Quandary

Pacific Fishing

ALASKA ■ BRITISH COLUMBIA ■ WASHINGTON ■ OREGON ■ CALIFORNIA

1992 YEARBOOK



Russian Roulette



CORDOVA, AK

AK Ponders Hatchery Programs

From Shining Star to Falling Star

Alaska's 20-year-old salmon enhancement program, once touted as the savior of the pink fishery, has come under increasing scrutiny of late. Even before the disastrous season last year, the Alaska Board of Fisheries requested that the state legislature take a look at all aspects of the program in a general overview. Since then, rock-bottom prices, underweight fish, and reduced escapement of wild

fish have inflamed the passions of fishermen standing on either side of the hatchery issue.

Responding to the board's request of February 1991, the Alaska legislature initiated an examination of the program and began hearings on the topic in February of this year. A recently submitted draft report lists possible changes that include creation of a statewide hatchery planning board that could impose regional production caps, guidelines for the Board of Fisheries on management of mixed wild and enhanced stocks, and the funding of studies that will help determine how much straying of hatchery stocks occurs and what effect it has on local gene pools. Concur-

rent with this overview on hatcheries, an additional study is being conducted looking into questions affecting all aspects of wild and hatchery price and production. The study will be submitted to the legislature in April.

According to the report, intermingling of wild and hatchery stocks causes concerns among fisheries scientists for numerous reasons. While hatchery stocks in Prince William Sound have become the mainstay of the pink fishery, biologists are told to manage to sustain the viability of wild stocks at the same time. This mandate dictates that hatchery fish must be separated from wild stocks when harvested. The only practical way to do this is to harvest them at the terminal area of the hatchery, by which time they have deteriorated in quality and are less valuable. This, in turn, increases the pressure to harvest them in outside waters while they are still fresh but co-mingling with wild fish.

Scientists have other causes for worry about increasing interactions between hatchery and wild salmon stocks as well. Some fear that diseases could be passed along that would result in the loss of indigenous species. While this has never happened in Alaska, it is not uncommon in the vicinity of other hatchery programs. Some scientists also believe that the carrying capacity of the near-shore and high-seas waters may be exceeded by large-scale releases of hatchery salmon. Evidence from last year's fishery indicates this would affect the size of the fish rather than the total number.

Biologists also worry that

widespread sexual interactions among the stocks will reduce the genetic diversity of wild stocks. Such interactions often come about through the practice of remote releasing of hatchery fish in order to disperse them throughout a large district. It is known, said the report, that the greater the distance between the remote release site and the hatchery, the more likely it is that the fish will follow their instincts and "stray" up nearby streams to spawn with wild fish.

"Many scientists are concerned about extensive remote releases practiced by many hatchery operators today," the report said. "They fear that such straying could potentially, in time, destroy genetic diversity—resulting in permanent, irreversible loss." Scientists believe the practice should either be banned or should be permitted only under stringent controls, the report said.

The legislative report included options that would create a state policy on management of mixed wild and hatchery stock fisheries, a statewide planning board that could impose production caps, increased tagging and marking studies, and a study that would analyze the quality of salmon at different distances from terminal areas. The report also examined the state funding of enhancement programs which, since 1972, has totaled \$210 million. It offered options for the legislature to consider that included analysis of the enhancement tax program, a more extensive cost-benefit analysis and a possible moratorium on state enhancement loans.

continued on p.102

KODIAK, AK

Trawlers Bow to By-catch

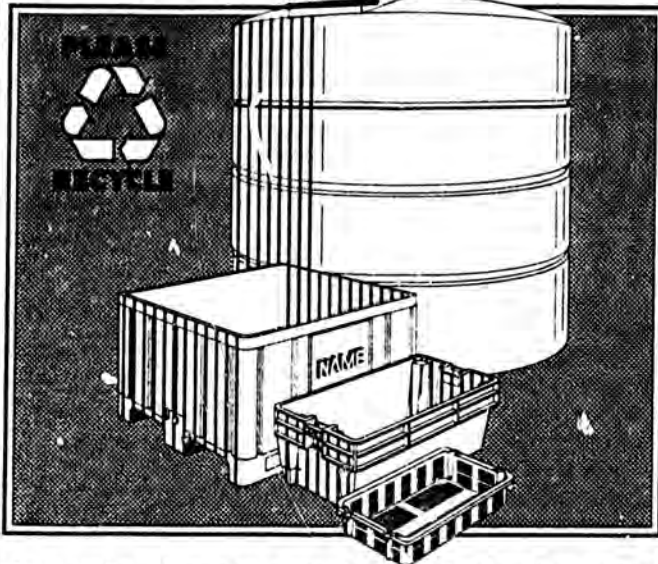
After only three weeks of fishing, the Bering Sea was closed to all bottom trawling for cod and pollock February 16 when the halibut by-catch cap was topped at a record pace. Factory trawlers took most of the halibut at a by-catch rate double that of shore-based vessels. With only about a third of the valuable pollock roe harvest landed, trawlers may continue to fish using mid-water gear.

Pacific cod will also be off-limits to bottom trawlers in that region until April 1 when the second quarter release of by-catch will be made available. Bottom trawling for all species is also prohibited in Zone 1, which encompasses most of the area east of the Pribilof Islands, because by-catch of Baird Tanner crab has exceeded the limit. And despite a delay in the pollock fishery that was intended to reduce chinook salmon by-catch numbers, 9,000 had been taken in the Bering Sea. In the Gulf of Alaska, 3,200 chinooks were taken, mostly by mid-water pollock fishermen. Though the North Pacific Fishery Management Council passed chinook by-catch standards at its December meeting, they have yet to be approved in Washington.

—Donna Parker



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NEWSNET

however—the disagreement is not likely to be a treaty-breaker. While both Chamut and Blum acknowledged the seriousness of the issue, they also stressed their perception that the commissioners on both sides intended to resolve the issue with a minimum of rhetoric and, they hinted, a great deal of horse trading.

Chamut says that, although the U.S. offer to not fish early Stuart stocks did not change the situation because it didn't mean they would cut back on their overall catch, he was encouraged by their willingness to look for solutions. He added that Canada might be willing to consider higher catch levels in the convention area if the U.S. were willing to cut back on catch levels of Fraser River-bound fish in Alaska's Noyes Island fishery.

Says Blum, "We are not out to stiff Canada; but on the other side, you can imagine it can be very disruptive to have 510,000 fish taken out of the 7.09 million you were anticipating." And while he would not indicate what new offers his side might be prepared to put on the table, he did say that the Noyes Island catch issue should be seen against the larger backdrop of the treaty negotiations. Says Blum, "With or without this issue, both sides would naturally come into the situation attempting to improve their share of the resource."

In any case, fishermen following the debate will most likely have to wait until at least April, when the commissioners meet again, before they hear what solution the two countries reach.

—T. J. Doherty

AK Ponders Hatcheries

continued from p.26

In its look at marketing, the report's options included a review of the state's role in marketing of Alaska seafood and development of a national salmon marketing council. However, most of the discussion centered on the Alaska Seafood Marketing Institute. One option asks that ASMI's statutes be expanded to include new market development.

PWSAC Talks Back

Most of the hatchery backlash finger-pointing has been directed at the Prince William Sound Aquaculture Corporation whose huge hatchery production contributes over 30 million fish to that region annually. Detractors blame PWSAC for the price crash that last sum-

mer saw pink salmon go for a mere 12 cents a pound; but PWSAC's Armin Koernig says they are pointing their fingers in the wrong direction.

"There are people who have wanted to blame someone and they are saying the crash wouldn't have happened if hatchery production in PWSAC hadn't been so high. Some people say we should curtail our pink production to match market capabilities, but the answer fishermen give here is that we don't believe we're overproducing, we believe industry is underselling. We need to find new product forms and develop better consumer acceptance, not cut back production," says Koernig.

Koernig has been so intimately tied to the development of salmon enhancement programs that one of the state's largest hatchery facilities is named for him. He blames the price crash on the antiquated market manipulation used by processors. In the past, said Koernig, processors were

able to control the size of the pack by setting the fleet on delivery limits, and unwanted fish escaped up the streams. However, with hatchery production, they can no longer do that. Uncaught fish typically return to the hatchery where they mill around and die, but last year the large volume required that they be caught and dumped at sea. "So the old approach of the processing industry doesn't work anymore," said Koernig. "It causes real social and environmental problems as we saw last summer in PWS."

In answer to accusations that increased hatchery production in PWS increases the likelihood of intermingling and dilution of wild stock gene pools, Koernig says the state and aquaculture associations select hatchery brood stock that will have the least effect on natural stocks. The problem, he says, is trying to find a brood stock that will satisfy both managers and geneticists. Managers would like fish whose return timing is significantly different than the nearby wild stocks so that over-harvest of wild stocks and fishing in terminal areas can be avoided.

"The perfect situation for a manager is to separate wild fish from hatchery fish; but when it comes to proper selection of brood fish, the geneticists have concerns about introducing a stock that is alien to the environment. So what is great for the manager to protect wild fish is unacceptable to the geneticist for the protection of wild fish—and that causes a gridlock. We are wrestling with this problem in PWS and for anyone to think we are indiscriminately farming fish is a misconception," Koernig said.

While Koernig welcomes examination of the state's hatchery programs, he fears that this legislature review

may be nothing more than a witch hunt.

"I don't want to bad-mouth this whole thing and we have participated in many discussions and course changes in the enhancement program for years; however, this time there seems to be a number of enemies of the hatchery program that have gotten together and are using this economic situation to voice their biological concerns," he said.

Koernig said there have always been people in the wings with bias against hatchery programs. "They would be happy if there were no hatchery programs at all... but I think it comes down to a philosophical difference. In the future," says Koernig, "a large portion of the world's food will come from the ocean. We need to figure out how to do this without being environmentally destructive. What you're looking at here is the beginning of a future that will feed people on this earth and, unfortunately, the theory that you just take what Mother Nature gives you is no longer good enough to support the world population."

—Donna Parker

Sunken Gillnets On the Rise

continued from p.39

developing fishery, said Management Branch Chief Galen Tromble, and "we're somewhat concerned about it, because we don't know what the implications are for the future. If it's two or three vessels, no problem. If it's 150 or 200, we'd have some things to decide."

The Alaska Board of Fisheries convened a special meeting March 3-6 to revisit the matter of sunken gillnets as *Pacific Fishing* went to press.

—Joel Gay

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April 8, 1992

The Honorable Lyman Hoffman
P.O. Box 886
Bethel, Alaska 99559

Dear Lyman:

This is in response to the Jan. 27 letter to the Congressional delegation signed by all members of the Legislature.

While it now appears that the Consumer Reports article criticizing salmon (and other seafood) quality has not changed consumer perceptions or behavior, we haven't seen the last of this issue.

During the last Congress, there was an effort to craft mandatory federal seafood inspection legislation. I was an enthusiastic supporter of this effort, as I firmly believe it would go far toward solving some of the very real problems that even good seafood suffers on its long trip from the sea to the table. I gave my support to a proposal patterned after the State of Alaska's program, which is widely considered to be the best in the nation. Unfortunately, this effort foundered because some others favored an approach backed by the meat and poultry industries, which I believe would have been detrimental to seafood in the long run.

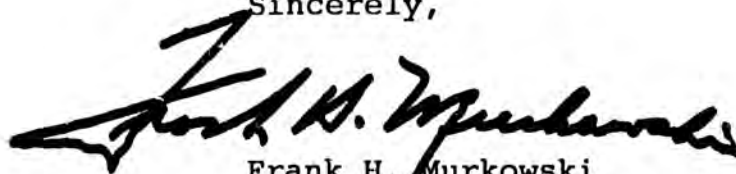
Labeling of farmed salmon has been suggested many times, and may well be one method of helping differentiate Alaska's wild fish from the pack. Many farms use chemical and drug treatments to increase the survival rate of their fish, and that information should be available to consumers, as should information on the fish's country of origin. It remains to be seen, however, whether such a labeling requirement could be imposed administratively, or would require Federal legislation. My preference, frankly, is for the former approach, if it is possible to achieve it.

I assure you that this issue is never far from my mind, and I will be working with the other members of the

The Honorable Lyman Hoffman
April 8, 1992
Page 2

delegation to achieve a result that benefits this critical
Alaska interest.

Sincerely,

A handwritten signature in dark ink, appearing to read "Frank H. Murkowski". The signature is stylized with a large, sweeping initial "F" and a long, horizontal stroke extending to the right.

Frank H. Murkowski
United States Senator

SALMON NEWS

April 1992

No. 2

The U.S. Salmon Market

There are 250 million potential salmon consumers now living in the United States. On average, they are highly educated, health conscious, and among the most affluent consumers of any nation. In recent years, nutritional experts have urged Americans to eat more seafood. In particular, they have encouraged us to eat seafoods rich in Omega-3 fatty acids, like salmon.

These characteristics make the U.S. the largest potential market for increased sales of Alaska salmon. Yet, in 1989, Americans ate only about one pound of salmon per person — in any form — compared to 130 pounds of beef and pork and 80 pounds of poultry. Of the salmon we did eat, about 75% was Alaska salmon. The remaining 25% was supplied by other states, Canada, northern Europe and South America.

Why aren't U.S. consumers eating more salmon, and specifically, more Alaska salmon? The best available current information tells us the following:

- *U.S. consumers lack knowledge about salmon purchasing, species, size and quality;*
- *Consumers prefer fresh salmon to frozen, and very little Alaska salmon is sold fresh;*
- *Consumers age 55 and older are the largest purchasers of canned salmon, and this group represents only a small percentage of the U.S. market;*
- *Consumers perceive canned salmon as old-fashioned;*
- *Consumers who buy canned fish prefer tuna to salmon;*
- *Consumers, in general, have a low awareness of salmon;*
- *Restaurants do not generally serve canned salmon; and*
- *Sellers are not able to build long-term marketing programs for Alaska salmon due to irregular supplies and/or prices, nor do they have access to good, detailed information about U.S. salmon consumption patterns.*

Current U.S. Consumption of Alaska Salmon

Precise data on how much and what species of Alaska salmon is eaten in the U.S. is not available, however, we can get an estimate based on data for U.S. produced salmon.

Alaska harvests have comprised about 91% of U.S. salmon harvests during the last five years (Figure 1). Most U.S. salmon has been exported during this period, with the exception of pink and chinook salmon (Figure 2). Figures 3 and 4 show domestic consumption compared to export, separately, for both for canned and fresh/frozen U.S. salmon production.

Figure 1. Alaska Salmon Harvests as a Percentage of U.S. Salmon Harvests, 1986-1990
(in millions of pounds)

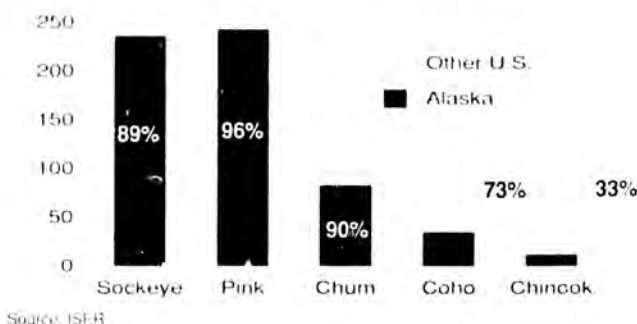
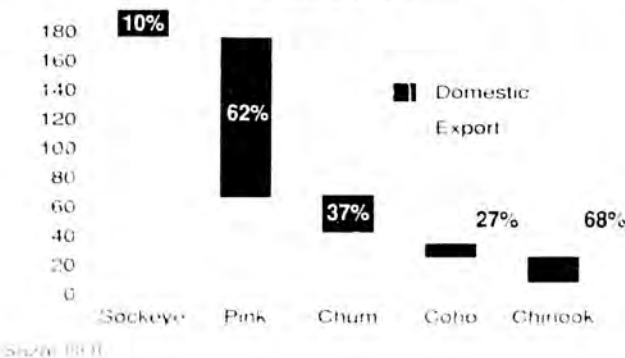


Figure 2. Domestic vs. Export Markets for Canned and Fresh/Frozen U.S. Salmon Production, 1986-1990
(in millions of pounds)



This paper is by Eini Eklöv, a national marketing specialist. It is the second in a series of papers, a video program, and regional workshops intended to provide information and encourage fishermen and others to work together to improve the market for Alaska salmon. The project sponsors are the Alaska Commercial Fishing and Agriculture Bank (CFAR) and the Alaska Dept. of Commerce, Division of Business Development. For more information, contact Eini Eklöv, project coordinator, 119 Seward St., No. 7, Denali, Alaska 99501. Phone: 407-780-3333; Fax: 407-780-4444.

Figure 3. Domestic vs. Export Markets for Canned U.S. Salmon Production (5-Year Average, 1986-1990)
(in millions of pounds)

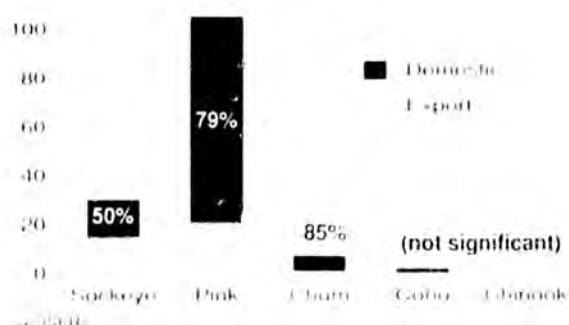
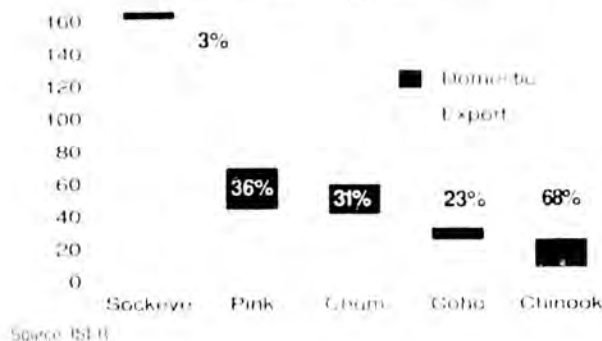


Figure 4. Domestic vs. Export Markets for Fresh/Frozen U.S. Salmon Production (5-Year Average, 1986-1990)
(in millions of pounds)

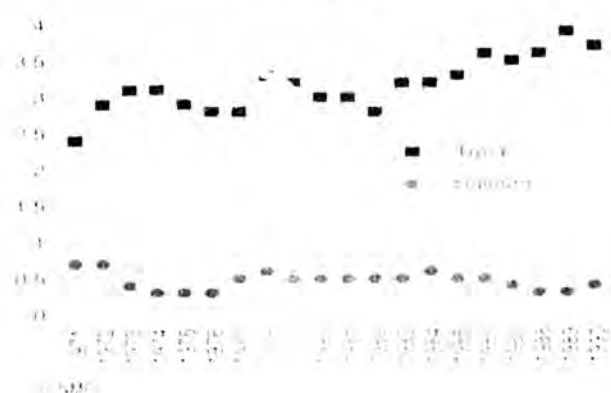


Source: ISIRI

Trends in U.S. Salmon Consumption

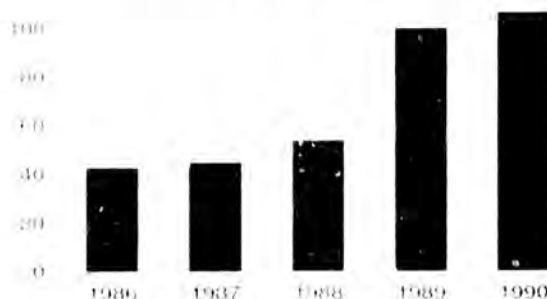
Recent surveys show an increase in total sales volume of canned salmon in the U.S. for the years 1990 and 1991, although per capita consumption declined 57% in the twenty year period prior to 1990. Figure 5 shows domestic consumption of canned salmon compared to canned tuna during this period, in which tuna consumption increased by 65%.

Figure 5. Canned Consumption Tuna vs. Salmon, 1971-1990
(in millions of pounds)



Consumption of fresh/frozen salmon in the U.S. increased almost 30% over the five year period 1985 to 1989, while imports of salmon increased almost 250% during this period. Figure 6 shows imports of fresh and frozen salmon into the U.S. for 1986-90. U.S. Census statistics do not differentiate between 'farmed' and 'wild' salmon imports, but since 'fresh, whole salmon' account for 86% of 1990 imports, we can assume that a large percentage of the increase in U.S. salmon consumption during the past five years can be attributed to farmed salmon.

Figure 6. Fresh and Frozen Salmon Imports to the U.S., 1986-1990
(in millions of pounds)



Source: AOAC (U.S. Census)

Preferences of U.S. Salmon Consumers

About 90% of Americans eat seafood. Of that group, about half, or 45%, eat salmon. On average, during the past five years, these Americans have consumed more fresh/frozen salmon than canned (Figure 7). Most canned salmon consumers do not eat fresh/frozen salmon, and most fresh/frozen consumers do not eat it canned.

Figure 7. Fresh/Frozen vs. Canned Salmon Consumption in the U.S. (5-Year Average, 1985-1989)
(in millions of pounds)



Reasons Why U.S. Consumers Eat Salmon

- They like the taste 65
- For good health benefits 50
- Availability to diet 45

Source:

ASMF's Salmon 2000 study estimates that 68% of all salmon consumed in the U.S. is currently purchased through foodservice outlets. In the food trade, 'foodservice' includes restaurants as well as institutions, like schools and hospitals. According to the study, the remaining 32% is purchased by consumers in retail outlets (supermarkets or fish markets) and eaten at home.

The Salmon 2000 study also found that in-home salmon consumption in the U.S. has declined over the past five years from 2.1 to 2.1 ratings person year. This is related primarily to declining canned salmon consumption, which is still estimated to account for more than half of in-home consumption.

In the food-service category, only 35% of U.S. restaurants have salmon on their menus; 75% of those which carry salmon are white tablecloth or hotel restaurants. ***This pattern of consumption explains the increase in market share of farmed salmon over Alaska salmon in the U.S. over the past five years: Americans are primarily buying fresh/frozen salmon in higher-priced restaurants. In this setting, they prefer fresh salmon, regardless of price. Fresh, farmed salmon can be delivered to these restaurants 52 weeks per year, allowing restaurateurs to keep salmon on their menus year-round, at relatively stable prices.***

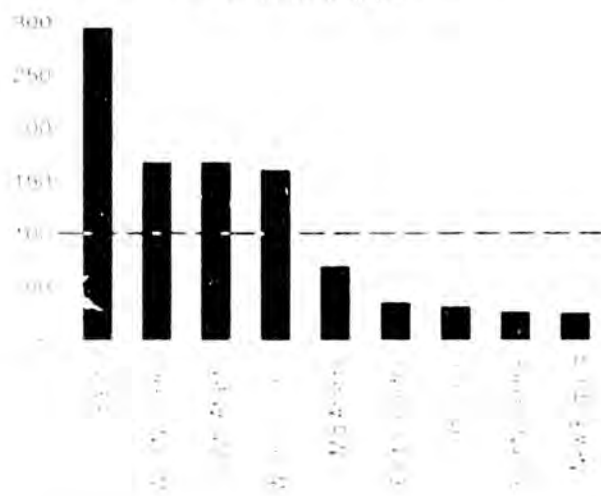
Geographic Preferences

Most canned salmon sold in America is pure, used in major population centers in the southern, eastern and midwestern states.

Metropolitan Areas with the Highest Per Capita Consumption of Canned Salmon, 1990-1991

1 Charlotte, NC	6 Washington, D.C.
2 Birmingham, AL	7 Indianapolis, IN
3 Atlanta, GA	8 Pittsburgh, PA
4 Nashville, TN	9 Memphis, TN
5 Cincinnati, OH	10 Detroit, MI

Figure 8. Fresh Frozen Salmon Regional Consumption Index, 1990



There are no statistics which indicate the top buy-in areas for fresh frozen salmon in the U.S., although a study of consumer food purchasing habits indicates the Pacific states area has the highest per capita consumption (Figure 8). The 'index' for each area represents regional consumption divided by national consumption. An index of 100 is average.

Prices

In the past, U.S. salmon prices have varied considerably. Prices were based on variable domestic harvest and consumer demand, which was often affected by foreign exchange rates. Recent price drops in most species demonstrate the effects of increased world salmon supply with no increase in demand. This was outlined in a study prepared for *Salmon News* by economist Gunnar Knapp. Mr. Knapp predicts that in the future, U.S. salmon pricing will be tied less to domestic supply and more to the cost of producing farmed salmon; any large increase or decrease in prices as a result of supply or demand, will cause farmers to increase or decrease salmon production.

Figure 9 shows prices for Pacific and Atlantic salmon over the past five years. ***Note that all species of Alaska salmon wholesale for less than farmed Atlantic salmon, on average, during this period.***

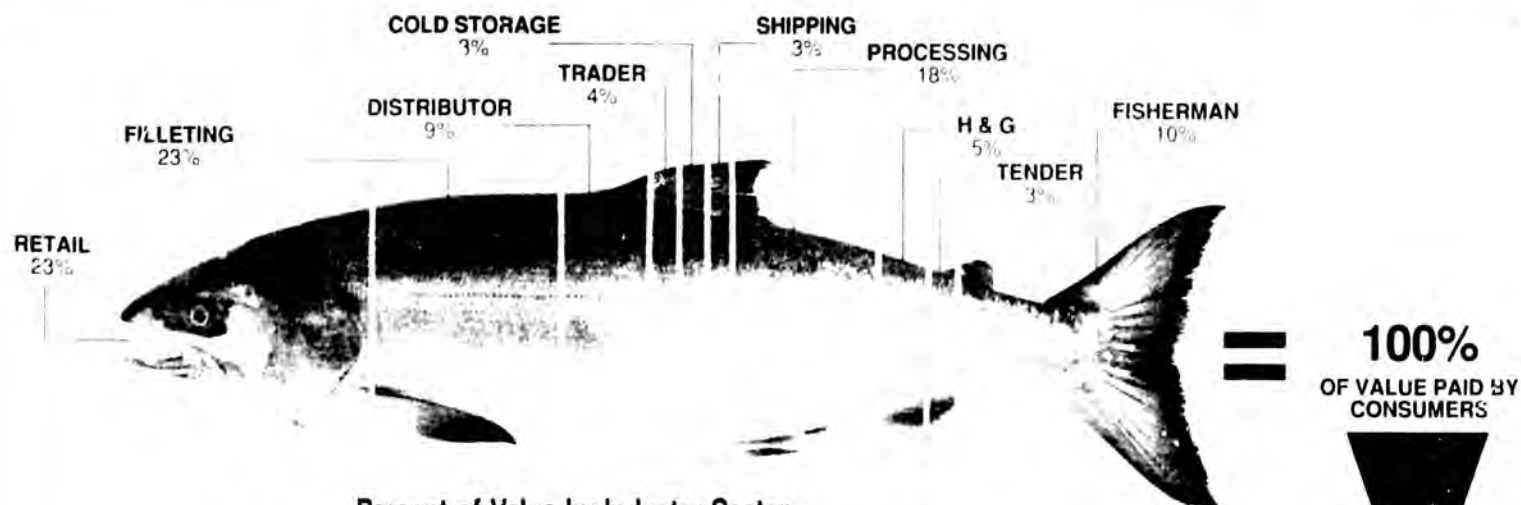
Figure 9. U.S. Wholesale Fresh Frozen Salmon Prices, 1987-1991

	1987	1988	1989	1990	1991	5-Year Avg.
Atlantic	4.65	5.20	4.35	4.20	3.15	4.31
Sockeye	2.90	3.80	4.75	2.80	3.10	3.47
Wild King	3.75	3.70	3.55	2.80	2.25	3.21
Wild Coho	2.45	3.65	3.35	2.35	1.95	2.75
Chum	1.30	2.55	1.85	1.60	1.40	1.74
Pink	1.25	1.75	2.05	.90	.80	1.35

The Distribution Chain

There is no single path that Alaska salmon takes from fishermen to market in the U.S. The chart below illustrates a typical distribution chain and the margins that are generally available to businesses which make up the links in that chain. The size of a given margin is not necessarily related to profit at that level; every business associated with the production/marketing of salmon must pay for its labor, overhead, marketing, and capitalization from the margins they can get for the services they provide.

Because every penny made by anyone in the salmon business must ultimately come from the consumer, let's follow a typical salmon product backwards through a U.S. retail distribution chain:



**Percent of Value by Industry Sector
for Sample Chum Salmon Fillets Sold at Retail for \$3.99/lb.**

■ **Consumer.** The customer pays \$3.99 lb. for chum salmon fillets at a supermarket or other retail store.

■ **Retailer.** The retailer pays \$2.15 lb. to a distributor/wholesaler for a headed, gutted (H&G) fish. Filleting the fish results in a weight loss of about 30%, adding \$.92 lb. to the retailer's cost. The retailer then adds a markup of 20-50% of his total cost, to cover operating expenses and a profit. To illustrate, we're using an average of 30% or \$.92 lb., although retailers will take as little as 15% markup when an item is featured "on sale."

■ **Distributor.** The distributor/wholesaler pays a trader \$1.79 lb. for the H&G chums, and adds a markup of about 20%, in this case \$.36 lb., to cover his expenses and profit. A full-line distributor can carry as many as 15,000 items, supplying everything to stores and restaurants from silverware to salmon. Seafood distributors specialize in seafood, but often handle several hundred different items. Distributors typically own a fleet of trucks and a cold storage facility. They often steak or fillet salmon to add value and provide convenience for their buyers.

■ **Trader Broker.** The trader buys large lots of frozen salmon from a processor's cold storage holdings, for, in this case, \$1.63 lb. To cover his expenses and profit, he adds a 10% markup, or \$.16 lb. Traders and brokers are traditional middle men; however, brokers don't actually purchase product; they make sales for processors. A broker makes about a 5% commission, paid by the processor.

All of the remaining costs typically are paid by the processor. They include:

■ **Cold Storage.** Public cold storages charge about \$.01 lb. month, plus handling fees. They are private companies with large warehouses that hold millions of pounds of product at -10°F. Average cold storage fees add about \$.10 lb. to the cost of fish.

■ **Shipment from Alaska.** Transportation companies provide freezer vans for Alaska processors during the season. When the vans are full, they are shipped by barge to cold storages in the U.S., primarily in the Pacific Northwest. Shipper's fees for this service average about \$.10 lb.

■ **Processing.** A salmon loses about 25-30% of its weight when headed and gutted, making a fish purchased for \$.53 lb. worth about \$.73 lb. before processors add their markup. A typical processing markup, to cover expenses and profit, is about \$.40-.70 lb. Processors also sell salmon eggs separately, usually directly to Japanese buyers. A processor may receive an extra \$.15-.25 lb. for chum salmon roe, based on the round weight of the salmon.

■ **Tendering.** A processor pays salmon tenders on contract an average of \$.12 lb. for the season. This can vary greatly, depending on the size of the run and other factors.

■ **Fishermen.** Moving backwards through a typical U.S. retail distribution chain that begins with customers paying \$3.99 lb. for chum salmon fillets, a fisherman might realize \$.41 lb. for his fish.

	Pays:	Adds:	Gets:
Retailer	3.07	+ 30%	= \$3.99 lb.
Filleting	2.15	+ 70%	= 3.07
Distributor	1.79	+ 20%	= 2.15
Trader	1.63	+ 10%	= 1.79
Cold Storage	1.53	+ .10 lb.	= 1.63
Shipping	1.43	+ .10 lb.	= 1.53
Processing	.73	+ .70 lb.	= 1.43
H & G	.53	+ 73%	= .73
Tender	.41	+ .12 lb.	= .53
Fisherman			\$.41/lb.

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MEMORANDUM

TO: Representative Ron Larson, Chair
Legislative Budget & Audit Committee

FROM: Senator Dick Eliason, Chair
Senate Special Committee on Domestic &
International Commercial Fisheries

DATE: June 15, 1992

RE: Request for legislative audit

I would like to formally request that the Legislative Budget and Audit Committee authorize a legislative audit of all the funding mechanisms for the state's Private Non-Profit (PNP) hatchery program. This would include, but not be limited to:

1. the Fisheries Enhancement Revolving Loan Fund administered by the Department of Commerce and Economic Development (AS 16.10.500-620), including, but not limited to: regulations concerning length of loans, interest rates, deferments and payback periods; the methods for approving and prioritizing loans including an analysis of benefit-cost analyses and financial analyses; the status of coordination efforts between the Departments of Commerce and Fish and Game; an analysis of how PNP costs are determined to be "reasonable"; and any other issues concerning this loan program; and

2. the Salmon Enhancement Tax (AS 43.76.010-.015), including, but not limited to: methods of determining the amount of tax to be collected and how it is allocated to the various aquaculture associations; analysis of whether costs are distributed in proportion to benefits; the impact of a mechanism to allow specific gear groups to opt out of the program or pay in proportion to the enhancement benefits they receive; and any other issues

The information derived from this audit will be used as part of the ongoing Legislative Hatchery Review Project. Molly McCammon, staff assistant to Senator Hoffman, will continue to coordinate that project during the interim and will be the contact person (4453) for this audit request.

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