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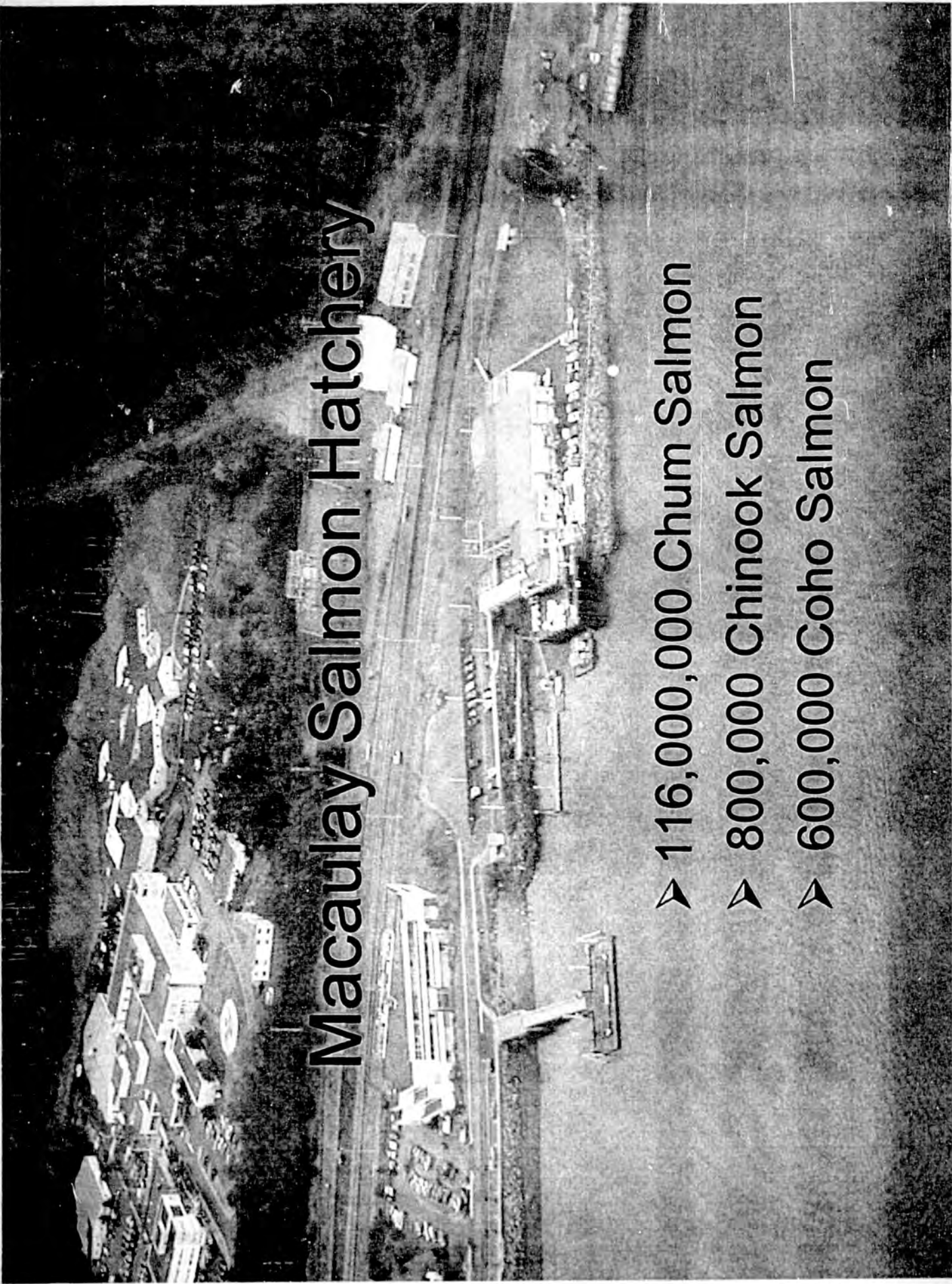
DIPAC Quick History

- 1976 - Kowee Creek Hatchery
- 1980 - Sheep Creek Hatchery
- 1989 - Macaulay Salmon Hatchery
- 1996 - Snettisham Hatchery

DIPAC's Corporate Make-up

➤ 32 Member Board of Directors

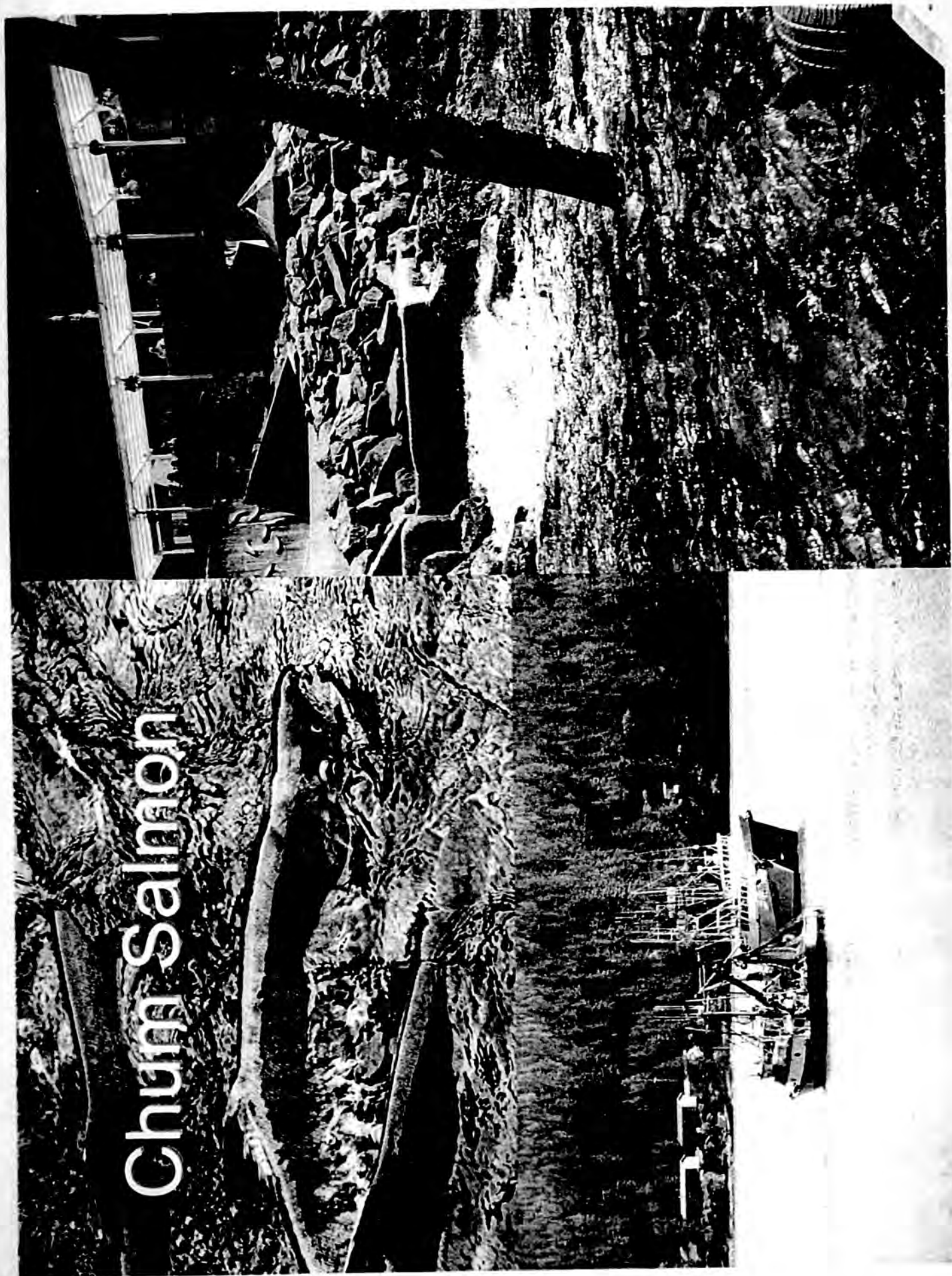
- 6 Gillnet Representatives
- 1 Seine Representative
- 1 Troll Representative
- 1 Processor Representative
- 10 Sport Fish Representatives
- 10 Public at Large
- 1 Subsistence Representatives
- 1 City and Borough of Juneau
- 1 Environmentalist



Macaulay Salmon Hatchery

- 116,000,000 Chum Salmon
- 800,000 Chinook Salmon
- 600,000 Coho Salmon

Chum Salmon



Chum Salmon

2006 Estimated Contribution

	Total Harvest	DIPAC Contribution	% of Total Harvest
Canal GN	1,036,000	995,000	96%
Waku/Stephens GN	369,000	359,000	97%
Upper Chatham SN*	303,000	183,000	61%
Local Sport Catch		2,700	
Combined Total		1,539,700	

*Sub-districts 112-14 & 112-16, weeks 26-32.

Chum Salmon

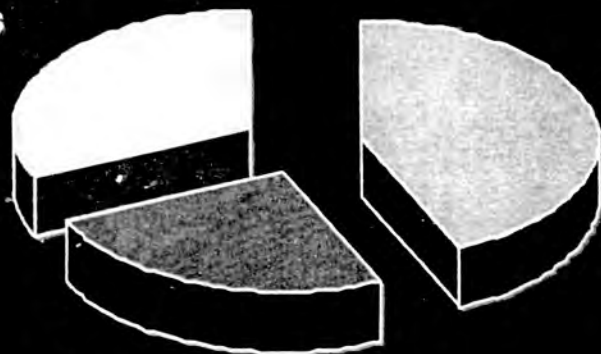
2006 SE Alaska Gillnet Harvest

Estimated GILLNET Harvest: 3,115,000

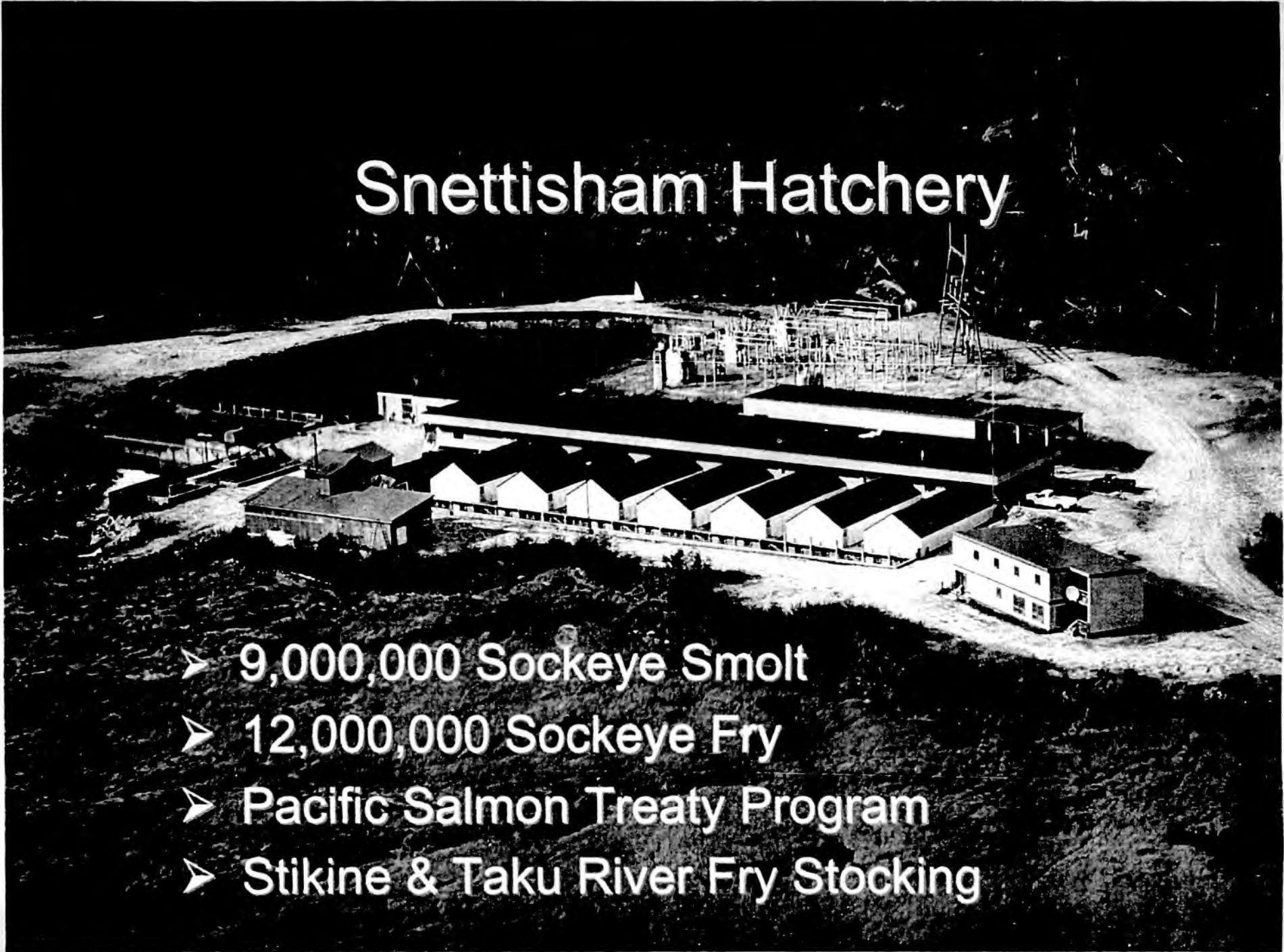
Other Gillnet
Fisheries
32%

DIPAC Contribution
43%

Hatchery Terminal
Areas
25%

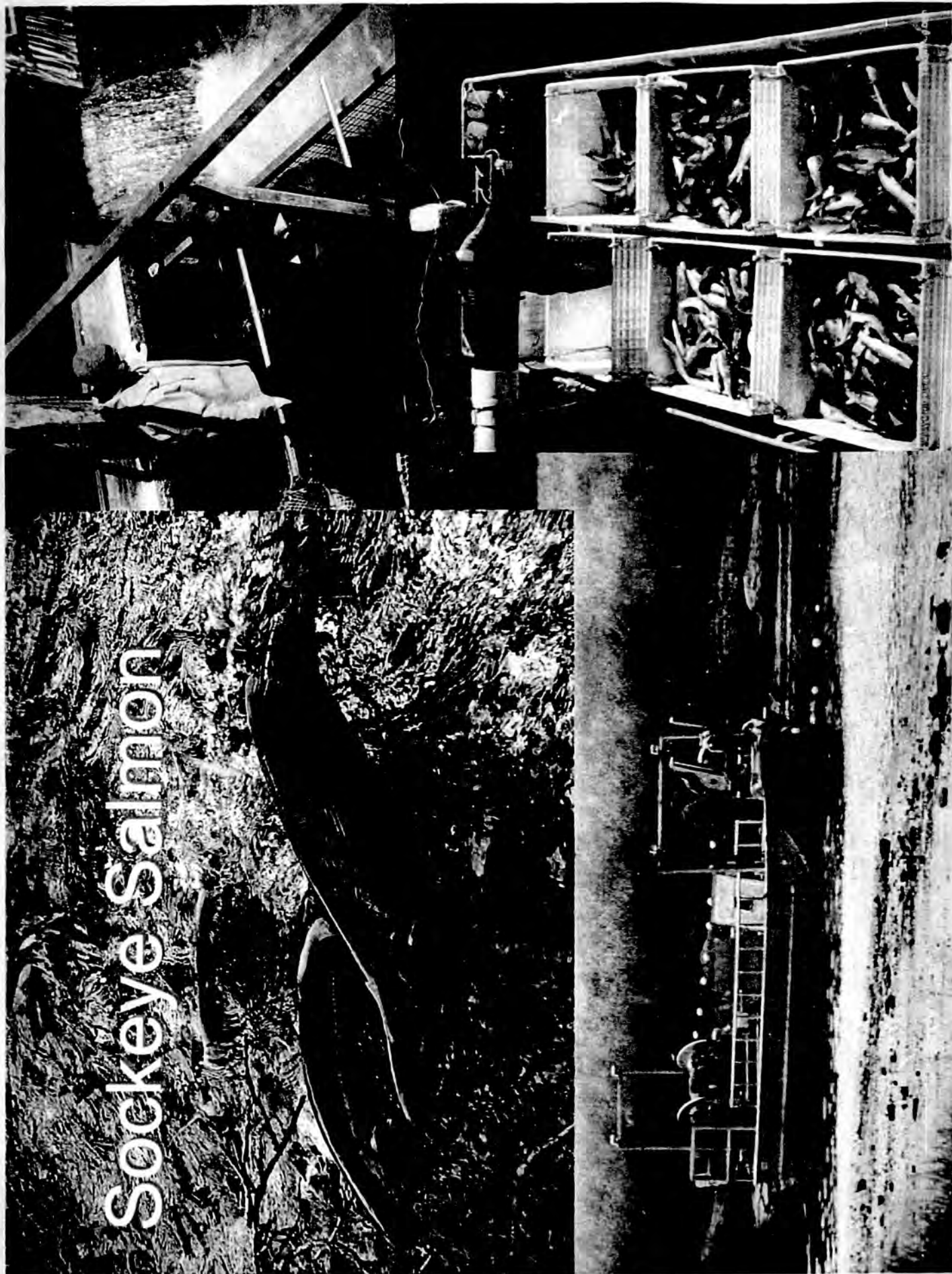


Snettisham Hatchery



- 9,000,000 Sockeye Smolt
- 12,000,000 Sockeye Fry
- Pacific Salmon Treaty Program
- Stikine & Taku River Fry Stocking

Sockeye Salmon



Sockeye Salmon

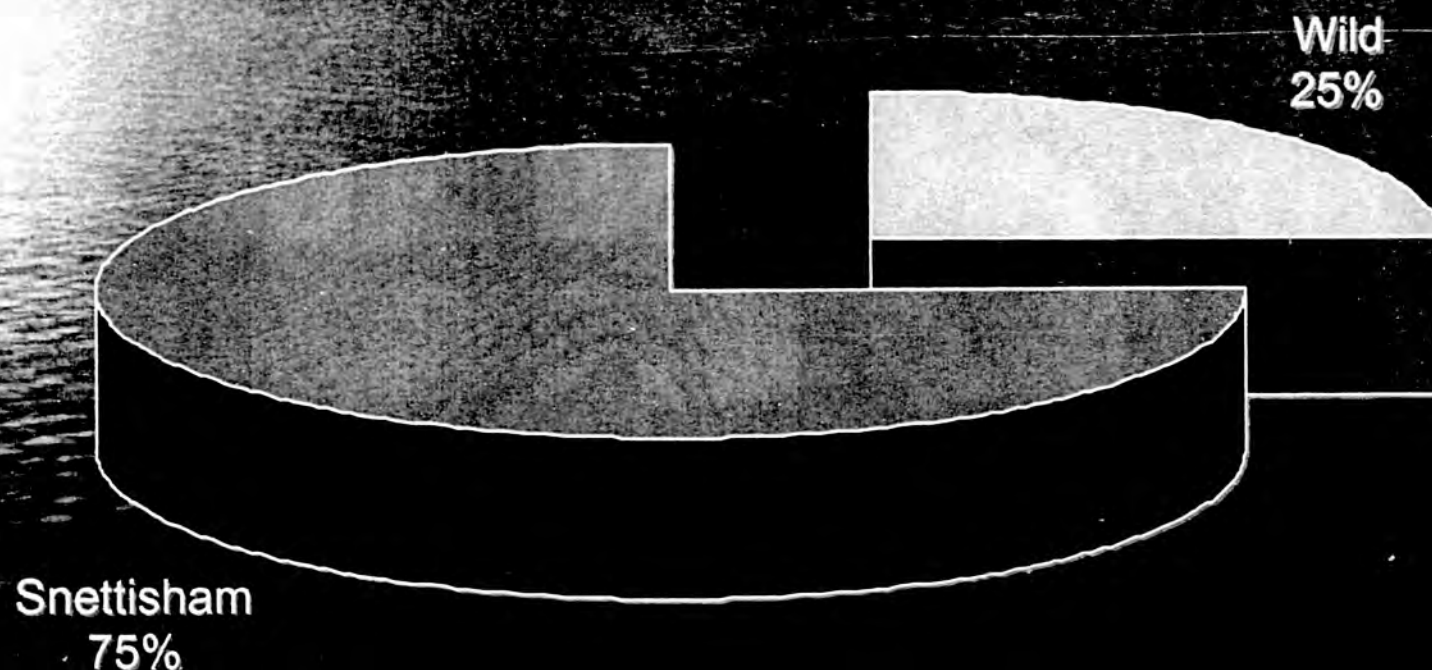
2006 Contribution & Harvest Share

	CP Harvest	DIPAC Contribution	Cost Recovery	Total Harvest
Stephens/Speed GN	238,500	179,300	126,000	305,300
Speed Chatham SN (wks 30-32)	27,100	10,500		10,500
Frederick Sound	5,600	2,300		2,300
Sport Contribution/ Personal Use	300	300		300
Total	271,900	192,400	126,000	318,400
Harvest Share		60%	40%	

Sockeye Salmon

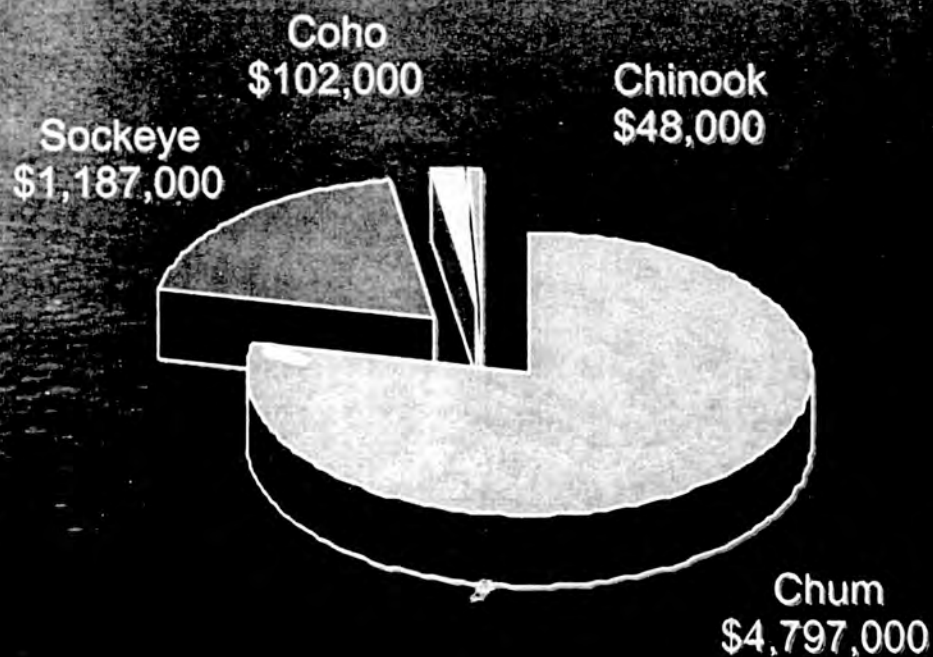
Taku/Stephens/Speel Arm Gillnet Harvest

District 111 Total Harvest: 238,500



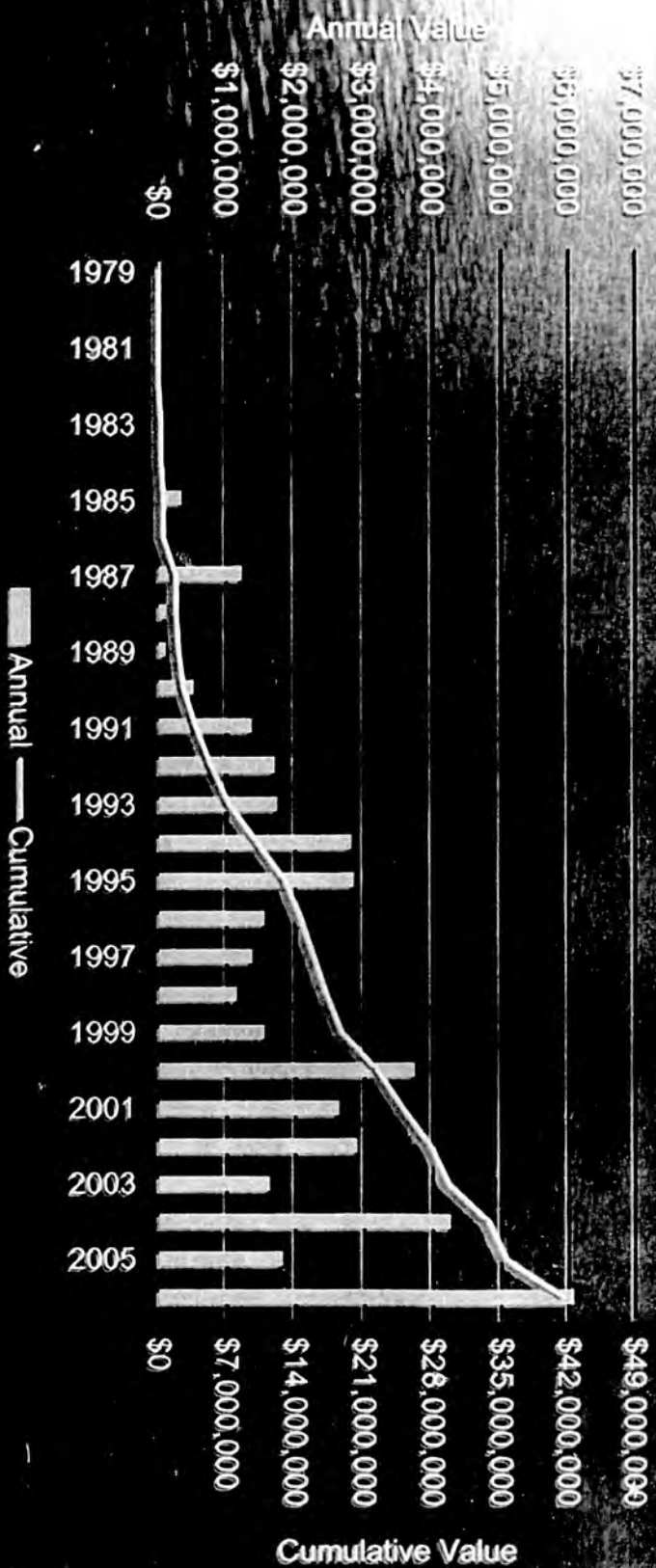
2006 Contributions

Estimated Ex-vessel Value: \$6,100,000



Ex-Vessel Value of DIPAC Salmon Contributions, 1979-2006

Total Contribution: \$41,592,000







Cook Inlet Aquaculture Association

*"Providing and Protecting Your Salmon
Resource"*



**A nonprofit regional association created
by state legislation.**

Our mission is to:

- 1) protect self-perpetuating salmon stocks and
habitats upon which they depend;**
- 2) rehabilitate self-perpetuating salmon stocks;**
- 3) rehabilitate salmon habitat;**
- 4) maximize the value of the Cook Inlet (Area H)
common property salmon resource by applying
science and enhancement technology.**



Quick Overview of CIAA

Stocking

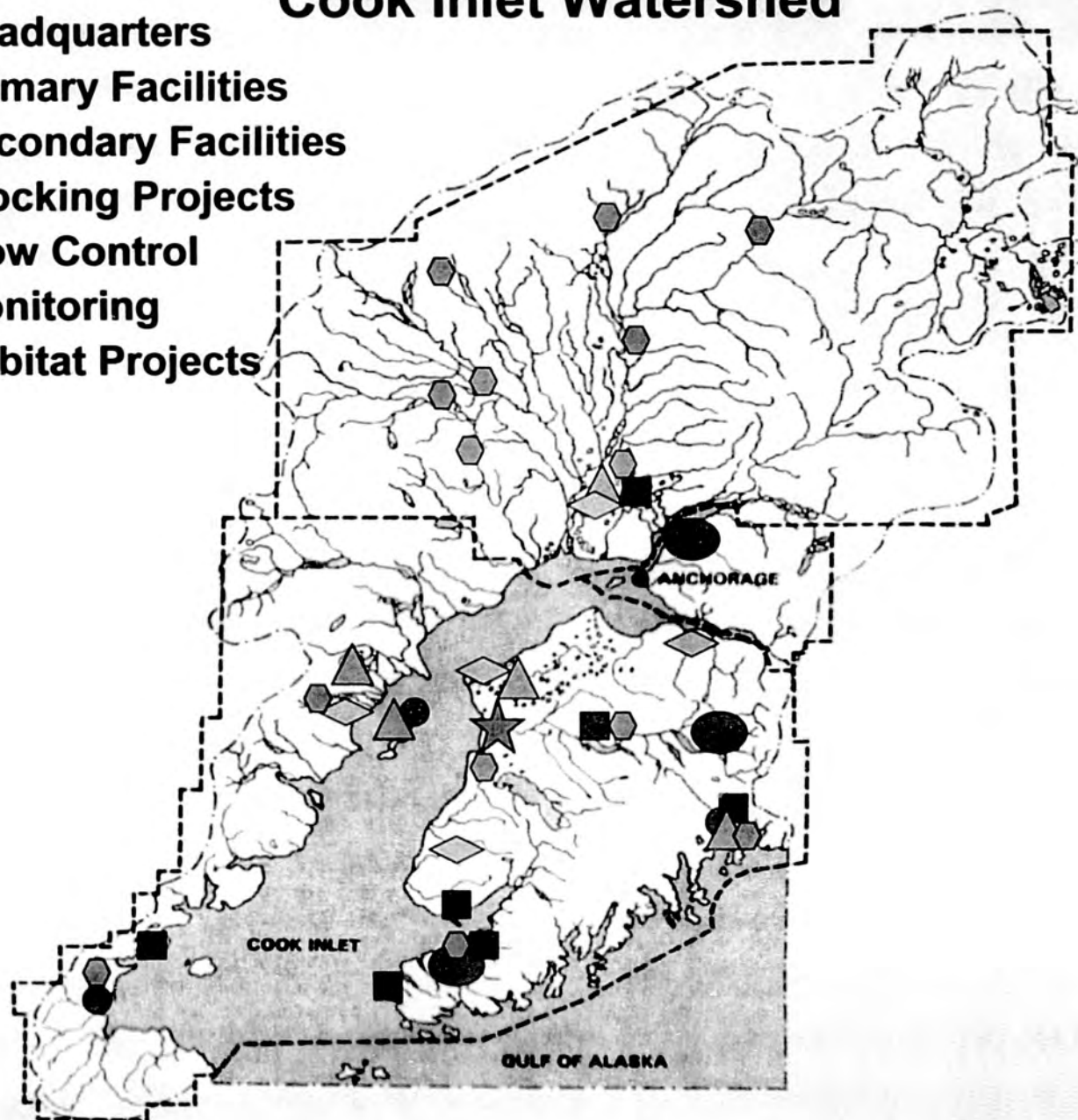
Habitat

Monitoring

Internship Program

Cook Inlet Watershed

- ★ Headquarters
- Primary Facilities
- Secondary Facilities
- Stocking Projects
- ▲ Flow Control
- ⬡ Monitoring
- ◊ Habitat Projects



CIAA INTERNSHIP PROGRAM



Initiated in 2005
5 Students – 3 States

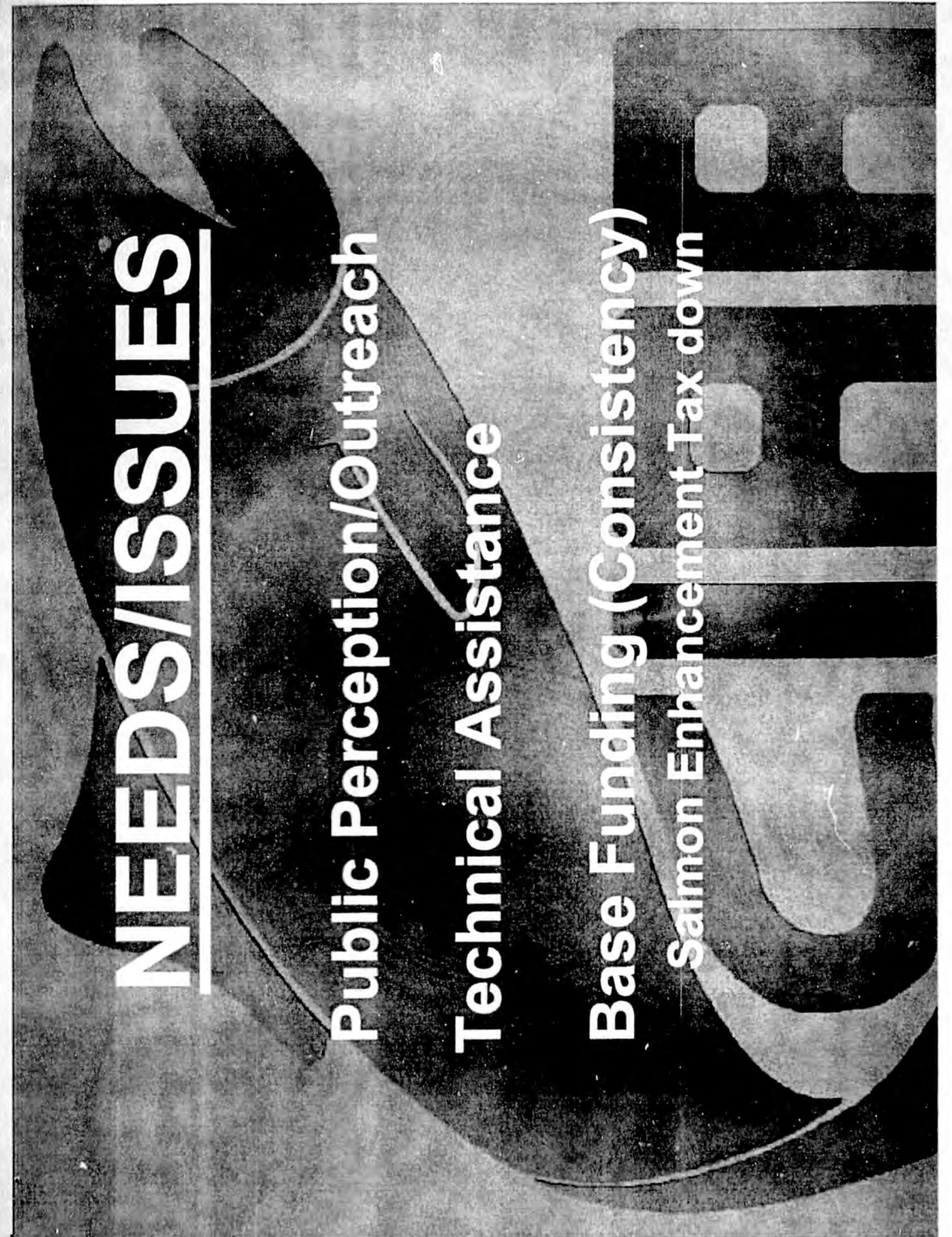


Expanded in 2006
26 Students – 6 States



Expected in 2007
40 Students – International





NEEDS/ISSUES

Public Perception/Outreach

Technical Assistance

Base Funding (Consistency)

Salmon Enhancement Tax down

FISH RAP

Highlighting releases, returns, policy and legislation affecting the Southeast Alaskan salmon fisheries

Nonprofit Org
U. S. Postage
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Sitka Alaska
Permit #38

Vol. 24 No. 2
December 2006

A good year
for the fleet:
Ex-vessel value of
NSRAA production
tops \$13.6 million



Kevin McDougall photo

Value to Fleet Nears \$14 Million

NSRAA is fulfilling its mission with third highest harvest value ever.

The dollar value of NSRAA's contributions to commercial salmon fisheries in Southeast Alaska topped \$13.6 million in 2006, with over 3.9 million fish harvested. That marks the third highest contribution ever.

Only the 1995 and 2000 harvests were higher.

The dollar value is 250 percent higher than the 5-year average, thanks to both higher return numbers and improved market conditions.

Contribution numbers are 170 percent above the 5-year average, mostly due to an outstanding chum return.

Net fisheries benefited the most, seeing an increase of over 275 percent of the 5-year average in the total ex-vessel value for chum.

"Hidden Falls bounced back from a poor 2005 chum return," said NSRAA data analyst Chip Blair. "The 2006 return provided the seine fleet with about 5 times the catch and value of a year ago. And Deep Inlet showed substantial increases as well."

The Boat Harbor project also had a record return of 566,000 chum, all of which went to the gill-net fleet. 2006 was a record year for gillnetters, in terms of benefit from NSRAA fish: 850,000 chum with an

ex-vessel value of \$2.6 million.

Trollers have less to crow about, since it was a very poor chinook year at both Hidden Falls and Medveje. The numbers of chinook contributed to the trollers represents a mere 31 percent of the 5-year average.

"Chinook were down at almost all Southeast Alaska hatchery programs, so we suspect the low return was due in large part to ocean conditions," said Blair.

Despite the poor chinook return, extremely high prices kept the year from being a complete disaster for trollers, as the ex-vessel value of chinook saw a much smaller decline, dropping to 85 percent of the 5-year average.

NSRAA coho projects had a more normal year, with a contribution just slightly larger than the average. But thanks to strong coho prices, the ex-vessel value made a huge jump to 250 percent of the average, again, a benefit for trollers.

NSRAA coho projects contributed 8.5 percent of the Southeast Alaska coho troll catch in 2006. That's about 1 in every 12 coho caught.

Overall, fully 80 percent of NSRAA salmon returning this season were harvested by commercial fishermen. 16 percent went to cost recovery, and the remainder to broodstock, and sport fishermen.

Cost recovery, as a result, was a "pleasure" to manage in 2006.

"We heard a lot of favorable comments from fishermen this season, and hardly any complaints, which was a nice change from recent years," Blair said.

Improved chum numbers and stronger prices meant NSRAA needed fewer fish for cost recovery,

"both in absolute numbers and as a percentage of the return," Blair said. "In the past 5 years we've needed to take about 25 percent of the return for cost recovery, but this year, we needed much less at Hidden Falls and Deep Inlet."

In practical terms that meant cost recovery efforts had minimal impact on the commercial chum

cont. on page 4

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Humpies Aided by Chum

In a normal year, the net fisheries would consider a great chum return a bonus. For seiners, especially, their "bread and butter" is normally wild pink salmon. But this year, the pink fishery came in way below projection.

"To put the 2006 pink salmon harvest in perspective, the total harvest in 2006 was about 11.7 million fish, the lowest since 1987," said Scott Kelley of the Alaska Department of Fish and Game. "Needless to say, we severely restricted many of our traditional seine fisheries this year to provide for escapement."

"The poor pink return affected all seiners. It is hard to make it without the pinks," said one seiner. "However, the chum run was the only bright spot. So NSRAA does deserve kudos for helping making

a disaster a little easier to bear."

For NSRAA, it's all in a day's work.

"The underlying concept of the hatcheries is that they are to somewhat mitigate and stabilize salmon production during poor wild stock returns, and to take the pressure off the wild stocks," Kelley said. "There is no doubt that the hatchery chum were more important to the average fisherman than usual."

The market has already adjusted for the difference. According to the *Salmon Market Bulletin*, the average price for frozen chums showed a substantial gain this fall, from 72 cents per pound to 95 cents per pound.

"Considering the harvest shortfall for pinks, frozen chum may be, to some extent, serving as a replacement product for frozen pinks."

Hatchery Reports

Hidden Falls Hatchery Report

Hidden Falls met or exceeded all its production goals for 2006, reported hatchery manager Scott Wagner.

"With the exception of the chinook return, we had excellent releases and returns this year," he said.

Chum

Cooler than normal water temperatures made for great rearing conditions for broodyear 05 chum.

"The typical outbreak of *Vibrio* in our 'late-large' group of fish never materialized due to the cooler temperatures," Wagner said. This group was released in late May.

A high ratio of females to males made eggtakes this fall go

smoothly. Hidden Falls processed 130,000 chum in 24 days, averaging 5.61 million eggs per day, the second highest average on record.

"What is really remarkable is that this was managed with a smaller crew than in the past," Wagner said. "We had a highly motivated and hard working staff."

Chinook

Broodyear 04 chinook were released in early June in good health. Although these fish entered the saltwater last fall at a smaller than ideal size, they achieved record growth in the saltwater and were released at a typical size for Hidden Falls chinook.

An alternative rearing strategy is being tried on broodyear 05 chinook.

"Over a 5 week period we use warm water from the near surface lake pipeline, 24 hour light, and a new feeding regime," Wagner said.

The fish were moved to straight saltwater in late September, and have put on a record amount of

weight since then.

"That's an encouraging sign," Wagner said. "These fish look and act similarly to Medveje (Green Lake chinook, and we're hoping this strategy will boost chinook survival from Hidden Falls. Only time will tell."

Staff collected 1.8 million chinook eggs for Hidden Falls programs and an additional 1.7 million for Medveje, to meet their shortfall. A portion of the Hidden Falls eggs are destined to become a "zero-check" trial group, to determine the suitability of this rearing strategy for Hidden Falls chinook.

Coho

2.8 million coho were released from Kasnyku Bay this year, an increase of 600,000 from 2005. Wagner reports these fish grew well in the saltwater and should do great on their own.

Staff is now rearing 2.7 million coho for release in 2007. This group's numbers were reduced by

cont. next page

General Manager's Notes



As most of you know, the 2006 salmon season was full of surprises, most notably the very weak run of pink salmon throughout many areas of Southeast Alaska. Fortunately, the lack of large numbers of pink salmon was somewhat offset by strong chum salmon returns to most areas and stronger demand in the marketplace. It is in times like these that we can see the obvious benefits of having a diversified salmon fishery composed of numerous healthy wild stocks and a good strong salmon enhancement program. We are quite pleased to report that except for Chinook, all of our other adult returns came in at or above our preseason forecasts. We are projecting fairly similar returns for the coming season. The distribution will be somewhat different, however. (See related articles in this edition of the Fishrap.)

If you were one of the many fishermen fishing in the Deep Inlet terminal fishery this past season, you know how congested the area became for everyone. Despite the horrendous

amount of boat traffic in the area, we managed to get through the season without too much conflict. I want to thank you all for being as courteous as you could throughout the season. The people living on the islands appreciated your willingness to respond to their requests to "slow down" when asked. I can only think of one instance last season where someone was rude or uncooperative. That situation was later remedied with a little talk and education!

I have been pleased with the responses to my last newsletter article concerning NSRAA's reserve fund situation. Most responses have been positive and several individuals said that they were happy to learn that the NSRAA management and Board were "looking out for the organization's future". Only one individual commented that he felt that NSRAA should not be so concerned about the future, because we could always get State loans.

If there are other topics that you would like more information on, I hope you will feel free to bring them to our attention. I can be reached at 907-747-6850 or you can e-mail me at: pete.esquiro@nsraa.org.

Finally, on behalf of the NSRAA Staff and Board of Directors, I'd like to wish you all a Happy Holiday Season.

Northern Southeast Regional Aquaculture Association FISH RAP Vol. 24 No. 2 December 2006

Highlighting releases, returns, policy and legislation affecting the Southeast Alaskan salmon fisheries

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Gillnet
Seine
Crewmember

Mailing List: Fish Rap is mailed free to all limited entry salmon permit holders in the Southeast Alaska gillnet, seine, and power/hand troll fisheries. Fish Rap is published bi-annually.

For a change of address notify: Commercial Fisheries Entry Commission
8800-109 Glacier Highway
Juneau, Alaska 99801

Any interested party may also receive Fish Rap free of charge. Send your address to NSRAA.

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Seine
Sportfish
Troll
Seine
Gillnet
Subsistence

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FISH RAP STAFF
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an outbreak of Phoma, an airborne spore that occurs in the spring.

"The only treatment for this is to maintain good culture practices and let it run its course," Wagner said.

Broodyear 06i eggtrucks took place at the end of October and in early November. 1.6 million eggs were taken for Deer Lake program and 3.6 million for the Hidden Falls program.

Infrastructure

Major projects were completed at Hidden Falls this past summer, including re-roofing of the hatchery building, painting the bill houses, improving the dock float moorage, and adding additional anchors for both of the chum net pen sites.

"Next year we plan on repainting the bunkhouse and repairing some of the siding," Wagner said. "The maintenance staff has been kept busy but they feel they are making headway now."

Medvejie Hatchery Report

This year saw the beginning of the "zero-check" chinook releases at Deep Inlet, which, in combination with other Deep Inlet programs, stretches hatchery operations at the site from mid-February until mid-July.

Zero-check chinook are reared and released their first summer, rather than being held over a winter at the hatchery.

"It's a far cry from the old days when we were rearing chum at Deep Inlet for just 45 to 50 days," said Medvejie hatchery manager Lon Garrison.

Ninety million chum fry later, staff celebrate the end of another successful chum rearing season at Hidden Falls.



Chum

NSRAA released the greatest numbers of chum fry ever into Sitka Sound in the spring of 2006. 50.8 million fry were released in Deep Inlet, with another 9.2 million released at the hatchery for future broodstock.

2006 was the third year for the "late-large" chum program at Medvejie. The late-large program chum are held longer and released at a larger size, which seems to increase their marine survival rates.

"The 2006 post-release chum fry monitoring in Sitka Sound showed that these late-large fry moved immediately offshore, which bodes well for them," Garrison said.

Adult chum returns to Medvejie were very strong this year.

"Cost recovery and broodstock management worked out well this year with only a slight amount of excess broodstock," Garrison said.

A total of 41.76 million eggs were taken in 21 days. Currently Medvejie is incubating 66 million chum eggs, the most ever.

Chinook

Medvejie is now producing just under 4 million chinook smolts per year, for 3 different Medvejie programs as well as the new Deep Inlet zero-check program.

"The new project went well," Garrison said. "One requirement of the new program is moving these fish up to Green Lake for freshwater rearing, then back to the hatchery, and finally out to Deep Inlet. By the time the season was done, we'd transported 6 million chinook fry, and lost almost nary a fish

thanks to good planning, vigilance, and patience."

Green Lake rearing went well, with very few health problems for the fish and good growth performance despite cooler water temperatures. Medvejie reared chinook grew almost too fast, nearly outgrowing their raceways.

Adult chinook returns to Medvejie were, however, disappointing this year.

"If we'd known how poor the return would be we would have skipped cost recovery harvesting, because as a result we weren't quite able to meet our broodstock needs this year," Garrison said. Hidden Falls staff harvested excess chinook broodstock to make up the difference, however.

Currently, 3.9 million chinook eggs and yearling fish are on hand at Medvejie.

Coho

Bucking the trend, the Medvejie coho program became simpler this year. No Indian River coho broodstock were released at the hatchery, but rather transferred to Sheldon Jackson College for release there.

10,000 Plotnikof origin smolts were released at Medvejie to provide broodstock for the developing Sawmill Cove coho program and the remaining 119,000 were reared and released at Deep Inlet.

On hand are 235,000 Plotnikof Lake fingerling coho that are in freshwater raceways for the

winter. No Indian River stock coho eggs were taken although a return of about 200 adults was observed.

Infrastructure

No large infrastructure projects were undertaken at Medvejie this year, although plenty of smaller but essential projects received attention, such as replacing the main compressor, repairing the forklift, and rebuilding the outboard motor for the Whaler.

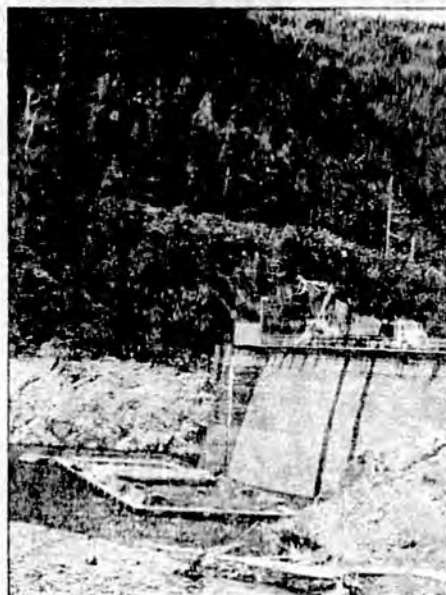
"We do need to be thinking about adding additional housing at Medvejie," Garrison said. "With so many programs that have their own, and our growing dependence on pumps, we need to make sure we have adequate staff to cover standby all the time," Garrison said.

Medvejie staff continued to work with Sheldon Jackson College students and the SJC hatchery program, which continues to serve as a great source of NSRAA employees as well as increasing fishing opportunities for the common property harvest in Sitka Sound.

Allen Marine Tours were fewer this year than in previous years, but they hope to continue bringing tourists from all over the globe to Medvejie.

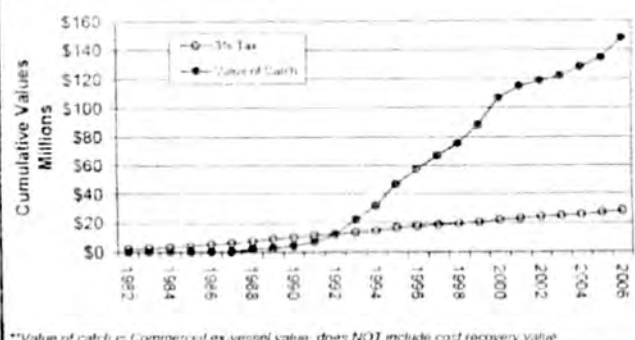
Third graders from the Sitka School District visited the hatchery once again in late September, much to the delight of the kids and the staff.

"It's great to see the wonder and enthusiasm on their faces," Garrison said. "And I think many of the parents are equally impressed."



The Medvejie crew transfers chinook fry into net pens from atop the Green Lake dam.

Comparison of Commercial Value
of NSRAA Production to Enhancement Tax



**Value of catch is Commercial ex-vessel value; does NOT include cost recovery value.

NSRAA has received \$28 million in 3% tax. In return, fishermen have realized \$145 million in ex-vessel value from NSRAA salmon.

Sawmill Creek Hatchery Gets ADF&G Approval

NSRAA's plan to build a new coho rearing facility at Sawmill Cove in Sitka is moving forward, with groundbreaking tentatively scheduled for spring of 2007.

On December 6, ADF&G's Regional Planning Team met to consider the hatchery permit application. Also on the agenda was the new facility's allowed level of production, the monitoring period for the facility's initial releases, and when to allow increases in production levels.

"We're thrilled that the Regional Planning Team approved the Sawmill Creek Hatchery for a new private non-profit permit at 4.33 million summer coho eggs," said NSRAA operations manager Steve Reifentuhl. "This establishes what is called the Basic Management Plan for operation capacity and sets a maximum egg limit."

The RPT also passed the initial coho smolt release numbers for the next three years.

In 2007, NSRAA will release 10,000 coho at Bear Cove, and 210,000 at Deep Inlet.

In 2008 and 2009, Bear Cove releases will increase to 20,000 and then 50,000.

These increases are contingent upon NSRAA demonstrating that the adult summer coho are not straying into Salmon Lake and Sawmill Creek.

In addition, the RPT recommended to allow a release of 500,000 coho smolt at Deep Inlet in 2009.

"Those eggs will need to be taken in the fall of 2007, which is a tall order considering that we will have only 500 adults returning to Medveje for broodstock," Reifentuhl said. "Since we won't be able to release larger numbers at Bear Cove in 2007, we will likely need to go back to Plotnikof Lake to supplement the Medveje broodstock."

Concerns about hatchery coho conflicting with wild salmon stocks in Sawmill Creek had delayed the permitting process for the Sawmill Creek Hatchery, but NSRAA modified its plans in order to prevent any problems.

"No fish will be released from the Sawmill Creek site," said Reifentuhl. "It will be used only for incubation of eggs, ripening adults, and rearing fry to smolts."

All smolts will be transferred by boat for imprinting and release at Bear Cove or Medveje, and returning adults will be captured at those sites. Broodstock will be transported by boat or truck back to the Sawmill Cove facility.

"Our program goal is to release 300,000 coho smolt at Medveje, and 1.7 million at Deep Inlet," Reifentuhl said. "But our initial production will be smaller, to see how well the adult returns are managed and to make sure there's not a negative impact on wildstocks."

A public meeting in Sitka will be held within 30 days of the Regional Planning Team's December meeting, and public comment on the matter will be allowed for another 60 days after that.

NSRAA is optimistic that by mid-March, all permits will be approved and the \$2.3 million construction grant contract signed with

the State of Alaska.

"Since we made the program changes I haven't heard any negative comments, so we're looking forward to getting underway in the spring," Reifentuhl said.

cont. from cover: Value to Fleet

fisheries, with not a single closure.

"We had originally planned on closing the inner bay at Deep Inlet during August, but cost recovery was going so well in July, we extended the [more restricted] early season schedule for another week, believing that we would then be able to finish cost recovery fishing outside the terminal harvest area in August," Blair said.

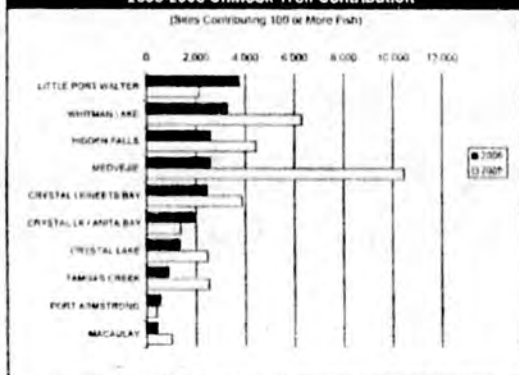
That decision paid off, as Deep Inlet's full terminal harvest area was open to the commercial fleet for the rest of the season, with a double rotation fishery.

"It's the first time this has happened in years," Blair said.

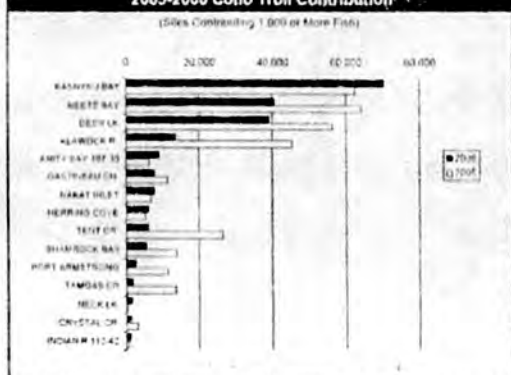


The F/V Perseverance makes a cast recovery net in Bear Cove.

Alaska Hatchery Contributions to S.E. Trawl Fisheries
2005-2006 Chinook Trawl Contribution



Alaska Hatchery Contributions to S.E. Trawl Fisheries
2005-2006 Coho Trawl Contribution



NSRAA Contribution to Southeast Alaska Commercial Fisheries Number of Fish : 2005 - 2006								
	Gillnet		Seine		Troll		All Gear	
	2005	2006	2005	2006	2005	2006	2005	2006
Chinook	1,454	778	3,710	3,939	14,794	5,187	19,958	9,904
Chum	510,095	849,459	906,426	2,830,598	165,049	141,145	1,581,570	3,821,202
Coho	303	596	23,917	7,281	132,685	115,034	156,905	122,911
Sockeye	2,043	906	-	-	-	-	2,043	906
All	513,895	851,739	934,053	2,841,818	312,528	261,366	1,760,476	3,954,923

Market Outlook

Market Outlook

As Wal-Mart goes, so goes the rest of the country. That might be why the market for wild salmon is much healthier than it was just a few years ago.

Earlier this year, Wal-Mart announced that within 3 to 5 years all wild-caught seafood from North America they sell will be certified by the Marine Stewardship Council (MSC).

In August of this year, at least two MSC-labeled seafood items in stock were identified as being from Alaska: 'Seafood Tonight' Alaska salmon patty cakes, and wild Alaskan pollock fillets. Wal-Mart also sells MSC-labeled "wild salmon fillets," without identifying their origin.

Astaxanthin in your salmon, anyone? Consumers in larger numbers are saying no - to farmed salmon, that is, and yes to wild.

"Salmon's on a roll," said Chris McDowell, a fisheries economist, in the *Alaska Journal of Commerce* in October.

According to the *Journal*, both supply and demand for wild salmon are up, although they are

still competing in the marketplace against cheaper farmed Atlantic salmon from Chile and British Columbia.

"[But] the sustainability message carries a fair amount of weight" against the food purity and environmental issues associated with fish farming, McDowell said. "And I think people are keenly aware of the health benefits of eating fish, salmon in particular."

This positive market trend is despite U.S. salmon sales to Japan described as "soft" in an industry publication, *Quick Frozen Foods International*. The publication noted that the Advertising Standards Authority (ASA) has ruled frozen foods company Birds Eye in the United Kingdom can continue to slam farmed salmon in its ad campaign touting frozen wild Pacific salmon, despite complaints from Atlantic salmon farmers in Scotland.

The statewide chum salmon harvest of 21.4

million fish ranks as the second best of all time in both numbers of fish and in the ex-vessel value at \$56.3 million, according to the Alaska Department of Fish and Game's (ADF&G) season summary as of November, 2006.

Despite the increase in supply, chum salmon prices increased from 2005 by 5 cents a pound, a 19 percent increase.

"Strong market performance for chums drove a significant increase in ex-vessel price for the species, to the 35-cent-per-pound range in Southeast Alaska. As recently as 2003, statewide average ex-vessel price for chums has been as low as 19 cents per pound.

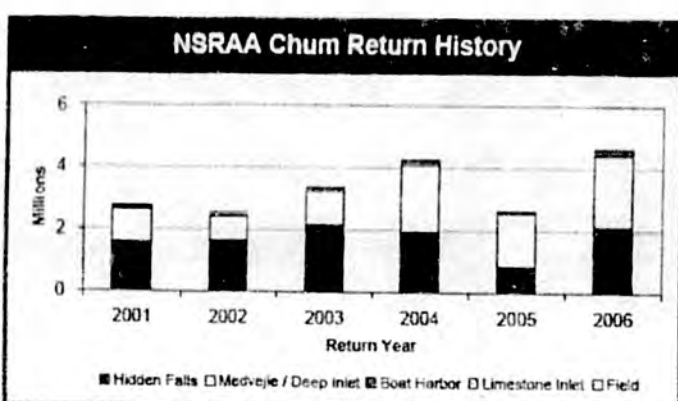
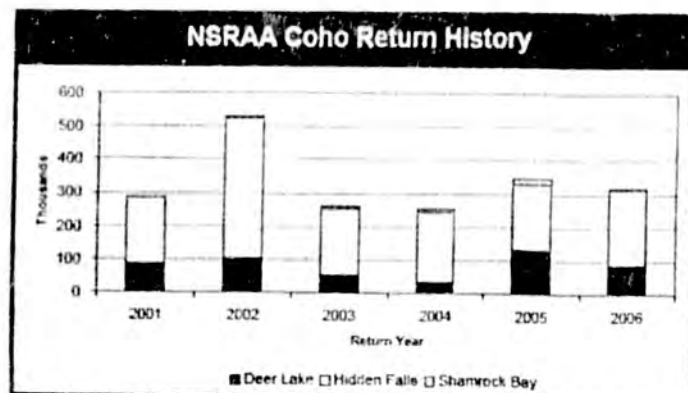
The stronger ex-vessel price stimulated fishing effort for chums in the driftnet and seine fleets, particularly in areas with a shortage of pinks this season. The combination of strong Alaska harvest and rising first wholesale value for chum prod-

ucts indicates genuine growth in demand." (*Seafood Market Bulletin*, October 2006)

Coho salmon prices increased from \$0.75 per pound in 2005 to \$0.99 per pound in 2006, and chinook salmon prices increased from \$2.23 per pound in 2005 to \$2.77 per pound in 2006.

Ex-vessel prices for dressed, troll-caught coho reached record levels in September, topping out at \$2.85 per pound; the chinook harvest was below projections despite increased effort, driven by higher prices, according to the *Seafood Market Bulletin*.

Overall, 2006 was a great market year for salmon in Southeast and there's no reason to expect 2007 to be significantly better or worse. According to ADF&G, the value, \$308.8 million, of the state 2006 salmon catch is higher than the most recent 10 year average (2005-1996) of \$279 million, but \$25 million less than fishermen earned in 2005, a record harvest in numbers of fish.



Field Reports

Deer Lake

A fish population that's starving is not usually good news, but when it comes to the rainbow trout in Deer Lake, hunger is great. It means that the coho salmon now rearing inside protective net pens in the lake—a strategy implemented in 2005—are no longer providing breakfast, lunch, and dinner for the voracious, non-native trout.

"We had an encouraging 58 percent survival rate for the fry that didn't migrate out of the lake last fall, which suggests that the rainbow population may be experiencing some dietary hardships," said Deer Lake project manager Todd Buxton.

Even more troubling for the rainbow trout is that zooplankton populations in the lake are decreasing by half each year. NSRAA doesn't fertilize the lake.

"So while the larger trout are being starved by rearing fry in net pens, we're also putting the hunger on smaller trout by not promoting zooplankton blooms through lake fertilization," Buxton said.

By these two approaches, all age classes of trout in the lake should be experiencing some pretty uncomfortable hunger pains, the effect of which should be decreased reproductive success and outright mortality.

This year's pen-reared fry met or exceeded all growth expectations, despite early mortalities due to the stress of transporting them to the lake, and the levels of saturated

gases in the lake water due to the large snow pack.

The coho fry get an extra snack from the naturally occurring zooplankton that drift through the pens, which provide a little extra boost to fry size and condition.

Around 940,000 fry were released into the lake in late November when the water's surface temperature cooled to less than 4 degrees Celsius. This is the temperature at which the lake's surface water "sinks" and the deeper water in the lake rises to the surface.

This reversal results in lake temperatures that remain a nearly uniform 2-4 degrees Celsius throughout winter. These low temperatures lower the fry's metabolism and likely encourage the coho fry to stay in the lake over the winter rather than emigrate to salt water before spring.

Marine survival of age 1 smolt released last year was 12 percent, which resulted in an adult return of approximately 86,231 fish.

While the percentage of coho caught by trollers and seiners this year was below last year's, the high fish prices in 2006 generated an income (\$780,485) that was better than average, and was in fact the 7th highest in the history of the project.

Deer Lake coho also outperformed Hidden Falls coho both in marine survival (12.1 percent versus 9.9 percent) and in average size per fish (7.7 pounds versus 6.8 pounds).



Winter came early in Southeast this year. The view from Deer Lake camp.

Although the season started on a difficult note, with all the damage to the camp infrastructure from last winter's floods, everything has been repaired and improved.

It's an appropriate finish for a project that has improved its benefit to cost ratio to 3.0, up from 2.2 last year.

Haines

Thermal (otolith) marking of chum fry at 17-mile incubation boxes for the Haines project was successful this year. That's just one of several accomplishments for the Haines project in 2006.

Successful otolith marking resulted in the Alaska Department of Fish and Game (ADF&G) authorizing NSRAA to double the number of eggs seeded at 17-mile.

"For this increase, we increased the number of incubation boxes from 4 to 8 to accommodate the 2.4 million eggs that can now be seeded there," reported Haines project manager Todd Buxton.

Buxton noted that a smaller number of thermally-marked eggs at 17-mile survived than he had hoped—a mere 73 percent rather than the expected 90 percent.

"So, these tests were used to find a way to improve the distribution of flow through the incubation boxes, which should help egg-to-fry survival in the future," Buxton said.

A state legislative grant funded the rejuvenation of spawning channels at 24-mile this past spring, and the results were immediately apparent.

"It attracted more than 1000

fish this fall, where fewer than a dozen fish have entered the channel in the past several years," Buxton said.

While 5000 spawners used the channel in the 1980s, the spawners this year were purposely limited by the use of movable weirs in order to prevent later arrivals from destroying the redds—or nests of eggs—built by earlier spawners.

"With this strategy, fry production is maximized and the excess spawners are redirected to spawning habitat in the Chilkat River," Buxton said. It also keeps the channel from needing rehabilitation too frequently.

The Herman incubation site was expanded to full capacity this year with the addition of a 7th incubation box.

"For the first time in the history of the Haines project, we've taken the fully permitted numbers of eggs at both the Herman and 31-mile incubation sites," Buxton said. 1.6 million eggs were taken at Herman and 800,000 at 31-mile.

Chum escapement into the Herman spawning channel was also managed with weirs, limiting

cont on next page



Bill Holton and Josh Humer spawn chum at Herman Creek Spawning Channel.



the number of spawners to just over 700 fish.

NSRAA continues to monitor potential spawning channel sites for chum salmon in the region.

"Elevation and archeological surveys were completed near the confluence of the Chilkat and Klehini Rivers this summer, and it is likely that these channels would attract spawners," Buxton said. Permits for this site have been applied for, and Buxton hopes that construction of the channels can begin in February of 2007.



NSRAA Employees At Work & Play.

From left: Judd Kirkness and Josh Benassi closing camp at Deer Lake; Matt Golden vaccinating chinook fry at Green Lake; Angie Bowers with sport caught coho at Hidden Falls.



Board Member Profile: Carl Johnson

Serving on the NSRAA board runs in Carl Johnson's family. His father was on the NSRAA board "in its early days," and his brother, Paul, is a current board member.

The seafood business is a family affair, too. Johnson is the Petersburg plant manager for Ocean Beauty Seafoods, and his father was manager of Juneau Cold Storage.

"I was born and raised in processing," Johnson said.

Ocean Beauty's Petersburg Production Facility produces ikura, sujiko, and canned salmon, as well as chum, coho and sockeye salmon for both fresh and frozen markets.

Johnson sits in the processor seat on the NSRAA board, joining in 2004.

"I threw my hat in the ring and have found it to be fascinating," Johnson said. He's served on boards before but "never one this big."

Usually 20 or so members are at each board meeting, Johnson estimates. He finds the meetings to

be well organized and successful.

"Of course, there are a lot of different ideas with that many people, but things get hashed out and it runs pretty smoothly," Johnson said.

Johnson grew up in Juneau and spends his summers working in Petersburg, but he and his wife live in Lake Stevens, Washington.

during the rest of the year. His children have "grown and gone" but he and his wife enjoy camping, fishing, and traveling during their free time.

Johnson doesn't find himself taking sides at board meetings very often.

"I'm more of a listener and an adviser. I'm a neutral seat on some issues that have to do with gear groups," Johnson said. "But some-

times I'll get input from other processors if there's something concerning us in an upcoming meeting. And sometimes other board members will ask my opinion."

One thing Johnson did advise against was the possibility of NSRAA building a coho processing facility in conjunction with its Sawmill Cove hatchery, an idea that arose a few years ago.

"There was some interest in doing a coho plant as well as a hatchery, and that was a concern for the processors," Johnson said.

"We didn't feel that getting into the commodity side of the seafood business was part of the organization's mission. Do what you do best: get fish into the ocean."

NSRAA hopes to break ground on the new Sawmill Cove facility this spring, and

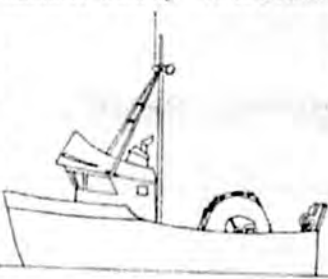
Johnson anticipates that the project will be NSRAA's main "challenge" for the foreseeable future, although ongoing capital improvements on aging facilities remain on top of NSRAA's list of things to do.

"We need to decide what to replace, in what order," Johnson said. "Fortunately, NSRAA has always had a good economic base, with conservative management, and well balanced books. We want to keep that."

Johnson is glad to see the back of some economically tough years - 2002 through 2004 - for the seafood industry.

There are lots of reasons for the improving market conditions for Alaska seafood, but Johnson believes that one of them is educated seafood buyers.

"Consumers are asking for wild fish over farmed," Johnson said. "We're on an upswing now."



A Hidden Falls chinook sport-caught on a fly by seasonal employee Brad Olszewski.



An eagle watches a family of bears in the Hidden Falls Lake outlet stream this summer.

Boat Harbor Sees Huge Chum Return

Record year at Boat Harbor, improvement anticipated at Limestone Inlet

"This was a phenomenal year for chum salmon returns, and nowhere was it more dramatic than at Boat Harbor," reported operations manager Steve Reifensstuhl.

565,000 chum were caught in 2006 at the Boat Harbor terminal harvest area, the biggest return ever for that site. The catch was about 3 times the forecasted numbers for this NSRAA field project, which is operated cooperatively with Douglas Island Pink and Chum (DIPAC).

The excellent return allowed gillnetters to fish in the area for seven days a week for almost a month.

"A fair portion of those fish were from the late-large chum rearing strategy implemented at that site 4 years ago," Reifensstuhl said. Late-large chum fry are held longer at the rearing site and released at a larger size than their "traditionally" reared counterparts, in what seems to be a successful effort to increase their marine survival rates.

The 2006 return was comprised mostly of 4-year old chum. The 3-year old component of the run was strong as well, which

leads NSRAA staff to predict that the 2007 return will see good numbers of 4-year olds.

Limestone Inlet is another cooperative field project between NSRAA and DIPAC. This year 88,000 chum were harvested, just 70 percent of the forecasted numbers.

However, the late-large rearing program was implemented at Limestone Inlet only 3 years ago.

"So we're hoping that the late-large component that returns in 2007 as 4-year olds will help turn that program around," Reifensstuhl said. "It's likely that both programs will be great producers in the future."

Both programs have benefited from experienced - and motivated - caretakers. Gillnetter and former NSRAA board member Chris Crowe works at Boat Harbor, and his son, Brent Crowe, also a gillnetter, works at Limestone Inlet. They've been on the job for a combined 15 years.

"They're out there from mid-March until early June, feeding the fish and doing the sampling," Reifensstuhl said. "Then when they've released the fish and de-mobbed the site, they start fishing. Having that consistency has been great in terms of the fish rearing."

"This was a phenomenal year for chum salmon returns, and nowhere was it more dramatic than at Boat Harbor"



David Fundak, his wife Beth and their son Sam are settling in to life at Medveje Hatchery.

Employee Changes

Full Roster of Employees

No one should be short-handed this winter and early spring, as NSRAA has all its positions filled for the first time in a long while.

Several seasonal employees moved into full-time positions, including Angie Bowers at Hidden Falls; Brandon Hummel, who moved from seasonal at Deer Lake to a 10-month position at Hidden Falls; and Jud Kirkness, who moved from a seasonal at Medveje to a 10-month position at Deer Lake.

"Jud came recommended by Deb Lyons, as he had worked on the Sitka Trail Works crew, and he worked so well at Medveje I knew he was the one we wanted

to be full-time in the field at Deer Lake," said operations manager Steve Reifensstuhl. "We were lucky he was interested in the position."

Tommy Sheridan is moving from his previous job as assistant manager at Hidden Falls to begin the new position of otolith lab coordinator.

"He's a perfect fit for this new position," Reifensstuhl said.

New to NSRAA is David Fundak, who is now living on site at Medveje, after working for Prince William Sound Aquaculture.

"It feels good to be at this stage," Reifensstuhl said. "I hope it lasts for a while."



A gillnetter hauls gear in the Deep Inlet TIA.

Richard Eliason Jr. photo

New Board Members

Dick Longworth, a lifelong Petersburg resident, is a new NSRAA board member, serving in one of the Interested Person seats.

Longworth, a retired elementary school teacher and biologist, brings a wealth of diversified experiences to the board, having worked many summers as a crewman on

commercial seiners in Southeast, as well as doing heavy construction and surveying work.

Now, in his "retirement," he operates what he calls his "public service business."

"Petersburg needed a bike shop, so I opened one," Longworth said.

FISHERY MANAGEMENT REPORT NO. 06-19

**ALASKA SALMON ENHANCEMENT PROGRAM
2005 ANNUAL REPORT**

by

Bruce White,

Alaska Department of Fish and Game, Commercial Fisheries, Juneau

March 2006

Alaska Department of Fish and Game
Division of Sport Fish, Research and Technical Services
333 Raspberry Road, Anchorage, Alaska, 99518-1599

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2005 ABSTRACT

The Alaska Department of Fish and Game (ADF&G) oversees and regulates all state and private sector salmon rehabilitation and enhancement projects. Protection of Alaska's natural salmon stocks requires stringent permitting processes. Geneticists, pathologists, and biologists review all projects prior to the issuance of a permit to operate a salmon ranching facility, transfer eggs or fish, or release any fish into Alaska waters. Pathology, genetic, coded wire tag, and otolith processing laboratories are maintained to provide both diagnostic information to ADF&G fishery managers, and inseason and technical expertise to the private sector.

Over 1.7 billion salmon eggs were collected by Alaskan hatchery operators in 2005. In addition, over 1.4 billion fish were released. An estimated 80 million salmon of hatchery origin returned. Of the 200 million salmon harvested in the commercial common property fishery, over 53 million or 27% of the harvest was contributed from ocean ranching by the Alaska salmon enhancement program. Enhanced salmon provided over \$39 million or 14% of the preliminary value of the commercial common property harvest. The ocean ranching program provides hundreds of Alaskans with seasonal and fulltime jobs. It is considered the largest agricultural industry in Alaska.

Key words: Alaska salmon enhancement program, salmon hatchery, annual report, ocean ranching, private non-profit corporation, Southeast Alaska, Prince William Sound, Cook Inlet, Kodiak, egg take, cost recovery, Chinook, pink, chum, coho, sockeye

INTRODUCTION

Prince William Sound and Southeast Alaska are the predominant regions involved with enhancement programs, and pink and chum salmon are the predominant species produced. Production levels, in terms of egg takes and releases, have largely stabilized (Figure 1); programs have matured and are generally operating at planned capacities.

The salmon enhancement program is composed of several factions:

- 30 private nonprofit (PNP) corporation hatcheries,
- 2 federal or Bureau of Indian Affairs (BIA) hatcheries,
- 2 Alaska state hatcheries, and
- Several streamside incubation and restoration projects.

The Alaska Department of Fish and Game Division of Sport Fish operates the state hatcheries, primarily to produce salmonid species intended for sport fisheries. Private nonprofit corporations are permitted to operate salmon hatcheries and recoup their operational costs from a special harvest of returning adult fish, called a cost recovery harvest. All other returning adult fish are available for harvest in Alaska's common property fisheries open to the public. Federal hatcheries are generally used for research. Streamside incubation projects enhance stocks of fish inexpensively. Stream restoration projects involve restoring streams degraded by human activity.

HIGHLIGHTS IN 2005

- The preliminary statewide harvest of salmon in 2005 was a record 221 million fish, surpassing the previous record of 218 million fish harvested in 1995. Statewide, the returns associated with Alaska's salmon hatcheries also reached record levels, with a return of over 80 million salmon.
- Enhancement program-produced fish provided 14% of the total value of the statewide commercial common property harvest. A preliminary estimate of the exvessel value of the enhanced portion of the commercial common property harvest is \$39 million, and is likely to increase with post season adjustments.
- Statewide, 47% of the chum, 33% of the pink, 19% of the coho, 8% of the Chinook and 4% of the sockeye salmon in the common property harvest were of hatchery origin.
- Compared to 2004, the preliminary exvessel value of the statewide commercial salmon harvest increased about 30%. This is largely due to the record number of fish harvested. The preliminary price paid for sockeye salmon increased, while the prices for Chinook, coho, pink, and chum salmon remained about the same as last year.
- An estimated 405,001 hatchery-produced fish representing 10 species (Chinook, coho, pink, chum and sockeye salmon; steelhead, lake, and rainbow trout; Arctic char and grayling) were harvested by sport anglers.
- In Southeast, a total of 4.2 million enhanced fish contributed 6% of the total common property harvest in number, and \$10.2 million or 16% of the total harvest in value. An estimated 2.8 million enhanced chum salmon were harvested in the common property fishery having a preliminary exvessel value of \$5.4 million. Hatchery origin coho and Chinook salmon contributions to the common property fishery were \$2.4 and \$1.4 million, respectively.
- Prince William Sound experienced record pink salmon returns, and contributions to the common property harvest. The five hatcheries combined to provide over \$19 million to the common property fishery. Total hatchery contributions exceeded 72% of the common property harvest in number and provided approximately 44% of the total exvessel value. Hatchery produced pink, sockeye, chum and coho salmon contributed about \$12.1, \$3.2, \$2.6, and \$1.1 million to the common property harvest, respectively.
- Approximately 14% of the salmon caught in Cook Inlet commercial salmon fisheries originated from Cook Inlet hatcheries, with a preliminary exvessel value of \$4.6 million.
- Enhanced salmon in the Kodiak commercial common property fisheries contributed an estimated \$5.5 million, and by number totaled 36% of the common property harvest. Returns to hatcheries are subject to natural forces, and accordingly survival rates and return numbers vary from year to year.

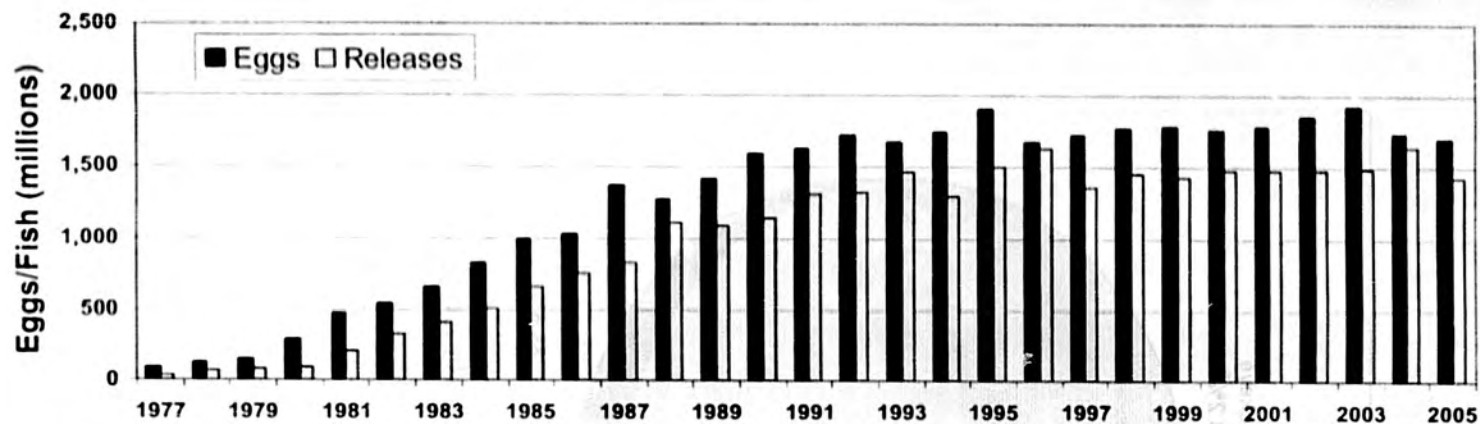


Figure 1.—Total egg-takes and releases in the Alaska salmon hatchery program, 1977 to 2005.

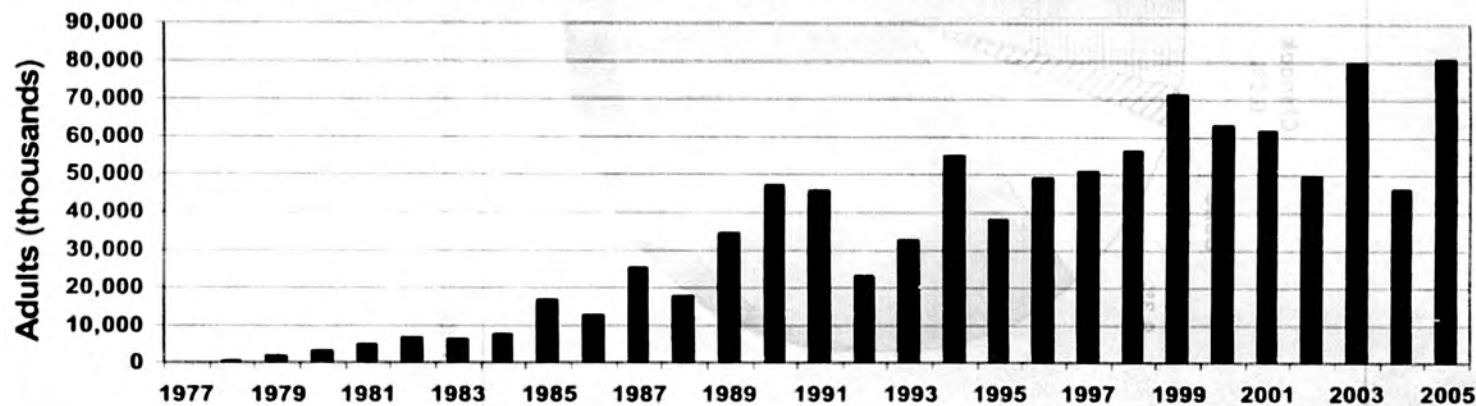


Figure 2.—Total returns in the Alaska salmon hatchery program, 1977 to 2005.

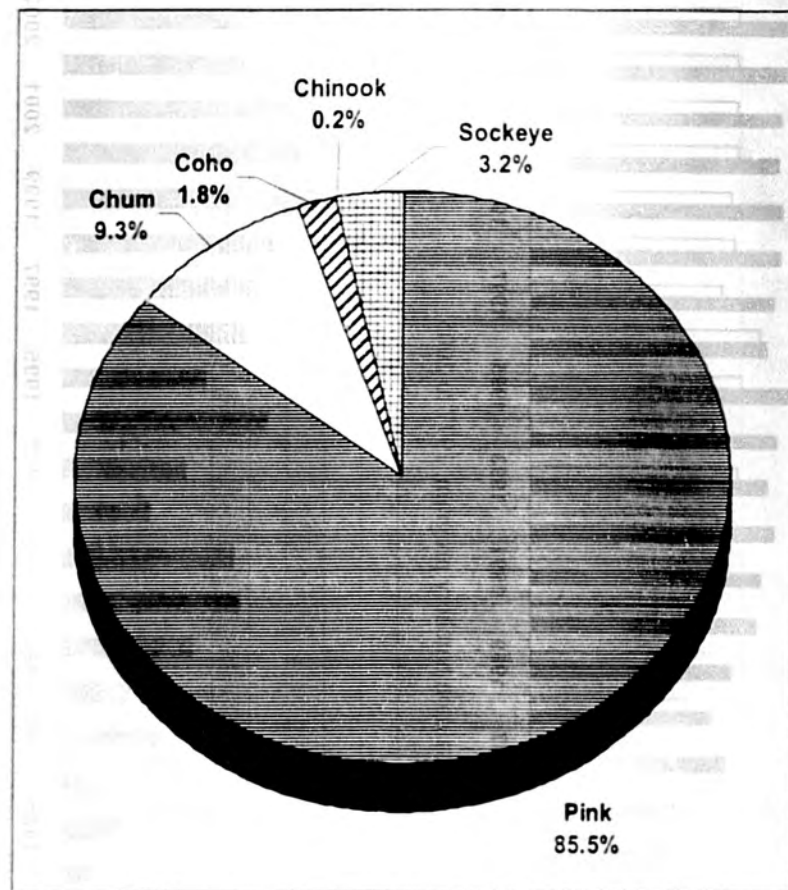


Figure 3.—Alaska salmon hatchery returns by species in 2005.

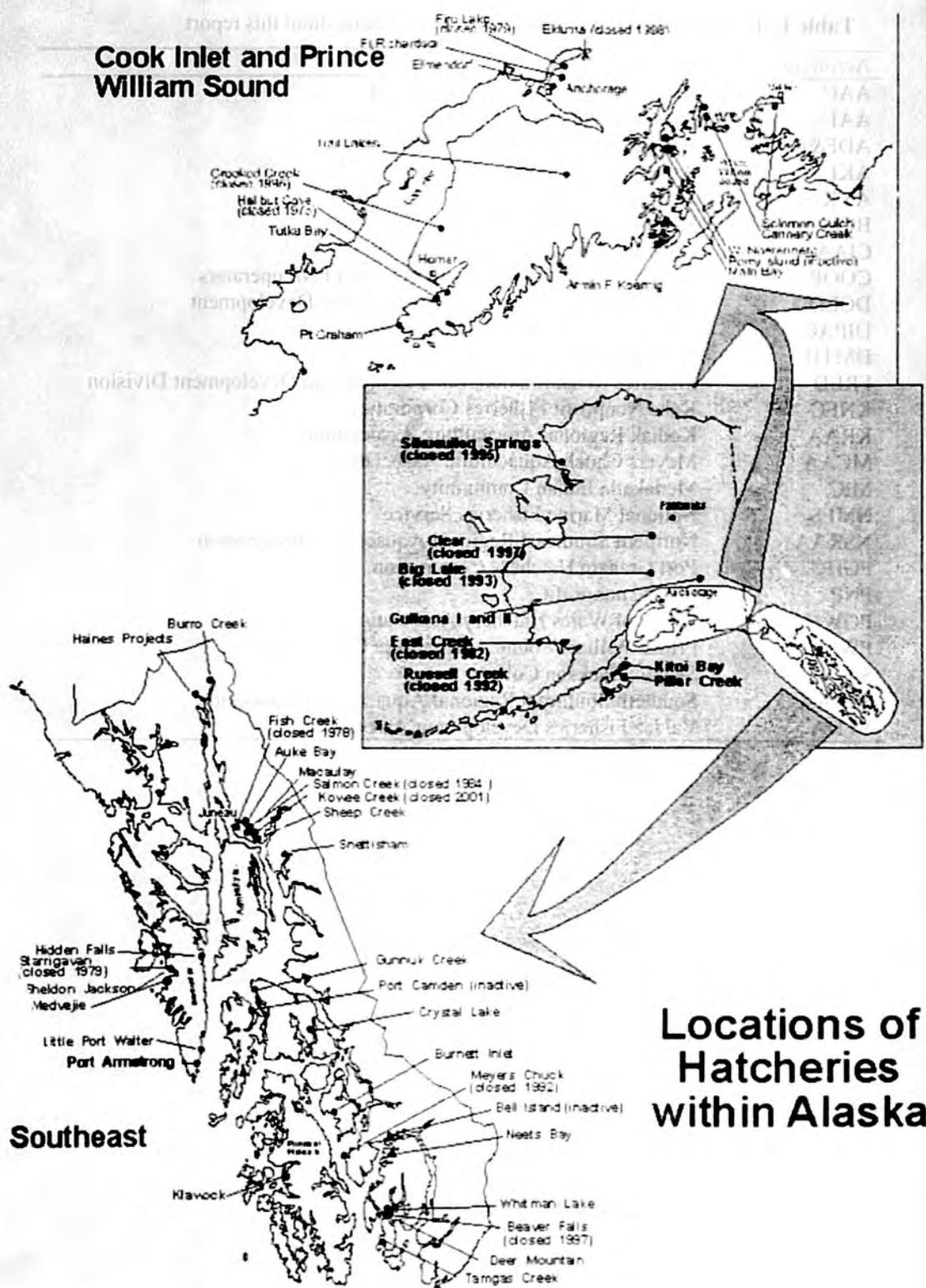


Figure 4.—Locations of hatcheries in Alaska.

Table 1.—List of acronyms and abbreviations used throughout this report.

Acronym	Organization
AAC	American Aquaculture Corporation
AAI	Alaska Aquaculture, Inc.
ADF&G	Alaska Department of Fish and Game
AKI	Armstrong-Keta, Inc.
AYK	Arctic-Yukon-Kuskokwim
BCF	Burro Creek Farms, Inc.
CIAA	Cook Inlet Aquaculture Association
COOP	Cooperative projects between state and PNP operators
DCED	Department of Commerce and Economic Development
DIPAC	Douglas Island Pink and Chum, Inc.
DMTH	Deer Mountain Tribal Hatchery
FRED	Fisheries Rehabilitation, Enhancement and Development Division
KNFC	Kake Nonprofit Fisheries Corporation
KRAA	Kodiak Regional Aquaculture Association
MCAA	Meyers Chuck Aquaculture Association
MIC	Metlakatla Indian Community
NMFS	National Marine Fisheries Service
NSRAA	Northern Southeast Regional Aquaculture Association
PGHC	Port Graham Hatchery Corporation
PNP	Private nonprofit
POWHA	Prince of Wales Hatchery Association
PWSAC	Prince William Sound Aquaculture Corporation
SJC	Sheldon Jackson College
SSRAA	Southern Southeast Regional Aquaculture Association
VFDA	Valdez Fisheries Development Association

Table 2.—Estimated egg takes from Alaska hatcheries, in millions, 2005.

Area	Pink	Chum	Coho	Chinook	Sockeye	Other	Total
Southeast	83.46	435.97	23.98	13.48	17.41	0.17	574.46
Prince William Sound	685.78	167.77	4.80	0.00	47.87	0.00	906.22
Cook Inlet	25.18	0.00	2.83	2.02	8.21	4.43	42.68
Kodiak/Alaska Peninsula	155.10	22.65	2.47	0.21	8.30	0.00	188.72
Totals ^a	949.52	626.38	34.08	15.71	81.80	4.60	1,712.09

^a Some figures may not total exactly due to rounding.**Table 3.**—Estimated releases from Alaska hatcheries, in millions, 2005.

Area	Pink	Chum	Coho	Chinook	Sockeye	Other	Total
Southeast	81.42	400.42	15.55	7.39	10.91	0.02	515.72
Prince William Sound	564.05	126.99	3.03	0.00	15.33	0.00	709.40
Cook Inlet	26.57	0.00	2.17	2.00	10.16	1.24	42.14
Kodiak/Alaska Peninsula	136.29	21.58	1.39	0.07	2.32	0.00	161.64
Totals ^a	808.32	548.99	22.13	9.47	38.73	1.26	1,428.90

^a Some figures may not total exactly due to rounding.**Table 4.**—Total returns attributed to Alaska hatcheries and enhancement projects in 2005, including common property, cost recovery, broodstock, and escapement.

Area	Pink	Chum	Coho	Chinook	Sockeye	Other	Total
Southeast	1,788,382	5,227,853	874,135	116,636	301,227	94	8,308,327
Prince William Sound	50,908,319	2,200,381	329,869	1,846	733,682	0	54,174,097
Cook Inlet	2,366,005	0	81,239	19,615	1,344,244	122,443	3,933,546
Kodiak/Alaska Peninsula	14,013,561	124,959	165,979	380	217,447	0	14,522,326
Totals ^a	69,076,267	7,553,193	1,451,222	138,477	2,596,600	122,537	80,928,296

^a Some figures may not total exactly due to rounding.

Table 5.—Alaska common property commercial harvest of enhanced fish, in thousands, 2005.

Area	Harvest ^a	Chinook	Sockeye	Coho	Pink	Chum	Total
Southeast	Total Commercial Harvest	448	1,608	2,993	59,040	6,437	70,526
	Total Cost Recovery Harvest	31	140	255	811	1,893	3,129
	Common Property Harvest	417	1,468	2,738	58,229	4,544	67,397
	Enhanced Fish Harvested	50	121	491	772	2,770	4,204
	% Enhanced in Total CP Harvest ^b	11.9%	8.3%	17.9%	1.3%	61.0%	6.2%
Prince William Sound	Total Commercial Harvest	35	1,987	536	59,897	1,987	64,442
	Total Cost Recovery Harvest	0	189	44	12,510	536	13,279
	Common Property Harvest	35	1,798	492	47,387	1,451	51,163
	Enhanced Fish Harvested	0	329	183	35,111	1,383	37,007
	% Enhanced in Total CP Harvest ^b	0.0%	18.3%	37.3%	74.1%	95.3%	72.3%
Cook Inlet	Total Commercial Harvest	30	5,424	208	2,354	167	8,183
	Total Cost Recovery Harvest	0	75	2	2,139	0	2,215
	Common Property Harvest	30	5,349	206	215	167	5,968
	Enhanced Fish Harvested	0	819	0	5	0	823
	% Enhanced in Total CP Harvest ^b	0.0%	15.3%	0.0%	2.2%	0.0%	13.8%
Kodiak	Total Commercial Harvest	14	3,047	396	30,139	477	34,073
	Total Cost Recovery Harvest	0	0	0	2,640	0	2,640
	Common Property Harvest	14	3,047	396	27,499	477	31,433
	Enhanced Fish Harvested	0	215	152	10,963	92	11,422
	% Enhanced in Total CP Harvest ^b	0.0%	7.1%	38.3%	39.9%	19.2%	36.3%
Chignik/Aleutian Islands/ Alaska Peninsula	Total Commercial Harvest	16	6,598	220	9,614	791	17,239
	Enhanced Fish Harvested	0	0	0	0	0	0
	% Enhanced in Total CP Harvest ^b	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Bristol Bay	Total Commercial Harvest	75	24,502	75	3	1,131	25,786
	Enhanced Fish Harvested	0	0	0	0	0	0
	% Enhanced in Total CP Harvest ^b	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Arctic-Yukon-Kuskokwim	Total Commercial Harvest	63	121	349	0	386	919
	Enhanced Fish Harvested	0	0	0	0	0	0
	% Enhanced in Total CP Harvest ^b	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	Total Commercial Harvest	681	43,287	4,777	161,047	11,376	221,168
	Total Cost Recovery Harvest	31	404	301	18,099	2,429	21,263
	Common Property Harvest	650	42,883	4,476	142,948	8,947	199,905
	Enhanced Fish Harvested	50	1,484	826	46,851	4,245	53,456
	% Enhanced in Total CP Harvest ^b	7.6%	3.5%	18.5%	32.8%	47.4%	26.7%

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

^b CP = common property.

Table 6.—Preliminary estimated value of the total Alaska common property harvest, in thousands of dollars, 2005.

Area	Chinook	Sockeye	Coho	Pink	Chum	Total
Southeast	\$12,101	\$7,286	\$13,428	\$22,482	\$8,868	\$64,165
Prince William Sound	\$3,563	\$17,716	\$3,019	\$16,348	\$2,741	\$43,388
Cook Inlet	\$701	\$29,831	\$654	\$51	\$282	\$31,519
Kodiak	\$139	\$11,689	\$1,074	\$10,315	\$672	\$23,888
Chignik/Aleutian Islands/Alaska Peninsula	\$118	\$25,812	\$234	\$974	\$583	\$27,722
Bristol Bay	\$213	\$91,294	\$142	\$0	\$852	\$92,502
Arctic-Yukon-Kuskokwim	\$2,444	\$444	\$847	\$0	\$362	\$4,097
Totals ^a	\$19,278	\$184,074	\$19,399	\$50,171	\$14,359	\$287,281

^a Harvest data from Eggers, D. 2006 Run Forecasts and Harvest Projections for 2006 Alaska Salmon Fisheries and Review of the 2005 Season. Value data from the Alaska Department of Fish and Game website: <http://www.state.ak.us/adfg/geninfo/salmon/salmhome.htm>. Accessed 2/06/2006. Preliminary figures may not total exactly due to rounding.

1061	1	1	1	1	1	1
1062	1	1	1	1	1	1
1063	1	1	1	1	1	1
1064	1	1	1	1	1	1
1065	1	1	1	1	1	1
1066	1	1	1	1	1	1
1067	1	1	1	1	1	1
1068	1	1	1	1	1	1
1069	1	1	1	1	1	1
1070	1	1	1	1	1	1
1071	1	1	1	1	1	1
1072	1	1	1	1	1	1
1073	1	1	1	1	1	1
1074	1	1	1	1	1	1
1075	1	1	1	1	1	1
1076	1	1	1	1	1	1
1077	1	1	1	1	1	1
1078	1	1	1	1	1	1
1079	1	1	1	1	1	1
1080	1	1	1	1	1	1
1081	1	1	1	1	1	1
1082	1	1	1	1	1	1
1083	1	1	1	1	1	1
1084	1	1	1	1	1	1
1085	1	1	1	1	1	1
1086	1	1	1	1	1	1
1087	1	1	1	1	1	1
1088	1	1	1	1	1	1
1089	1	1	1	1	1	1
1090	1	1	1	1	1	1
1091	1	1	1	1	1	1
1092	1	1	1	1	1	1
1093	1	1	1	1	1	1
1094	1	1	1	1	1	1
1095	1	1	1	1	1	1
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1103	1	1	1	1	1	1
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1105	1	1	1	1	1	1
1106	1	1	1	1	1	1
1107	1	1	1	1	1	1
1108	1	1	1	1	1	1
1109	1	1	1	1	1	1
1110	1	1	1	1	1	1
1111	1	1	1	1	1	1
1112	1	1	1	1	1	1
1113	1	1	1	1	1	1
1114	1	1	1	1	1	1
1115	1	1	1	1	1	1
1116	1	1	1	1	1	1
1117	1	1	1	1	1	1
1118	1	1	1	1	1	1
1119	1	1	1	1	1	1
1120	1	1	1	1	1	1
1121	1	1	1	1	1	1
1122	1	1	1	1	1	1
1123	1	1	1	1	1	1
1124	1	1	1	1	1	1
1125	1	1	1	1	1	1
1126	1	1	1	1	1	1
1127	1	1	1	1	1	1
1128	1	1	1	1	1	1
1129	1	1	1	1	1	1
1130	1	1	1	1	1	1
1131	1	1	1	1	1	1
1132	1	1	1	1	1	1
1133	1	1	1	1	1	1
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1156	1	1	1	1	1	1
1157	1	1	1	1	1	1
1158	1	1	1	1	1	1
1159	1	1	1	1	1	1
1160	1	1	1	1	1	1
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1162	1	1	1	1	1	1
1163	1	1	1	1	1	1
1164	1	1	1	1	1	1
1165	1	1	1	1	1	1
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1168	1	1	1	1	1	1
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1170	1	1	1	1	1	1
1171	1	1	1	1	1	1
1172	1	1	1	1	1	1
1173	1	1	1	1	1	1
1174	1	1	1	1	1	1
1175	1	1	1	1	1	1
1176	1	1	1	1	1	1
1177	1	1	1	1	1	1
1178	1	1	1	1	1	1
1179	1	1	1	1	1	1
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1190	1	1	1	1	1	1
1191	1	1	1	1	1	1
1192	1	1	1	1	1	1
1193	1	1	1	1	1	1
1194	1	1	1	1	1	1
1195	1	1	1	1	1	1
1196	1	1	1	1	1	1
1197	1	1	1	1	1	1
1198	1	1	1	1	1	1
1199	1	1	1	1	1	1
1200	1	1	1	1	1	1

Table 7.—Salmon harvest projections by region and species.

Table 7.—Salmon fishery enhancement program timeline of events.

Year	Event	No. of state hatcheries	No. private nonprofit (PNP) hatcheries	No. of Federal hatcheries
1934	Federal research station Little Port Walter constructed			1
1950	Federal hatchery at Auke Creek constructed			2
1953	1 territorial hatchery constructed at Kitoi Bay	1		
1954	1 territorial hatchery constructed at Deer Mountain	2		
1958	1 territorial hatchery constructed at Ft. Richardson	3		
1965	1 state hatchery constructed at Fire Lake	4		
1969	1 state hatchery constructed at Crystal Lake	5		
1971	Fisheries Rehabilitation, Enhancement and Development (FRED) Division created by Legislature			
1973	2 state hatcheries constructed (Crooked Creek and Gulkana)	7		
	State enhancement projects at Starrigavan and Halibut Cove started			
1974	2 state hatcheries constructed (Beaver Falls and East Creek)	9		
	Legislature authorizes permits for private nonprofit hatchery operators to salmon ranch			
1975	4 PNP permits issued [Sheldon Jackson (#3), Port San Juan (#2), Perry Island (#1), and Sandy Bay (#4)]		4	
	2 state hatcheries constructed (Big Lake and Tutka)	11		
1976	AS 16.10.375 passed, designating regions for regional planning teams and enhancing salmon			
	1 state hatchery constructed at Elmendorf	12		
	2 PNP permits issued [Burnett Inlet (#5) and Kowee Creek (#6)]		6	
1977	1 PNP permit issued to Gunnuk Creek (#7)			
	2 state hatcheries constructed (Klawock and Russell Creek)	14		
	State enhancement project at Karluk Lake started			
1978	1 PNP permit issued to Whitman Lake (#8)			
	2 state hatcheries constructed (Cannery Creek and Hidden Falls)	16		
1979	3 PNP permits issued [Sheep Creek (#11), Meyers Chuck (#10), Salmon Creek (#9)]			
	1 state hatchery constructed (Snettisham)	17		
	1 state hatchery closed (Fire Lake)	16		
1980	1 PNP permit issued to Burro Creek (#12)			
	2 state hatcheries constructed (Clear and Main Bay)	18		
	1 hatchery at Tamgas Creek constructed (Metlakatla Indian Community/BIA)			3
1981	1 state hatchery closed (East Creek)	17		

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Table 7.—Page 2 of 3.

Year	Event	No. of state hatcheries	No. private nonprofit (PNP) hatcheries	No. of Federal hatcheries
	2 state hatcheries constructed (Sikusuiq and Trail Lakes)	19		
	4 PNP permits issued [Medvejie (#16), Port Armstrong (#13), Solomon Gulch (#15), Salmon Creek (#14)]		16	
	1 PNP permit revoked [Salmon Creek (#9)]		15	
1982	2 PNP permits issued [Eklutna (#17) and Favorite Bay (#18)]		17	
1983	3 PNP permits issued [Neets Bay (#19), Crittenden Creek (#22), and Esther (#20)]		20	
1984	1 state hatchery completed (Broodstock Development Center)	20		
1984	1 PNP permit issued to Santa Anna (#21)		21	
1985	1 PNP permit issued to Port Camden (#23)		22	
1986	1 PNP permit issued to Beaver Falls (#24)		23	
1987	1 PNP permit issued to Gastineau (#25)		24	
1988	Aquatic Farm Act signed; statute passes allowing contracting of hatchery operations			
	4 state hatcheries contracted to private sector (Kitoi Bay, Trail Lakes, Cannery Creek, Hidden Falls)	16		
	4 PNP permits issued [Hidden Falls (#28), Cannery Creek (#26), Trail Lakes (#27), Kitoi Bay (#29)]		28	
	1 state hatchery constructed (Pillar Creek)	17		
	2 PNP permits revoked [Sandy Bay (#4) and Salmon Creek (#14)]		26	
1990	CSHB432 becomes law prohibiting finfish farming in Alaska			
	1 PNP permit issued to Bell Island (#30)		27	
1991	5 state hatcheries contracted to private sector [Main Bay (#31), Tutka, Gulkana (#39), Pillar Creek (#38), and Beaver Falls (#24)] — Beaver Falls and Tutka tallied elsewhere	12	30	
	Portions of 6 state hatcheries paid for by private or federal funds			
1992	1 state hatchery closed (Russell Creek)	11		
	2 PNP permits issued [Haines projects (#34) and Port Graham (#33)]		32	
	1 PNP permit revoked [Meyers Chuck (#10)]		31	
	FRED Division merged with the Commercial Fisheries Division to form the Commercial Fisheries Management and Development (CFMD) Division	8		3
1993	3 state hatcheries transferred from CFMD to Sport Fish Division (Broodstock Development Center, Elmendorf, and Ft. Richardson)			

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Table 7.—Page 3 of 3.

Year	Event	No. of state hatcheries	No. private nonprofit (PNP) hatcheries	No. of Federal hatcheries
	2 state hatcheries contracted to private sector (Crooked Creek and Klawock)	9		
	1 state hatchery closed (Big Lake)	8		3
1994	4 PNP permits issued [Tutka (#32), Crooked Creek (#35), Klawock (#36), Deer Mountain (#37)]		35	
	1 state hatchery contracted (Deer Mountain)	7		
	Ft. Richardson Hatchery merged with Broodstock Development Center	6		
1995	1 PNP hatchery under new management [Klawock (#38)]		30	
	1 state hatchery transferred from CFMD Division to Sport Fish Division (Crystal Lake)			
	1 state hatchery closed (Sikusuilag)	5		
1996	1 state hatchery contracted [Snettisham (#39)]	4	36	
	1 state hatchery transferred from CFMD Division to Sport Fish Division (Clear)			
	3 PNP permits revoked [Crittenden Creek (#22), Santa Anna (#21), and Favorite Bay (#18)]		33	
1997	1 state hatchery closed (Clear)	3		
	2 state contracted (PNP) hatcheries closed [Beaver Falls (#24), Crooked Creek (#35)]		31	
	1 PNP hatchery closed & reopened under new management [Burnett Inlet (#5, now #40)]		31	
1998	1 PNP hatchery closed [Eklutna (#17)]		30	
2000	1 state hatchery contracted to private sector (Crystal Lake Hatchery)	2	31	
	Port Camden hatchery permit (# 23) given up		30	3
2001	Kowee Creek hatchery permit (#6) revoked; 1 Federal hatchery inactivated (Auke Creek)	2	29	2
2002	No activity	2	29	2
2003	No activity	2	29	2
2004	1 PNP hatchery permit issued [Port St. Nicholas (#43)]	2	30	2
2005	No activity	2	30 ^a	2

^a Perry Island, Bell Island, and Burro Creek are not active; there are 27 active PNPs.

Table 8.—Eggs taken at Alaska hatcheries in 2005, in millions of eggs (transferred eggs are listed with the receiving hatchery).

Area/Operator/Location		Pink	Chum	Coho	Chinook	Sockeye	Other	Total
Southeast								
SSRAA	Whitman Lake	37.07	3.00	1.51				41.58
	Neets Bay	88.68	2.01					90.69
	Burnett Inlet		2.11			0.84		2.95
	Crystal Lake		0.23	2.57				2.79
NSRAA	Hidden Falls	88.32	4.37	2.05				94.75
	Medvejie Creek	0.47	58.91	0.27	4.73			64.37
	Haines projects		2.19					2.19
AKI	Port Armstrong	81.46	4.63	3.03	0.22			89.34
DIPAC	Macaulay *	112.80	0.81	0.93				114.54
	Snettisham					16.57		16.57
KTHC	Deer Mountain			0.18	0.17		0.07	0.42
KNFC	Gunnuk Creek		25.10	0.02				25.12
POWHA	Klawock			4.94				4.94
SJC	Sheldon Jackson	1.53	6.39	0.07				8.07
MIC	Tamgas Creek		11.87	2.94	0.55			15.35
NMFS	Little Port Walter				0.69		0.10	0.79
Southeast Totals^b		83.46	435.97	23.98	13.48	17.41	0.17	574.46
Prince William Sound								
PWSAC	Armin F. Koernig	198.59						198.59
	Wally Noerenberg	96.33	167.77	2.55				266.65
	Cannery Creek	151.81						151.81
	Main Bay					11.38		11.38
	Gulkana					36.48		36.48
VFDA	Solomon Gulch	239.05		2.25				241.30
Prince William Sound Totals^b		685.78	167.77	4.80	0	47.87	0	906.22
Cook Inlet								
PGHC	Port Graham	25.18						25.18
CIAA	Trail Lakes			1.41		8.21		9.63
ADF&G	Ship Creek Complex			1.42	2.02		4.43	7.86
Cook Inlet Totals^b		25.18	0	2.83	2.02	8.21	4.43	42.68
Kodiak								
KRAA	Kitoi Bay	155.10	22.65	2.38		0.72		180.84
	Pillar Creek			0.09	0.21	7.59		7.89
Kodiak Totals^b		155.10	22.65	2.47	0.21	8.30	0	188.72
Statewide Totals^b		949.52	626.38	34.08	15.71	81.80	4.60	1,712.09

* Burro Creek and Sheep Creek egg takes are listed under Macaulay Hatchery.

^b Some figures may not total exactly due to rounding.

Table 9.—Alaskan hatchery releases in 2005, in millions of fish.

Area/Operator/Location	Pink	Chum	Coho	Chinook	Sockeye	Other	Total
Southeast^a							
SSRAA Whitman Lake			0.30	0.63			0.94
Kendrick Bay		19.70					19.70
Nakat Inlet		7.92	0.30				8.22
Anita Bay		0.23					0.23
Neets Bay		0.83		0.09			0.92
Neets Bay		70.07	2.17				72.24
Nakat Inlet		9.76					9.76
Anita Bay		13.55					13.55
Burnett Inlet		0.23					0.40
Neck Lake		1.00					1.48
Crystal Lake		0.14		0.59			0.73
Neets Bay				0.40			0.40
Anita Bay				0.33			0.33
NSRAA Hidden Falls		43.82	2.20	1.25			47.26
Takatz Bay		44.98					44.98
Deer Lake		0.57					0.57
Medvejie		41.42					41.42
Deep Inlet		0.27		2.43			9.92
Bear Cove			0.72				0.72
Mist Cove			0.03				0.03
Indian River			0.29				0.29
Shamrock Bay		3.19					3.19
Haines projects							
AKI Port Armstrong	80.11	0.57	1.58	0.08			82.35
DIPAC Macaulay (Gastineau)			0.40	0.22			0.62
Sheep Creek			0.10	0.10			0.20
Gastineau Channel		35.27					35.27
Amalga Harbor		36.79					36.79
Boat Harbor		13.56					13.56
Limestone Inlet		15.01					15.01
Skagway				0.22			0.22
FishCr/Auke Bay/Twin L				0.28			0.28
Snettisham					4.15		4.15
Sweetheart Lake				0.55			0.55
Tahitan/Tuya Lakes				4.43			4.43
Tatsamenie Lake				0.63			0.63
KTHC Deer Mountain			0.07	0.08		0.01	0.15
KNFC Gunnuk Creek		5.09					5.09
Southeast Cove		23.47					23.47
SJC Sheldon Jackson	1.04	1.08	0.07	0.01			2.19
Deep Inlet		3.25					3.25
MIC Tamgas Creek		4.72	2.06	0.53	0.10		7.40
POWHA Klawock			2.25		0.40		2.65
NMFS Little Port Walter				0.16		0.02	0.18
Southeast Totals ^b	81.42	400.42	15.55	7.39	10.91	0.02	515.72

-continued-

Table 9.—Page 2 of 2.

Area/Operator/Location		Pink	Chum	Coho	Chinook	Sockeye	Other	Total
Prince William Sound								
PWSAC	Armin F. Koernig	131.20						131.20
	Wally Noerenberg	84.06	71.34	0.80				156.20
	Port Chalmers		40.48					40.48
	Whittier			0.11				0.11
	Cordova			0.11				0.11
	Chenega			0.05				0.05
	Sawmill Bay		15.16					15.16
	Gulkana I and II							
	Paxson Lake					3.31		3.31
	Crosswind Lake					3.70		3.70
	Cannery Creek	126.58						126.58
	Main Bay					8.32		8.32
VFDA	Solomon Gulch	222.22		1.97				224.19
Prince William Sound Totals ^b		564.05	126.99	3.03	0	15.33	0	709.40
Cook Inlet ^c								
PGHC	Port Graham	26.57				0.20		26.77
CIAA	Trail Lakes							
	Bear Creek			0.89		3.42		4.32
	Homer Spit			0.10				0.10
	Hidden Lake					0.57		0.57
	Meadow Creek					1.74		1.74
	Hazel/Leisure/Kirschner Lake					4.13		4.13
	Tutka Lagoon					0.10		0.10
ADF&G	Ship Creek Complex			1.18	2.00		1.24	4.42
Cook Inlet Totals ^b		26.57	0	2.17	2.00	10.16	1.24	42.14
Kodiak								
KRAA	Kitoi Bay	136.29	21.58	1.01				158.87
	Crescent Lake			0.14				0.14
	Jennifer Lake			0.11				0.11
	Katmai			0.03				0.03
	Little Kitoi					0.68		0.68
	Ruth Lake			0.03				0.03
	Pillar Creek							
	Big Waterfall Lake					0.05		0.05
	Crescent Lake					0.04		0.04
	Hidden Lake					0.19		0.19
	Island Lake			0.01				0.01
	Little Waterfall Lake					0.07		0.07
	Margaret Lake			0.01				0.01
	Mission Lake			0.02				0.02
	Monaska River			0.01	0.07			0.08
	Potato Lake			0.01				0.01
	Little Kitoi					0.06		0.06
	Ruth Lake					0.03		0.03
	Spiridon Lake					1.20		1.20
Kodiak Totals ^b		136.29	21.58	1.39	0.07	2.32	0	161.64
Statewide Totals ^b		808.32	548.99	22.13	9.47	38.73	1.26	1,428.90

^a No releases were made from Bell Island or Burro Creek hatcheries.^b Some figures may not total exactly due to rounding.

Table 10.—Estimated adult returns by species to Alaska enhancement projects in 2005, including common property harvests, as reported by operators.

Area/Operator/Location		Pink	Chum	Coho	Chinook	Sockeye	Other	Total
Southeast								
SSRAA	Whitman Lake		610,094	38,982	19,205			668,281
	Neets Bay		1,044,846	124,600	14,060			1,183,506
	Burnett Inlet			44,380		4,400		48,780
	Crystal Lake			7,400	8,577			15,977
	Anita Bay				2,940			2,940
NSRAA	Hidden Falls		806,561	203,769	19,074			1,029,404
	Medvejie		1,725,312	155,004	28,768			1,909,084
	Haines projects		5,058			6,043		11,101
AKI	Port Armstrong	1,786,926		19,444	1,656			1,808,026
DIPAC	Sheep Creek ^a							
	Macaulay		823,655	40,612	6,364			870,631
	Snettisham ^c					275,801		275,801
KNFC	Gunnuk Creek		164,426	423				164,849
SJC	Sitka	1,456	18,233	94	42			19,825
POWHA	Klawock			136,274		14,903		151,177
MIC	Tamgas Creek		29,668	96,669	10,163	80		136,610
NMFS	Little Port Walter				4,325			4,325
KTHC	Deer Mountain			6,454	1,462		94	8,010
Southeast Totals		1,788,382	5,227,853	874,135	116,636	301,227	94	8,308,327
Prince William Sound								
PWSAC	Armin F. Koernig	10,117,138						10,117,138
	Wally Noerenberg	9,164,154	2,200,381	87,399				11,451,934
	Cannery Creek	13,491,670						13,491,670
	Main Bay					467,109		467,109
	Gulkana					266,573		266,573
ADF&G	Ship Creek Complex				1,846			1,846
VFDA	Solomon Gulch	18,135,357		242,470				18,377,827
Prince William Sound Totals		50,908,319	2,200,381	329,869	1,846	733,682	0	54,174,097
Cook Inlet ^d								
PGHC	Port Graham	595,820						595,820
CIAA	Trail Lakes			7,735		1,344,244		1,351,979
	Tutka	1,770,185						1,770,185
ADF&G	Ship Creek Complex			73,504	19,615		122,443	215,562
Cook Inlet Totals		2,366,005	0	81,239	19,615	1,344,244	122,443	3,933,546
Kodiak								
KRAA	Kitoi Bay	14,013,561	124,959	164,379		45,916		14,348,815
	Pillar Creek			1,600	380	171,531		173,511
Kodiak Totals		14,013,561	124,959	165,979	380	217,447	0	14,522,326
Statewide Totals		69,076,267	7,553,193	1,451,222	138,477	2,596,600	122,537	80,938,296

^a Sheep Creek returns are listed under Macaulay hatchery.

Table 11.—Projected adult returns, by species, to Alaska enhancement projects in 2006.

Area/Operator/Location	Pink	Chum	Coho	Chinook	Sockeye	Other	Total
Southeast							
SSRAA Whitman Lake			25,000	25,000			50,000
Nakat Inlet		160,000	30,000				190,000
Anita Bay		300,000	25,000				325,000
Kendrick Bay		280,000					280,000
Long Lake				5,000			5,000
Neets Bay		1,674,110	280,000	17,000			1,971,110
Burnett Inlet			10,000		1,000		11,000
Neck Lake			75,000		4,500		79,500
Crystal Lake			3,500	7,600			11,100
NSRAA Hidden Falls		1,522,000	176,000	22,400			1,720,400
Medvejie Creek		1,592,000	82,100	21,000			1,695,100
Haines projects		5,722			6,043		11,765
AKI Port Armstrong	2,371,285	5,584	158,105	1,536			2,536,510
DIPAC Macaulay (Gastineau)							
Gastineau Channel		1,363,000	35,000	4,900			1,402,900
Amalga Harbor		1,331,000					1,331,000
Boat Harbor		192,000					192,000
Limestone Inlet		125,000					125,000
Pullen Creek				800			800
Snettisham					265,000		265,000
Sweetheart Lake					5,400		5,400
Taku River					4,000		4,000
Stikine River					22,000		22,000
KTHC Deer Mountain			8,008	1,089		70	9,167
KNFC Gunnuk Creek		75,152	250				75,402
Southeast Cove		540,393					540,393
SJC Indian River	41,460	5,259	6,733	22			53,474
Federal Little Port Walter				2,300		300	2,600
MIC Tamgas		102,000	100,000	8,000	3,000		213,000
POWHA Klawock			67,400		20,406		87,806
Southeast Totals	2,412,745	9,273,220	1,082,096	116,647	331,349	370	13,216,427
Prince William Sound							
PWSAC Armin F. Koernig	5,900,000						5,900,000
Wally Noerenberg	4,000,000	2,950,000	78,000				7,028,000
Cannery Creek	5,400,000						5,400,000
Main Bay					573,400		573,400
Gulkana					260,000		260,000
VFDA Solom Gulch	11,577,587		196,837				11,774,424
Prince William Sound Totals	26,877,587	2,950,000	274,837	0	833,400	0	30,935,824
Cook Inlet							
PGHC Port Graham	690,768						690,768
CIAA Trail Lakes							
Hazel/Leisure					148,900		148,900
Kirschner Lake					24,200		24,200
Hidden Lake					61,000		61,000
Bear Lake			37,000		87,000		124,000
Tustumena Lake					1,730,000		1,730,000
ADF&G Ship Creek Complex ^a			73,504	21,461		122,443	217,408
Cook Inlet Totals	690,768	0	110,504	21,461	2,051,100	122,443	2,996,276
Kodiak							
KRAA Kitoi Bay	6,718,961	263,630	161,681		54,137		7,198,409
Pillar Creek			1,600	500	171,867		173,967
Kodiak Totals	6,718,961	263,630	163,281	500	226,004	0	7,372,376
Statewide Totals	36,700,061	12,486,850	1,630,718	138,608	3,441,853	122,813	54,520,903

^a Ship Creek Complex is the combination of Elmendorf Hatchery and Fort Richardson Hatchery.

Table 12.—Cumulative state loans made to PNP salmon hatchery corporations and enhancement funds returned to associations.

Region/Corporation (number of permits)	State Loans					Enhancement Funds generated through assessments returned to associations via contract		2005 Operator Reported Revenues ^b	
	For Capital Construction		For Operations		Cumulative Repayments ^a	FY 2006	Cumulative		
	FY 2005	Cumulative	FY 2005	Cumulative					
Southern Southeast									
SSRAA (Southern Southeast Regional Aquaculture Association)–(4) ^c		\$10,663,000	\$1,447,887	\$6,649,196	\$21,428,852	\$712,667	\$33,666,419	\$4,976,624	
POWHA (Prince of Wales Hatchery Association)–(1)		\$496,000*		\$1,870,000*	\$0	\$0	\$0	\$345,678	
KTHC (Ketchikan Tribal Hatchery Corporation)–(1)						\$0	\$0	\$203,133	
Northern Southeast									
NSRAA (Northern Southeast Regional Aquaculture Association)–(3) ^c	\$63,500*	\$2,787,765	\$2,799,048	*	\$4,615,544	\$5,963,695	\$1,264,052	\$27,127,380*	\$2,814,870
AKI (Armstrong-Keta, Inc.)–(1)	\$737,000*	\$4,302,645	\$990,000	\$6,058,095	\$9,370,740	\$0	\$0	\$1,399,848	
BCF (Burro Creek Farms, Inc.)–(1)		\$143,500		\$290,875	\$608,708	\$0	\$0	\$0	
DIPAC (Douglas Island Pink and Chum, Inc.)–(3)		\$9,364,000		\$13,664,000	\$7,758,655	\$0	\$0	\$2,505,574	
KNFC (Kake Nonprofit Fisheries Corporation)–(1)		\$2,858,724		\$6,128,883	\$656,105	\$0	\$0	\$735,988	
SJC (Sheldon Jackson College)–(1)		\$423,624			\$694,210	\$0	\$0	\$75,000	
Prince William Sound									
PWSAC (Prince William Sound Aquaculture Association)–(3) ^d		\$24,475,419	\$3,000,000	\$8,585,500	\$21,070,124	\$457,972	\$16,287,362	\$11,435,367	
VFDA (Valdez Fisheries Development Association)–(1)	\$420,000	\$5,950,310		\$8,024,246	\$10,979,508	\$0	\$0	\$3,093,768	
Cook Inlet									
PGHC (Port Graham Hatchery Corporation)–(1)		\$1,106,500		\$635,155	\$30,576	\$0	\$0	\$407,665	
CIAA (Cook Inlet Aquaculture Association)–(3) ^d		\$1,576,381		\$2,983,369	\$2,352,838	\$405,258	\$20,952,957	\$2,181,361	
Kodiak									
KRAA (Kodiak Regional Aquaculture Association)–(2) ^d	\$454,700	\$454,700			\$0	\$382,069	\$12,715,271	\$2,811,275	
Chignik									
CRAA (Chignik Regional Aquaculture Association)–(0) ^d						\$80,135	\$3,253,017	\$0	
Statewide Totals	\$1,675,200	\$64,602,568	\$8,236,935	\$59,504,863		\$3,302,153	\$114,002,406	\$32,986,151	

Source: as reported in Department of Community and Economic Development, Division of Investments—Fisheries Enhancement Revolving Loan Fund Program Overview.

* Denotes a minor correction was made from previous reports.

^a Total repayments received and applied over the life of the loan relationship.

^b Data is preliminary and includes all reported revenue sources: cost recovery, loans, grants, interest, rentals, etc.

^c A 3% mandatory assessment tax was collected from commercial fishermen.

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

Table 13.—Summary of anadromous salmon production (all species) from Alaska hatcheries and enhancement projects.

Year	Egg Takes (millions)	Fry Releases (millions)	Total Returns (thousands)	Year	Egg Takes (millions)	Fry Releases (millions)	Total Returns (thousands)
1966	NA	1	0	1986	1,031	745	12,582
1967	NA	1	0	1987	1,274	754	24,994
1968	NA	1	0	1988	889	826	15,330
1969	NA	1	0	1989	1,418	1,087	34,530
1970	NA	1	0	1990	1,603	1,154	47,422
1971	NA	1	0	1991	1,634	1,319	46,109
1972	NA	2	0	1992	1,725	1,323	23,187
1973	2	0	0	1993	1,685	1,475	32,609
1974	8	2	0	1994	1,758	1,302	55,172
1975	29	7	18	1995	1,913	1,503	38,062
1976	56	9	38	1996	1,687	1,638	49,229
1977	96	38	175	1997	1,734	1,363	50,839
1978	129	73	334	1998	1,776	1,453	56,468
1979	152	85	1,962	1999	1,791	1,435	71,276
1980	292	96	3,024	2000	1,762	1,476	62,960
1981	475	212	4,885	2001	1,792	1,481	61,729
1982	548	331	6,939	2002	1,862	1,484	49,345
1983	548	412	6,560	2003	1,927	1,495	80,050
1984	675	416	6,650	2004	1,741	1,651	46,448
1985	995	659	16,650	2005	1,707	1,428	80,816
				Total	36,715	28,737	986,389

Table 14.—Summary of pink salmon production from Alaska hatcheries and enhancement projects.

Year	Egg Takes (millions)	Fry Releases (millions)	Total Returns (thousands)	Year	Egg Takes (millions)	Fry Releases (millions)	Total Returns (thousands)
1975	15	5	18	1991	998	862	38,132
1976	23	4	16	1992	1,077	797	14,879
1977	66	18	175	1993	1,031	919	20,693
1978	79	50	321	1994	1,076	790	41,489
1979	91	60	1,591	1995	1,162	921	25,415
1980	174	64	2,310	1996	929	999	29,298
1981	328	135	4,371	1997	1,064	772	33,956
1982	344	218	6,610	1998	1,121	873	38,651
1983	406	264	5,939	1999	1,092	878	51,973
1984	443	332	5,298	2000	1,074	880	40,395
1985	604	366	14,158	2001	1,097	942	47,247
1986	511	484	9,044	2002	1,168	938	30,835
1987	840	443	21,960	2003	1,105	962	59,774
1988	736	730	13,838	2004	960	965	30,564
1989	975	675	31,754	2005	950	808	69,076

Table 15.—Summary of chum salmon production from Alaska hatcheries and enhancement projects.

Year	Egg Takes (millions)	Fry Releases (millions)	Total Returns (thousands)	Year	Egg Takes (millions)	Fry Releases (millions)	Total Returns (thousands)
1975	5	1		1991	480	365	2,181
1976	7	2		1992	510	428	3,089
1977	8	3	1	1993	496	469	6,709
1978	12	4	3	1994	529	407	8,996
1979	24	7	6	1995	596	473	9,808
1980	74	13	16	1996	590	535	16,253
1981	87	46	53	1997	524	485	12,595
1982	126	63	153	1998	517	479	13,468
1983	170	86	301	1999	571	461	15,072
1984	269	108	1,809	2000	576	508	18,698
1985	244	201	1,404	2001	564	468	9,167
1986	374	182	1,931	2002	549	451	12,565
1987	380	298	1,930	2003	681	436	13,711
1988	392	288	2,490	2004	669	578	10,932
1989	293	310	1,347	2005	626	549	7,553

Table 16.—Summary of coho salmon production from Alaska hatcheries and enhancement projects.

Year	Egg Takes (millions)	Fry Releases (millions)	Total Returns (thousands)	Year	Egg Takes (millions)	Fry Releases (millions)	Total Returns (thousands)
1967	NA	1		1987	26	15	451
1968	NA	1		1988	28	19	251
1969	NA	1		1989	23	16	489
1970	NA	1		1990	22	18	940
1971	NA	0		1991	23	14	1,251
1972	NA	2		1992	21	14	1,378
1973	NA	2		1993	25	15	915
1974	NA	2		1994	28	18	1,306
1975	7	4	0	1995	27	21	1,312
1976	5	3	22	1996	30	21	1,087
1977	5	5		1997	36	23	1,456
1978	5	3		1998	30	21	1,365
1979	4	3	49	1999	26	22	1,553
1980	4	2	21	2000	28	19	1,631
1981	8	3	55	2001	29	21	1,799
1982	16	3	108	2002	36	20	2,120
1983	17	9	96	2003	35	23	1,563
1984	21	11	179	2004	34	27	1,203
1985	20	15	308	2005	34	22	1,451

Table 17.—Summary of Chinook salmon production from Alaska hatcheries and enhancement projects.

Year	Egg Takes (millions)	Fry Releases (millions)	Total Returns (thousands)	Year	Egg Takes (millions)	Fry Releases (millions)	Total Returns (thousands)
1967	NA	1		1987	17	8	93
1968	NA	0		1988	18	9	75
1969	NA	0		1989	15	8	76
1970	NA	0		1990	17	10	116
1971	NA	0		1991	20	7	172
1972	NA	0		1992	13	10	131
1973	NA	0		1993	12	12	112
1974	0	1		1994	13	10	126
1975	1	0		1995	14	7	171
1976	1	0		1996	11	7	171
1977	3	1		1997	12	7	150
1978	2	1	0	1998	13	8	104
1979	2	1	3	1999	12	8	112
1980	3	1	7	2000	11	9	159
1981	1	1	5	2001	13	10	188
1982	3	1	12	2002	16	8	157
1983	7	2	13	2003	12	9	170
1984	10	4	21	2004	15	9	194
1985	19	4	26	2005	16	9	138

Table 18.—Summary of sockeye salmon production from Alaska hatcheries and enhancement projects.

Year	Egg Takes (millions)	Fry Releases (millions)	Total Returns (thousands)	Year	Egg Takes (millions)	Fry Releases (millions)	Total Returns (thousands)
1973	2	0		1990	100	74	3,120
1974	2	1		1991	113	70	4,373
1975	8	1		1992	104	74	3,710
1976	24	2		1993	122	61	4,180
1977	19	14	0	1994	112	77	3,255
1978	35	16	13	1995	115	81	1,356
1979	30	17	318	1996	127	75	2,320
1980	38	15	670	1997	98	75	2,682
1981	51	28	401	1998	95	72	2,879
1982	59	45	56	1999	91	67	2,566
1983	68	53	210	2000	74	60	2,076
1984	86	52	382	2001	89	39	3,328
1985	108	73	754	2002	93	67	3,668
1986	101	77	1,146	2003	94	64	4,831
1987	107	60	920	2004	63	72	3,554
1988	107	69	1,166	2005	82	39	2,597

Table 19.—Summary of statewide salmon production from private nonprofit hatcheries in Alaska, as reported by operators.

Year	Egg take (millions)	Fry release (millions)	Total return (thousands)	Cost recovery (thousands)	Cost recovery revenue ^a
1975	8	17	4	1	NA
1976	8	17	4	1	NA
1977	9	37	12	0	109
1978	8	37	27	0	215
1979	10	54	29	0	253
1980	7	126	36	0	346
1981	0	224	102	0	856
1982	0	234	127	0	1,364
1983	0	261	170	1	886
1984	0	373	218	0	1,043
1985	0	470	302	0	1,854
1986	0	522	381	1	1,212
1987	0	868	461	4	1,184
1988	0	1,046	820	2	498
1989	0	1,109	860	15	012
1990	0	1,249	925	10	388
1991	0	1,326	1,087	13	170
1992	0	1,428	1,075	7	255
1993	0	1,613	1,426	4	848
1994	0	1,726	1,268	15	906
1995	0	1,877	1,174	9	554
1996	0	1,735	1,632	14	657
1997	0	1,713	1,349	19	352
1998	0	1,759	1,444	15	651
1999	0	1,778	1,428	22	608
2000	0	1,750	1,469	19	007
2001	0	1,779	1,473	18	398
2002	0	1,849	1,478	19	005
2003	0	1,914	1,490	22	937
2004	0	1,727	1,641	21	986
2005	0	1,688	1,417	21	245
Cumulative Hatchery Revenues from Special Harvests:					\$296,664,604

^a Inseason values. Revenue for 2005 derived from numbers provided by Eggers, D. 2006 Run Forecasts and Harvest Projections for 2006 Alaska Salmon Fisheries and Review of the 2005 Season and value data from the Alaska Department of Fish and Game website: <http://www.state.ak.us/adfg/geninfo/salmon/salhome.htm>. Accessed 2/06/2006.

Table 20.—Summary of pink salmon production from private nonprofit hatcheries in Alaska, as reported by operators.

Year	Egg take (millions)	Fry release (millions)	Total return (thousands)	Cost recovery (thousands)
1975	8	4	160	109
1976	16	4	160	215
1977	35	12	356	253
1978	35	26	1,505	346
1979	47	28	2,491	838
1980	98	32	5,253	1,359
1981	188	79	4,087	843
1982	185	103	3,638	583
1983	186	127	7,405	1,699
1984	242	159	6,768	949
1985	340	199	17,964	3,625
1986	325	272	12,258	2,008
1987	618	299	22,561	14,529
1988	645	626	39,920	9,846
1989	806	553	37,081	12,367
1990	789	685	13,200	5,977
1991	831	704	19,844	2,740
1992	883	648	40,939	13,384
1993	1,029	920	25,415	6,819
1994	1,075	787	29,298	9,401
1995	1,162	621	33,956	14,027
1996	929	999	38,652	10,693
1997	1,064	772	51,973	17,623
1998	1,121	873	40,395	12,381
1999	1,092	878	47,247	14,564
2000	1,074	880	30,835	12,916
2001	1,097	942	59,773	15,376
2002	1,168	938	30,564	17,040
2003	1,105	962	69,076	18,099
2004	960	965		
2005	950	808		

Table 21.—Summary of chum salmon production from private nonprofit hatcheries in Alaska, as reported by operators.

Year	Egg take (millions)	Fry release (millions)	Total return (thousands)	Cost recovery (thousands)
1975	<1	<1	8	2701
1976	<1	<1	10	2701
1977	2	<1	22	2701
1978	2	15	21	2700
1979	7	15	<1	2700
1980	27	32	2	2800
1981	32	22	21	2812
1982	46	24	22	28<1
1983	69	42	127	2835
1984	122	55	1,001	2437
1985	119	98	525	2123
1986	181	100	780	2189
1987	235	150	955	2499
1988	370	186	1,835	2470
1989	267	287	1,102	2298
1990	425	217	1,633	2370
1991	442	359	1,959	2404
1992	495	394	3,079	2706
1993	458	452	6,387	21,782
1994	520	402	8,783	2,128
1995	590	463	9,800	2,252
1996	651	534	16,205	2,4782
1997	517	477	13,250	2,4643
1998	513	479	13,423	2,4355
1999	568	460	15,072	2,4361
2000	572	508	18,698	2,6060
2001	560	468	7,620	2,3104
2002	547	450	12,561	2,5074
2003	675	436	13,695	2,6514
2004	664	574	10,905	2,4102
2005	615	544	7,524	2,2428