Northern Southeast Regional Aquaculture Association

FISH RAP

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

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December 2005

A set of cost recovery chums is brought aboard the F/V Yankee Maid in Deep Inlet this summer.

Inside

Change in the Future for Deep Inlet?

Pete Esquiro and Steve Reifenstuhl, NSRAA managers, will be traveling to Ketchikan in late January to attend the Board of Fisheries (BOF) meetings scheduled for January 22 through February 1.

They have two good reasons for attending: Board of Fisheries Proposals 162 and 163.

These proposals, regarding the Deep Inlet Terminal Harvest Area Salmon Management Plan and the NSRAA Special Harvest Area, gained near-unanimous support from the NSRAA board at both the spring and fall regular board meetings in 2005.

162, proposed by NSRAA, allows an early season for chinook fishing, giving gillnetters, seiners, and trollers a head start on the season. This change will become more important in coming years because beginning in 2006, 1 million chinook smolt will be released in Deep Inlet. This should result in some 20,000 chinook returning to Deep Inlet.

163, proposed by NSRAA and the Chum Trollers Association, makes some time and area changes for cost recovery fishing in Deep Inlet, which hopefully will reduce NSRAA's conflicts with the commercial fleet during the cost recovery harvest.

NSRAA staff noted that the 2005 fishing season was managed by the Alaska Department of Fish and Game (ADF&G) under emergency order with most of the proposed changes in effect, giving the proposals a trial run before their consideration by the BOF.

"The early spring fishery went smoothly, although there were fewer chinook in the terminal harvest area this spring and effort was relatively low," said NSRAA operations manager Steve Reifenstuhl, in regard to Proposal 162.

The trial run for Proposal 163 was promising, Reifenstuhl said. "The time change allowing cost recovery fishing in the outer area was helpful, and probably allowed the harvest to be completed a day earlier. The expanded area changes didn't help with the harvest this season, as no fish moved into the areas at the right time. But we didn't expect it to be helpful every year. It will give us more harvest options and will definitely be of help in some years."

Proposal 162 came about after a couple of successful years opening in June, some of the local gillnetters asked about opening even earlier. They noted the good numbers of chinook in 2004, a year in which 65,000 NSRAA chinook returned to Sitka Sound.

The board discussed how this fishery would affect trollers who use the area during the spring troll fishery. One troller, Larry Calvin, noted that he and other trollers had met with success in the area near Samsing Cove in recent years, so a compromise was to modify the western line of the terminal harvest area (THA) to protect that troll drag while allowing net fishing in the remainder of the area. This suggestion met with good support from the board.

They also discussed how the rotational fishery would be conducted, with seine representatives pointing out that seine effort was unlikely until mid-June. Since the THA management plan requires a seine day for every two gillnet days, seine days will be included in the plan, regardless of their

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New Guidelines for Deep Inlet

Parents spend many hours teaching their children to share and take turns, but you don't have to be a child to appreciate those principles. Commercial fishermen in Deep Inlet benefited from the concepts this past season, when they experimented with a change in the rotational harvest re-openings after a closure for cost recovery fishing.

"Closing Deep Inlet to complete the cost recovery harvest goal seems to be an annual event in these years of average returns. It is always controversial but surprisingly not as charged as the reopening," said NSRAA operations manager Steve Reifenstuhl.

Generally, the chum "build up" in Deep Inlet after a closure, so the net group that goes first when it re-opens reaps the rewards disproportionately to the group waiting at the docks.

Rotational fishing seems simple in regulation: gillnet and seine fishing time in Deep Inlet shall be shared on a 2 to 1 ratio. Two days of gillnet fishing in Deep Inlet requires one day of seine fishing. Some weeks there are four days of gillnet fishing and therefore 2 days of seine fishing.

But if there is a closure, the net group that fished last stands down on the re-opening while the other harvests. And here is where the nets chafe.

In recent years, gillnetters have fished the two days prior to the closure and therefore seiners fished when Deep Inlet re-opened.

"This year was no different, except that when NSRAA staff decided to reopen, there was discussion of providing a more equitable division of opportunity," Reifenstuhl said. Subsequent to an NSRAA executive commitment agreement, it was decided that the gillnetters would go first and fish two days in the outer Terminal Harvest Area (THA) with the majority of the bay closed. The entire THA, including the bay, was open on the seine day.

The experiment in playing well with others paid off.

"The result was plentiful fish for both the seine and gillnet fleets, and the satisfaction that comes from equitable opportunity," Reifenstuhl said.

It went so well that the NSRAA board of directors, at their fall 2005 meeting, passed a resolution providing guidance for future "re-openings" to be conducted with fair opportunity between the net groups.

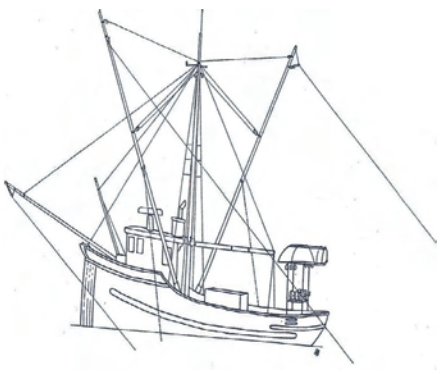
Hatchery Reports

Medvejie

Medvejie Hatchery is under the direction of a new manager, Lon Garrison, but from the fishes' perspective, operations continue unchanged.

"The transition seems to have gone smoothly," Garrison said in October.

Medvejie releases of chinook, chum, and coho all met or exceeded production goals in 2005, and returns of these species were strong this year as well.



"As former manager Jim Seeland has stated in the past, this hatchery is anything but status quo," Garrison said. "We continue to explore new ways of doing our jobs better and more efficiently, with the primary goal of increasing marine survival and putting fish out there for all to harvest."

Chum

Between Medvejie and Deep Inlet, 50.6 million chum fry were released in the spring of 2005, the highest number ever.

The release included five different components:

•6.8 million Medvejie stock @ 1.85 to 2.52g released from Medvejie in late April

•18.38 million Hidden Falls stock @ 2.03g released from Deep Inlet in late April

•15.46 million Medvejie stock @ 2.07g released from Deep Inlet in late April

•5.8 million Hidden Falls stock @ 3.94g released from Deep Inlet as "Late Large" in late May

•5.0 million Medvejie stock @ 3.98g released from Deep Inlet as "Late Large" in mid May

"This marks the second year for the late large chum program," Garrison said. "Increasing their size and releasing the fry a little later in the spring seems to have really help marine survival rates at other locations."

The technique is not without its challenges. Seawater circulation in Deep Inlet is sometimes poor, requiring the use of hydraulic pumps to keep dissolved oxygen at an acceptable level for the rearing chum. Outbreaks of the bacterial disease Vibriosis occur sporadically, especially when water temperatures become relatively warm, as they did this past spring.

Medvejie's eggtake goal was upped to 40 million from a previous high of 35 million, and they were able, just barely, to meet this goal.

"Most fish were quite large with very large eggs but fecundities were slightly lower than normal," Garrison said. "Thus in the future we may need to plan for slightly fewer eggs per female."

Medvejie is now incubating nearly 64 million eggs for six different chum projects:

•18 million HF stock to DI for standard rearing

•6 million HF stock to DI for late large rearing

•15 million Medvejie stock to DI for standard rearing

•6 million Medvejie stock to DI for late large rearing

•9 million Medvejie stock to DI as a joint project with Sheldon Jackson College

•10 million Medvejie stock at Medvejie for standard rearing

"We're at capacity for chum," Garrison said.

Chinook

Medvejie staff continue to do research on various methods of chinook rearing, while maintaining production of its regular chinook programs.

A total of 2.4 million chinook were released in the spring and summer, with six different groups comprising the total:

•248,167 Medvejie yearlings @ 60.28g released in mid May

•866,255 Green Lake yearlings @ 77.6g released in early May

•423,968 Medvejie SeaReady Smolts @ 89g released in late May

•199,474 early zero check @ 15.75g released in early July

•449,000 regular zero check @ 21g released in mid July

•247,600 SeaReady Smolt zero checks @12.7g released mid July

SeaReady refers to a process by which the smolts are exposed to extra salts, special feed, and light to help prepare them for life in saltwater. Zero checks are released the first summer after hatching, rather than being reared at the hatchery for a year over the winter.

"Some of these rearing techniques are revolutionary and some have been around for quite a while," Garrison said. "By continuing to try new methods and analyzing the return data, the hatch-

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Market Outlook

Fishermen who enjoyed the higher chum prices this past season can relax; the trend should continue for next season.

The 2005 Alaska salmon harvest looked to be the third largest on record, according to the November 2005 edition of the Seafood Market Bulletin. A record pink harvest and a strong sockeye harvest were the major factors.

Chinook and coho harvests statewide were slightly under projections, while the statewide chum harvest was one-third short of projections. That makes NSRAA's low chum return at Hidden Falls right in line with what happened all over the state, and Medvejie's good return an extra bonus for 2005.

The depressed chum return throughout the state resulted in increased prices as the demand for chum flesh remained high.

"The trend, today, is still that chum is rising in value," said John Garner, president of Norquest Seafoods. "This is true for both pale-meated and red-meated fish."

Garner believes that the higher value is the result of a combination of several factors.

"The marketing programs are working, and there is greater awareness of the benefits of wild Alaska salmon. The health benefits are better understood by consumers. An increase in value added production means much more of the fish is going into consumer-friendly forms, which adds value for everyone. And finally, the shortage of chum supply in Alaska dramatically increased demand, especially from the domestic fresh market and from customers in Europe who need 'MSC labeled' product," Garner said.

"MSC labeled" refers to fisheries certified by the Marine Stewardship Council as "sustainable." Alaska fisheries enjoy the marketing benefits of this environmental stamp of approval.

Garner doesn't enjoy trying to predict next year's markets so soon, since so many factors such as the Russian and Japanese salmon supply and exchange rates complicate the picture.

But he'll venture to guess that since roe values are currently at historic lows, they'll rise somewhat in the spring, and that chum flesh values will be stable or rising slightly in 2006.

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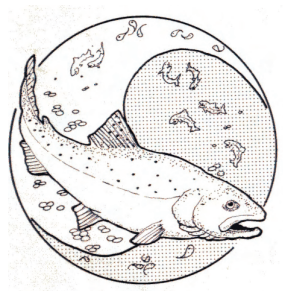

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ery will someday be able to narrow its focus on rearing chinook."

Each of the six chinook groups has been independently wire tag coded to allow staff to compare survival rates.

Over 4.2 million incubating brood year 2005 eggs are on hand at Medvejie, along with almost 2 million rearing brood year 2004 yearlings.

Coho

This was the final year for coho going to Shamrock Bay, unfortunately, the transfer vessel hit a rock on Frosty Reef during the final transport. and approximately 96,000 smolts had to be released from the damaged vessel. The remaining 192,300 smolts were reared at Shamrock for about 30 days and released at 21.2 grams.

20,482 Indian River stock were released at Medvejie in late May at an average weight of 15.39 grams.

"We will continue to release smolts from Medvejie to keep this stock as a viable option for future projects," Garrison said.

Current coho stock on hand consists of 23,500 Indian River fingerlings and 134,500 Plotnikof stock that will be reared in freshwater raceways for the winter. The Plotnikof smolts will likely be reared in saltwater pens adjacent to the future Sawmill Cove hatchery location, and released from there in the spring of 2006.

Medvejie hatchery staff continue to work closely with Sheldon Jackson College students and their hatchery manager, Dan Goodness. This year students were able to collect chum broodstock for their program once NSRAA's goals were met, and excess chinook eggs were transferred to the SJC hatchery so they will have a full compliment of eggs this year.

"The SJC program has supplied us with many excellent employees as well as increasing fishing opportunities in Sitka Sound," Garrison said. "It's been a pleasure to be a part of their steadily improving program."

More visitors than ever before visited Medvejie through Allen Marine Tours this season, and the hatchery once again hosted the 3rd grade classes from the Sitka School District.

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

Hidden Falls

Hidden Falls Hatchery met or exceeded all production goals this year, reports new hatchery manager Scott Wagner.

"We're at capacity for chum"

"We've continued to focus on improving our fish culture techniques and processes with a mind for efficiency and fish health," Wagner said.

One new technique involves sorting the chinook by size with the hatchery's new high-speed grader, with the intent of improving the growth and health of the smallest fish.

"The 'runts' ended up outperforming the graded large chinook, and look to be an area for further research and trials," Wagner said.

Chum

Release numbers for brood year 2004 were just under 89 million total for both release sites, Hidden Falls and Takatz Bay. This was slightly under the 90 million goal.

The regular release averaged 2g for both sites, and the Kasnyku Late-Large chum were let go at 3.3g.

"This is just short of our goal of 3.5 grams. Once again low dissolved oxygen levels and an outbreak of Vibrio resulted in an earlier than desired release," Wagner said.

This year also saw numerous outbreaks of Chaetocerous phytoplankton, which lodges in the gills and digestive tract of the salmon, causing poor feeding and oxygen absorption.

"It kept the culturists on their toes but they were able to work through these blooms and the fry pulled through," Wagner said.

Approximately 120 million chum eggs were taken over a one month period this fall, making it a "longer than normal" spawning season, Wagner said.

These eggs will provide fry for Hidden Falls, Takatz, Deep Inlet, and a new chum program at Port Armstrong.

Chinook

Staff kept the brood year 2003 chinook healthy this past winter by concentrating on removing the dead and dying fish, which makes a healthier environment for the rearing chinook, Wagner said. 1.25 million healthy chinook were released in early June.

Currently, just over 1 million are in saltwater at Hidden Falls, for release next May.

Staff hopes to try some alternative rearing strategies next summer.

"Staff performed a trial this year with 50,000 fish. They were able to get these fish to smolt over a five week period using warm water from the near surface pipeline, 24 hour light, and increased feeding rates," Wagner said. "These fish started out as the graded 'runts' and ended up bigger than the larges. They're now affectionately known as the 'super runts.'"

Wagner said these fish look and act much like the chinook in Medvejie's Green Lake program, which have superior marine survival rates.

Staff collected 1.9 million chinook eggs over four days this fall, more than enough to meet next year's production goals.

Coho

Just under 2.2 million coho were released from Kasnyku Bay in 2005, about 200,000 more than last year.

"We are now rearing just over 3 million coho for release next spring," Wagner said.

This means that Hidden Falls is realizing the full potential of its new incubation and round ponds completed last year.

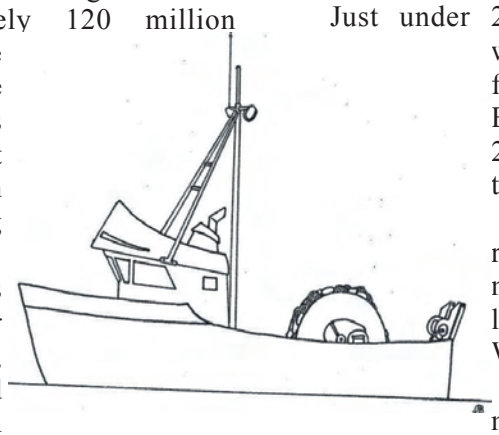
They also plan to increase their release of early entry coho next spring, to hopefully take advantage of higher marine survival trends for previous early entry releases.

Deer Lake fry are now being raised at Hidden Falls, instead of Medvejie. This June, 600,000 fry were transported by Ward Air to Deer Lake.

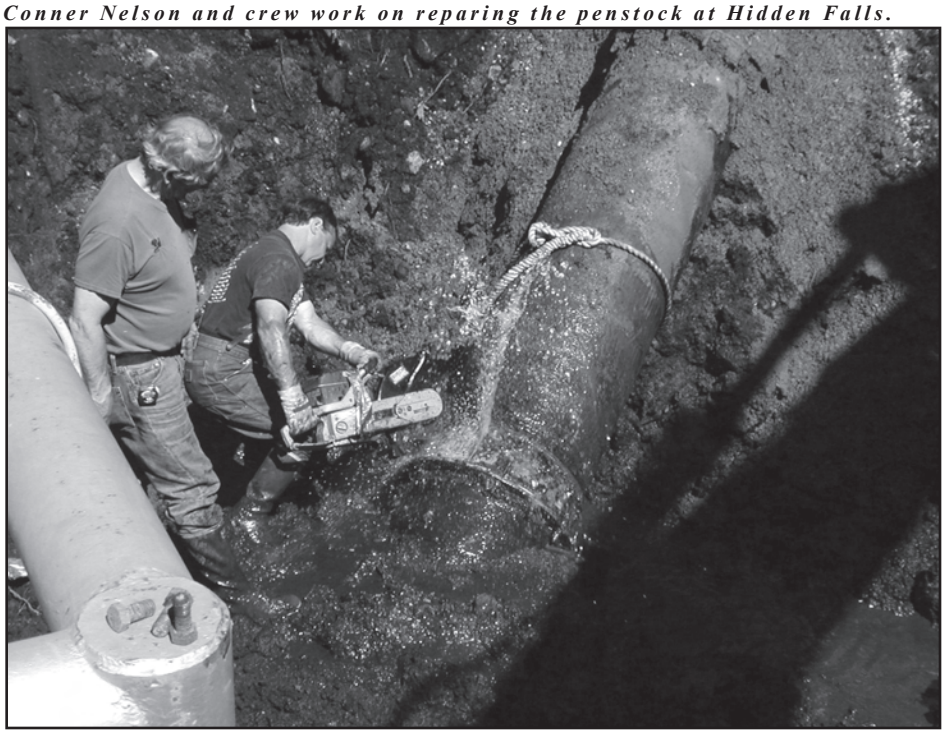
An equipment failure resulted in the loss of about 50,000 fry into the bay at the Hidden Falls dock, but excess fry in the regular Hidden Falls group were used to make up the difference.

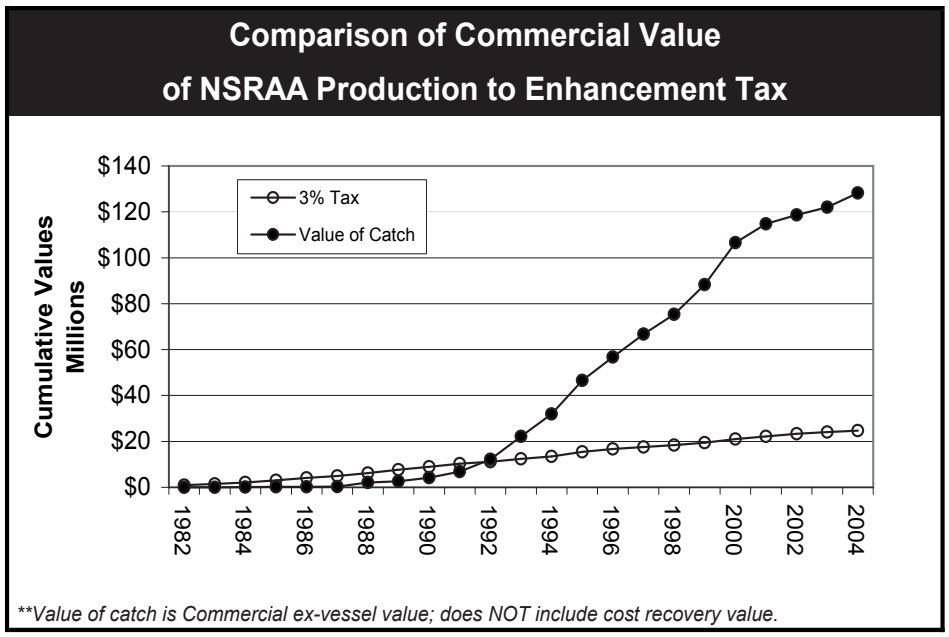
Besides the 3 million eggs incubating for Hidden Falls, another 1.3 million are on hand for release at Deer Lake next year.

Margie Kearns spawns Chinook at Medvejie. The Medvejie crew took over 4.2 million Chinook eggs this August.



Conner Nelson and crew work on reparing the penstock at Hidden Falls.





Chum eggs incuating at Hidden Falls.

Change at DI cont. from cover

intentions to fish. A provision to allow trolling on gillnet days when gillnet participation fails to reach a threshold level was also included in the proposal.

Bill Davidson of ADF&G said his department supported the early chinook fishing but noted that a mesh size restriction for gillnet fishing will be necessary, due to concern over early season sockeye in the area.

In the end, the board passed a resolution to allow a rotational fishery with four gillnet, two seine, and one troll day(s) per week in the THA from May 1 – May 21, with a modified western boundary at 135° 21.52' W long. After May 21, the western boundary would move back to its original position, with the same gear rotation until late June, when cost recovery fishing begins.

Proposal 163, if passed, will expand areas for chum cost recovery fishing and modify the time period that the outer Eastern Channel area is protected for the troll fleet.

"We felt there was hope of allowing some cost recovery effort in the troll area during the protected time period, without greatly impacting the troll fishery," Reifenstuhl said. "So this past winter we explored modifications to the troll agreement passed by the Board of Fisheries that has been in effect since the 2000 season."

From the trollers point of view this was controversial to say the least. Their slice of the Deep Inlet pie is already relatively small, they feel. But they tried to see the staff's point of view, and understand the difficulty of making cost recovery work, especially in years with smaller returns.

In the end, the following modifications were endorsed by a 22-1 vote:

- A new area for cost recovery was drawn up, allowing fishing near Makhnati Rock, inside Black Rock, in Western Channel and in Middle Channel.
- The western line of the Deep Inlet SHA was modified to allow some expanded area for cost recovery. Both area changes would be in effect for the entire season.
- The troll period would begin two days earlier (on July 22) and end one day sooner (the day before the end of the coho closure).

While the agreement didn't gain as much as staff had hoped, every little bit helps.

The full text of the proposals and other information about the BOF meeting in Ketchikan is available on the ADF&G website at http://www.boards.adfg.state.ak.us/fishinfo/meetinfo/fcal.php.

House Bill 218

Cost recovery at Hidden Falls may change dramatically if House Bill 218 finds its way into law.

The bill's primary function is to create a new mechanism for obtaining cost recovery money at Hidden Falls. Instead of a portion of the return being harvested specifically for cost recovery and sold to the highest bidder, a tax of up to 40 percent on the total commercial harvest would be imposed by the state. The money would then be paid to NSRAA to cover the costs of the program.

"The NSRAA board opposed it to start with during the 2005 legislative session, primarily because as it was written, the tax percentage was determined by the state departments of Revenue, and Commerce. We don't feel it's appropriate for them to do so," Esquiro said. "The NSRAA Board has sole responsibility for determining the reasonableness of the NSRAA budget."

The bill, introduced in the Alaska house last year, is currently "sitting" in the senate resources committee. Reifenstuhl believes the bill will be resurrected in the 2006 legislative session.

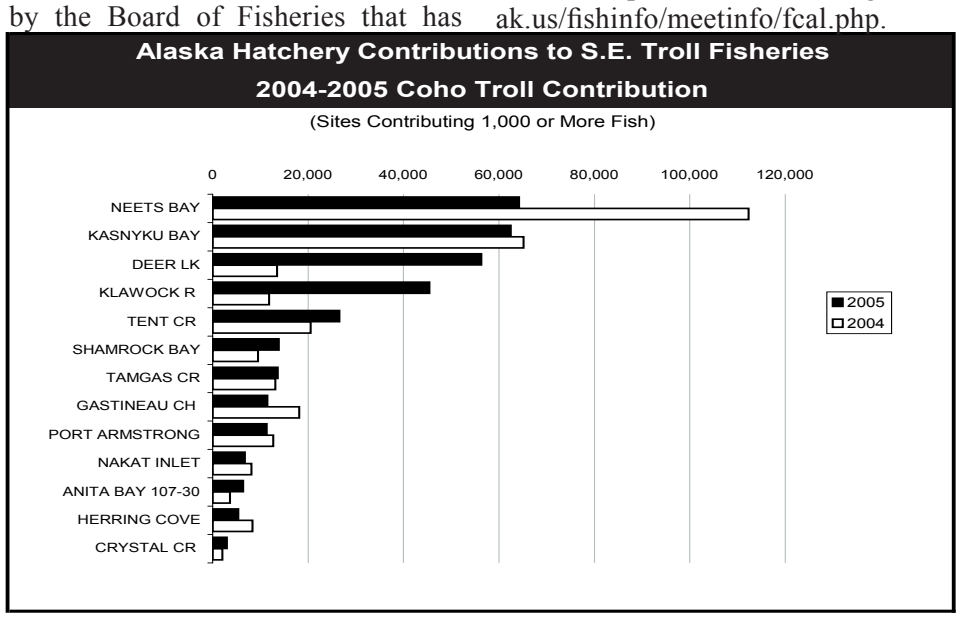
"There have been some language changes proposed to the bill, after a recent United Fishermen of Alaska board meeting. We've reviewed those proposed changes with the board, and if those changes remain in the bill, we won't actively oppose it," Reifenstuhl said. "We won't actively support it, either."

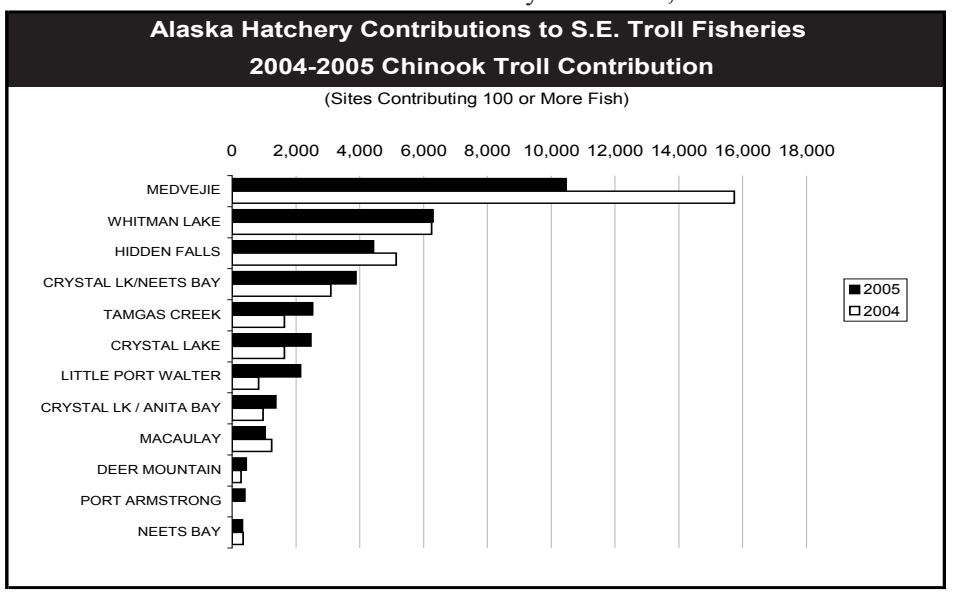
If the bill's language remains as it was originally, however, NSRAA will actively work against the bill, Reifenstuhl said.

Seiners, particularly members of Southeast Alaska Seiners (SEAS) are the primary supporters of the bill, he said. From their perspective, NSRAA's cost recovery fish, sold to the highest bidding processor early in the season, earn a premium price, directly competing against the seiners who typically get less for their fish at the dock.

From NSRAA's perspective, getting more money for their chum allows them to take a smaller percentage of the total harvest, leaving more fish for the commercial fishermen. And, so far, the NSRAA board of directors agree.

"If NSRAA earned the same dock price, we'd just have to harvest more fish to make the necessary revenue," Reifenstuhl said.





NSRAA Contribution to Southeast Alaska Commercial Fisheries
Number of Fish : 2004 - 2005

	Gillnet		Seine		Troll		All Gear	
	2005	2004	2005	2004	2005	2004	2005	2004
Chinook	1,346	3,548	3,671	7,605	14,896	20,826	19,913	31,979
Chum	510,095	628,421	906,426	2,180,151	165,049	145,947	1,581,570	2,954,519
Coho	259	1,182	25,711	37,645	133,281	90,719	159,251	129,546
Sockeye	-	-	-	-	-	-	-	-
All	511,700	633,151	935,808	2,225,401	313,226	257,492	1,760,734	3,116,044

NSRAA Chum Returns 2005

The chum began returning to Hidden Falls in 2005 during the third week of June, the normal time. That was about all that was normal with the Hidden Falls return this year.

The actual return fell short of the pre-season projection by a staggering 50 percent. A total of 807,000 fish is the smallest return for Hidden Falls since 1990.

As the low return came without prior warning, it made life difficult for everyone: seiners, NSRAA staff, and the cost recovery contract boats.

"Due to the poor return, we had to cancel mid-week openings for the common property fishery for most of the season, along with one Sunday opening," said Steve Reifenstuhl, NSRAA's operations manager and Hidden Falls cost recovery manager.

The closures during the traditional peak of the run in mid-July put the rumor mill into high gear.

"We had to cancel the July 10 opening. Between July 11 and 13, NSRAA harvested just less than one million pounds," Reifenstuhl said. "It was during this period that the second guessing started in earnest…that there were over half a million fish sitting around Takatz. The actual number was closer to one-tenth of what was being ballyhooed."

Cost recovery took a full month to accomplish despite the many common property closures. "Remarkably, cost recovery itself went fairly smoothly despite the small return. These fishermen worked hard to get the job done. But broodstock collection was our big bugaboo this year."

Normally, broodstock collection barely rates a mention in NSRAA's end of season reports on the harvest. But when the eggs for next year's chum releases begin to look scarce, the possibility of their absence weighs heavily on NSRAA's shoulders.

"It was the outside pressures to open the fishery on speculative and unsubstantiated abundance estimates that made it a difficult and frustrating season," Reifenstuhl said. "But we held to what we knew was best for the program, carefully considering the biological data, age composition, sex ratios, and run timing history to make our decisions. But it required impenetrably thick skin against outside forces challenging every decision."

Broodstock numbers seemed adequate in late July but by the end of the month it was clear that fish numbers were low, and fecundity, or the number of eggs per fish, was lower than expected by 10 percent, in effect requiring 10 percent more fish for broodstock than NSRAA had originally planned.

"Although never certain until the last egg was taken, broodstock needs were met by a slim margin," Reifenstuhl said.

Reifenstuhl noted that the seine fishery was able to harvest 42 percent of the total return, all the fish not required for broodstock and cost recovery.

Harvest distribution was more normal at Deep Inlet this season, with 67 percent going to the commercial harvest, 30 percent to cost recovery, and 3 percent to broodstock needs. A total of about 1.72 million chum returned to Medvejie-Deep Inlet combined, just over the five-year average.

Especially good news at Deep Inlet was the increase in average fish size from 7.7 lbs. in 2004 to 7.9 lbs. in 2005.

Cost recovery went fairly smoothly according to Chip Blair, NSRAA's data analyst and Deep Inlet cost recovery manager.

"We took a different approach this year. When all bids by harvesters came in too high, we decided to enlist boats to fish at six cents a pound. We put the word out and developed a list of interested boats, who then fished cost recovery when they were available."

Fifteen boats participated in the cost recovery harvest.

"While not entirely problem-free, overall it went more smoothly than it has in the past several years," Blair said.

A commercial closure was needed to allow NSRAA to meet its cost recovery goal. By the end of the first week of August, they had made only 25 percent of the goal, with 2.9 million pounds left to harvest.

"It was obvious that without a closure we would have little chance of meeting our goal," Blair said.

The Deep Inlet Terminal Harvest Area (THA) was closed for 12 days, from August 12-23.

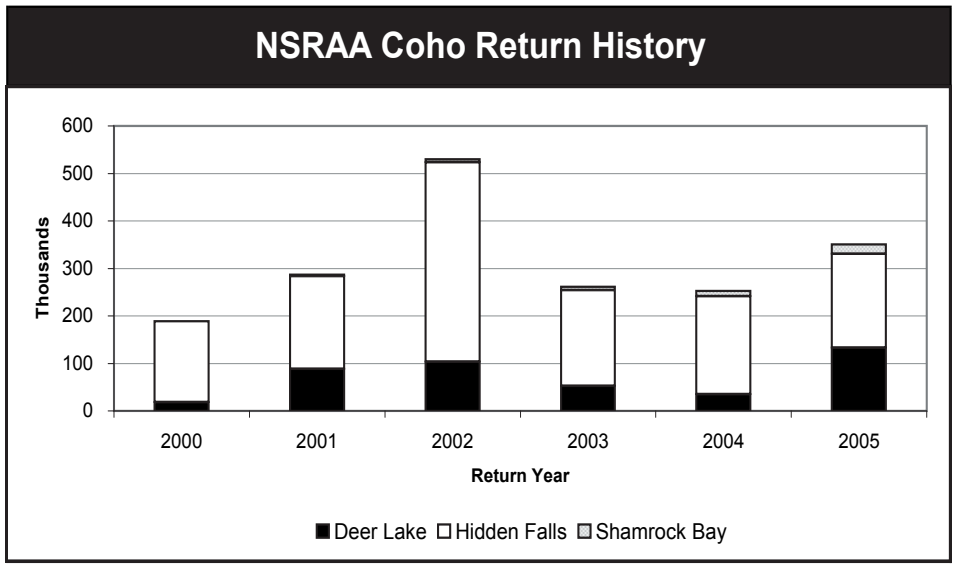
"Even with the closure, I had serious concerns that we would achieve our goal. But enough fish moved in, and the harvest went like clockwork over the next two weeks, with over 2.5 million pounds harvested. We set records for harvest levels, with almost 2 million pounds in a single week. It took a huge effort by a dedicated group of cost recovery boats to make this happen," Blair said.

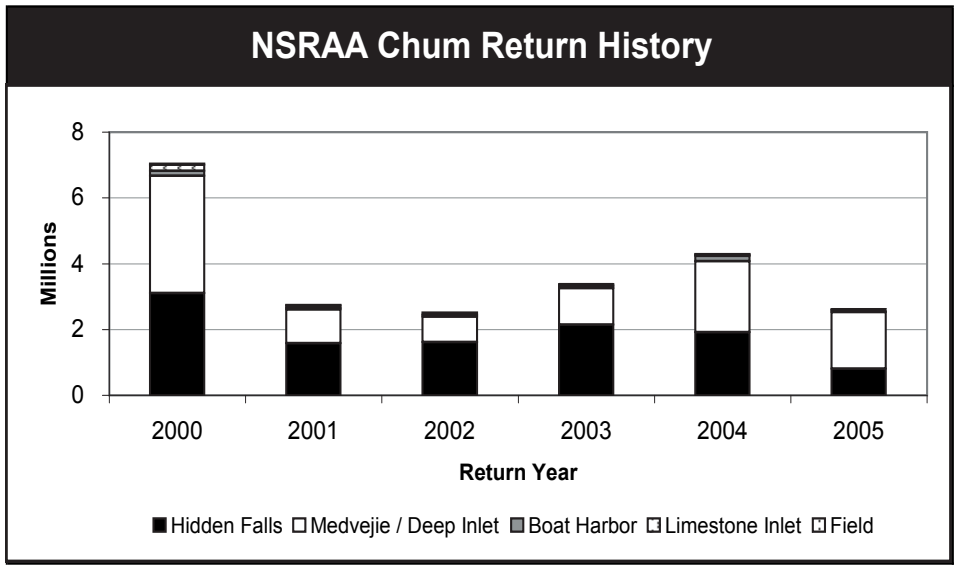
One bright spot in an otherwise tough chum year in Southeast, Blair noted, was that higher chum prices went a long way towards offsetting some of the drop in production.

At Hidden Falls, the commercial catch in 2004 was 1,156,000 fish with an ex-vessel value of $1,758,000. In 2005, it was 342,000 fish with a value of $1,018,000.

At Deep Inlet, the commercial catch in 2004 was 1,591,000 fish with an ex-vessel value of $2,472,000, compared to 1,156,000 fish with a value of $3,246,000 in 2005.

"It's interesting to note that despite the drop in commercial harvest numbers – from 2.64 million in 2004 to 1.5 million in 2005 for the two projects combined, the combined ex-vessel value for the two projects is roughly equal for the two years – about $4.2 million each year," Blair said.





Field Reports

Deer Lake

Coho fry are no longer on the menu for rainbow trout in Deer Lake.

The non-native trout have become in recent years the main predator for NSRAA's rearing coho fry. It's become such a problem that in August, NSRAA presented its case to McKie Campbell, the commission of the Alaska Department of Fish & Game (ADF&G) and the directors of sport and commercial fisheries divisions.

ADF&G will estimate the rainbow trout population and study their feeding habits before authorizing any culling. NSRAA has agreed to assist by providing housing at the camp as needed.

But while the studies are underway, the Deer Lake coho fry will be raised in pens, effectively starving down the trout population.

"We'll release the fish into the lake in mid-November when low water temperatures cause fish diets to go dormant," said Todd Buxton, Deer Lake project manager.

This year marked the trial year for pen-raised coho, and the results were favorable, though not without important lessons learned.

Staff built the necessary infrastructure for pen-rearing at the lake in the spring, in time for the June 22 transport of 572,000 fry from Hidden Falls.

The fry were separated into four groups, each fed at a different rate in order to evaluate fry growth and survival.

"Overall survival of fry in pens to release was 98 percent," Buxton said. "By all measures, fry grew more efficiently and at a faster rate in Deer Lake net pens than do fry reared in traditional hatcheries."

Feed conversion rates show that the fry gained more weight than was fed to them, indicating that they also fed on zooplankton and other food already in the lake.

Staff hopes that the reduction of the rainbow trout population will allow fry to be stocked as normal in the lake within two to three years.

"At that time we hope to once again plant 2.5 million fry in the lake and rear 1.5 million in pens, resulting in potential adult coho returns of 341,000 annually," Buxton said.

A portion of the fish food was lost due to rain damage, Buxton reports, so some of the fry were released on October 1 instead of in November. Around 60,000 of these fry immediately attempted to leave the lake.

The weir was in place but with staff not prepared to deal with such numbers of early emigrants, about 19 percent of the October release was lost.

Staff predicts that 75 percent or more of the pen-reared fry from this summer will emigrate on time from the lake next year as smolt.

"Early indications are that predation on pen-reared fry after release is low," Buxton said. On top of this, the fry are released at a size that is too big for them to want to remain in the lake an additional year, but too small for them to want to take up permanent residence in the lake.

The adult return to Deer Lake was the highest adult coho return since the record return in 1999, Buxton reported.

Marine survival of last year's smolt was 13 percent, resulting in a return of 133,000 fish. The income generated from those fish, $431,000, was the highest in five years.

F/V Rose Lee delivers cost recovery Coho to a tender in Mist Cove.

The Haines spawning crew gets ready to take another batch of Chum eggs this fall.

"The Deer Lake coho out-performed Hidden Falls coho both in marine survival and average size per fish," Buxton said. Hidden Falls coho survival was at 8 percent, with an average fish size of 6.4 lbs., while Deer Lake's survival was 13 percent with an average fish size of 7 lbs.

Cost recovery at Mist Cove went smoothly. Buxton estimates that the benefit to cost ratio for the project this year is 2.2 to 1.

Further activities at the Deer Lake site this year focused on improving camp infrastructure and the lifespan of the structures, so as to cut down on long term costs. Deer Lake staff also cleaned up old gear and float parts to reduce the camp's impact on the site.

Haines Programs

Haines projects experienced a mixed bag in 2005, with the puzzling low chum returns seen at Hidden Falls affecting the Chilkat Valley as well. The numbers of sockeye smolt emigrating from Chilkat Lake was also an historic low. On the upside, sockeye smolt sizes rebounded to their historic average at Chilkat Lake.

"We don't have a definitive explanation for the year's record low smolt population estimate of 380,728 at Chilkat Lake," said Todd Buxton, Haines project manager. "It could be that a significant number of age 2 smolt missed getting counted by emigrating from the lake before the smolt weir was installed on May 17. But we have no way of confirming this."

The lake continues to suffer from low Cyclops zooplankton densities, although the Cladoceran densities measured above average. Buxton hopes that a biology graduate student from Michigan State University, Allison Rober, who is studying food web dynamics in Chilkat Lake, will be able to come up with some answers about the lake's perplexing biology.

The Klehini River and Herman spawning channel chum returns began the third week of September, three weeks later than last year.

"Progress toward the eggtake goal was slow but steady until the run ended abruptly with just over one million eggs seeded in Herman incubation boxes," Buxton said. That number is well short of the 2.4 million eggs needed for Herman and 31-mile incubation sites last year.

The Chilkat River fall chum return was late but above average. This year's eggtake goal of 1.2 million eggs was successfully reached, for seeding at the 17-mile incubation site.

Staff completed improvements in the Haines chum enhancement programs this season by increasing incubation capacity at the Herman and 31-mile sites. Equipment for marking chum otoliths was assembled and tested at 17-mile.

"After proving we can successfully mark these fish, we will apply for permits to increase the number of incubation boxes at this site from 4 to 6, and to double the eggtake limit from 1.2 million to 2.4 million," Buxton said.

More good news comes for chum enhancement in the Chilkat Valley came in the form of a $300,000 legislative grant for chum spawning channel design and construction received from the State of Alaska.

"I have identified a site for construction of three new spawning channels

on the Chilkat River, and all necessary permits have been applied for," Buxton said, "so progress is being made."

Limestone Inlet/Boat Harbor

Returns to Limestone Inlet and Boat Harbor were disappointing this year, particularly at Limestone Inlet, but NSRAA staff is looking forward to seeing the results in a few years from fry released as "late-larges" from those sites.

These field projects are cooperatively run between NSRAA and Douglas Island Pink and Chum (DIPAC).

At Limestone Inlet 29,000 adults came back, which was just 23 percent of the projection. Boat Harbor saw 120,000 adults, 50 percent of projections.

The late-large chum rearing strategy has been done at both sites for two years with DIPAC funding. This year the NSRAA board decided to pick up the tab, increasing the budget from $123,000 to $190,000.

That will make it possible to raise the chum beyond the usual 1.5 g size, up to 3.5 grams upon release.

"We're hoping to see similar results as what DIPAC has seen from their late-large program," said NSRAA operations manager Steve Reifenstuhl. "They've had a 5 to 1 benefit to cost ratio, and while their regular releases have gotten between 1 and 2 percent survival, their late-large releases have survived at 5 percent or even up to 12 and 13 percent. It's been a phenomenal boon for their program."

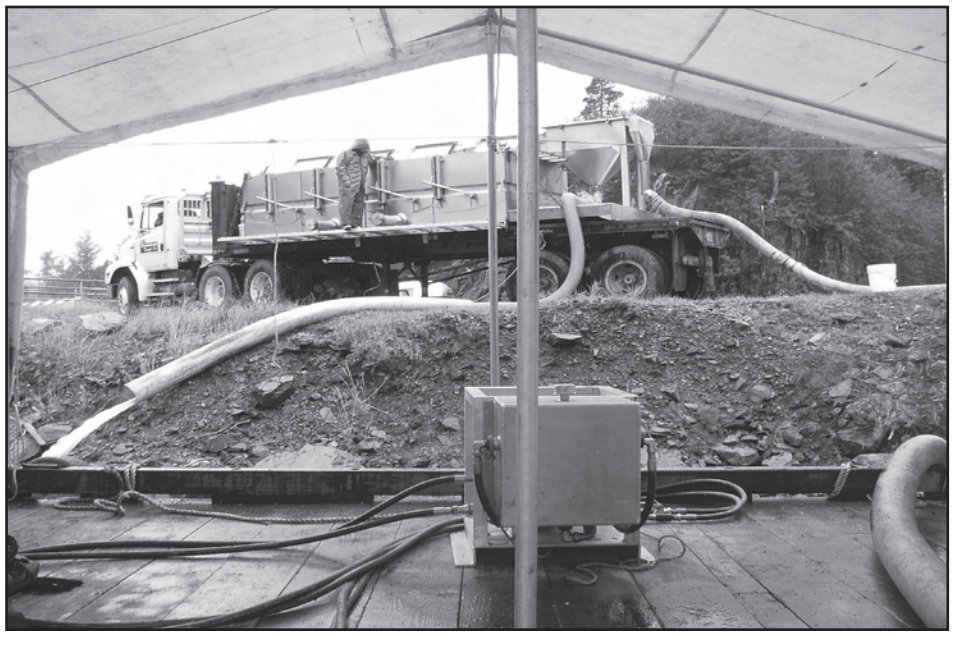
Reifenstuhl explained that when the fish reach 3.5 to 4 grams in size, they go offshore, which gets them away from the first gauntlet of predators in the wild.

"Even a one to two percent survival increase would be excellent," Reifenstuhl said.

The benefits of the late-large program should become evident in 2007, when the four year old chum start returning from the first late-large releases at these sites.

AML unloads a container van of fish food for Hidden Falls this spring.

Matt Golden loads up another truck full of Green Lake Chinook for transfer to salt water this October.



Board Member Profile

Cheyne Blough remembers one spring when he was a kid, traveling with his parents, they had an extra long layover in Sitka. His dad asked him if he wanted to walk down by the cannery.

"We walked down there and I remember going to the end of the dock, it must have been April or the end of March, and there was a guy smoking a cigarette there. He was crew on a longliner and they'd just got back from fishing for black cod. We asked him how many days they'd been fishing, and he said, 'Fourteen.' We asked him how much he'd made, and he said, 'Seven thousand dollars.' And I thought to myself, that's what I want to do."

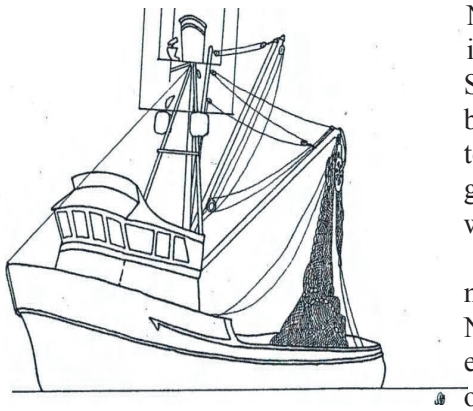
Cheyne was born and raised on Hokkaido, an island in northern Japan. His parents were missionaries there for 20 years.

Hokkaido is a familiar name to fishermen who pay attention to salmon market competition that comes from the Asian side of the Pacific.

"We lived in a great big herring house, built with one side for crew and one side for the fisherman and his family. They'd wiped out their herring run so this house was available," Cheyne recalled. "My mother took all the local fishermen's wives to the local Skiji market every morning to sell their catch."

Cheyne's family moved to Southeast Alaska in 1985. Once they'd settled in Southeast, Cheyne's father indulged his love of sport fishing, and Cheyne was able to make his dream of commercial fishing come true.

Cheyne lives in Hoonah, with his wife, Ronda, and their five children, Lee, 12, Daulton, 11, Ethan, 10, Ashley, 7, and Wesley, 5. Cheyne gillnets on his boat, the F/V Mayhem II, and he says that all his family fishes with him in the summer.



NSRAA's Boat Harbor and Limestone Inlet field projects mean the most to him commercially. He's held the at-large gillnet seat on the NSRAA board for three years.

"Gregg Bigsby had been on there for years and kept pestering me to take his seat, but I told him, 'If I'm taking your post I don't want it.' Finally he said he was quitting no matter what, so I went ahead and joined," Cheyne said.

Cheyne worked as a processor for six years so he knows firsthand, he says, how challenging it can be to communicate with fishermen. But communication, he believes, is one of the biggest challenges facing NSRAA these days. The long and difficult Hidden Falls chum harvest this past summer proved that.

"In hindsight, it all worked out. NSRAA pulled it off brilliantly," Cheyne said. "But from the fishermen's point of view, there's room for improvement with the process. The more information NSRAA can get out there, the less questions and criticism there will be from the fishermen."

Cheyne is quick to point out that he thinks the process should be a two-way street.

"Fishermen need to try to understand a little more too. I'm not critical of NSRAA anymore, now that I'm on the board. I've educated myself and understand things a lot better," Cheyne said. "NSRAA puts out the Fish Rap, they put out the numbers. But fishermen don't necessarily read things, and all they see during a closure is, 'We're not fishing!' For Hidden Falls, fishermen made a lot of phone calls and put a lot of pressure on NSRAA staff, making it difficult for them. So the board members themselves need to get out to their gear groups and spread the word. That's our job."

Improved communication between NSRAA and the fishermen is just one of Cheyne's goals. He'd also like to see more outright cooperation between gear groups.

"There are a lot of politics involved, with each gear group trying to hang on to what they have, and one gear group against another. If something doesn't benefit their group, then they're against it," Cheyne said. "I really don't believe that's the way things need to be run."

So although there are programs that Cheyne would like to see continue, he has no particular pet projects to address, other than working to improve the organization as a whole, and its relations with the fishermen who fund it. He looks forward to the challenges ahead.

"NSRAA has been successful in the past, and I think we'll be very successful in the future, perhaps even more than we think."

Sawmill Cove Update

The devil is in the details, it's said. But in the case of the mountain of paperwork generated by NSRAA's plan to build a new coho hatchery at Sawmill Cove, he's just about beat.

"The state has the money in hand, we have completed our permit applications for the program, we've been working on broodstock development, and now we're mostly just waiting to hear back," said NSRAA operations manager Steve Reifenstuhl. "We're hoping to begin construction in the spring of 2006, if all goes well."

About 2.35 million dollars was appropriated for the project from the federal omnibus budget bill earlier this year. The state of Alaska and NSRAA still need to establish the contract that will reimburse the organization for the project's expenses.

"Once that is in place we'll be able to establish a contract with a contractor for construction of the facility," Reifenstuhl said.

A long list of permits is awaiting approval from various agencies such as the Corps of Engineers, the City of Sitka, and the State of Alaska.

"We've completed water rights permit apps, the coastal zone questionnaire, the fish and game habitat permit, and the new private non-profit hatchery permit," Reifenstuhl said.

The hatchery permit must be reviewed by the Alaska Department of Fish & Game, and then will be reviewed by other agencies before public hearings are held on the matter. NSRAA already has three of these permits, and the process of getting one approved has been known to take up to a year.

"Once the comments are in and the department evaluates it, we may need to make adjustments to our plan, for things like how we'll be managing the weir on Sawmill Creek for passing wild stocks through, how many eggs we'll be permitted to take for the facility, and so on," Reifenstuhl said.

Broodstock for the new hatchery has been in development for three years. Most recently, eggs from 150 female Plotnikof Lake coho were taken at the beginning of November, and are incubating at Medvejie hatchery.

NSRAA released a group of Plotnikof coho stock two years ago, which began returning as adults in 2005. Another group is awaiting release next spring.

"We're hoping those fish can be imprinted to Sawmill Cove water and released from there next spring," Reifenstuhl said. "We hope that will be enough to get enough adults returning for eggtakes in 2007."

The ultimate goal is to have 2.5 million coho eggs for the new Sawmill Cove hatchery. That many eggs can't be taken from wild stock, so NSRAA must develop the broodstock over time.

The final hurdle for the project is still up in the air. Whether or not NSRAA has to complete an environmental impact statement or the less arduous environmental assessment, or perhaps even qualifies for a "categorical exclusion" from either of these, is still unknown.

"An environmental assessment would add another six months to the process, but I'm not very optimistic that we'll get a categorical exclusion," Reifenstuhl said. "I gave it my best shot. Certainly there are other hatchery programs that can be used for comparison, and the area where we're working was already a heavy industrial site. But the state may see it differently than I do."

Ben Gilles, Steve Reifenstuhl, and Lon Garrison take Coho eggs at Plotnikof this fall. About 200,000 Plotnikof eggs are currently incubating at MCIF.

New Deer Lake fish technician, Sarah Nelson, at camp this summer.

Employee Changes

NSRAA staff played musical chairs this year after longtime Medvejie manager Jim Seeland stepped down last May.

Lon Garrison, who had been the Hidden Falls manager for the last couple years, stepped in to fill Seeland's shoes at Medvejie.

Scott Wagner, who had been senior fish culturist at Medvejie, moved out to take over as Hidden Falls manager, and one new fish culturist has been hired at Hidden Falls, Dan Hand.

Hidden Falls assistant manager Ben Contag left this year for Port Armstrong Hatchery, so his spot has been filled by Tommy Sheridan, formerly a fish culturist at Hidden Falls.

Hidden Falls maintenance engineer Ken Merrill also left, after less than a year in the position. Josh Nelson is the new maintenance engineer and has been on site about a month.

Matt Golden, formerly a seasonal fish culturist, has been promoted to senior fish culturist at Medvejie, primarily responsible for Deep Inlet rearing and the Green Lake chinook project. Ben Gilles, formerly of the Deer Lake project, will be taking over the seasonal job at Medvejie. Last but not least, Sarah Nelson will be taking over the sesonal fisheries technician position at Deer Lake

Phew. Got all that?

All the newbies are extremely grateful for the staff who didn't change jobs this season; they're the ones who are making sure nothing gets missed in the shuffle.

New Board Members

Both of NSRAA's new board members were born in Sitka and lived here most of their lives.

Rafe Allensworth is taking over the at-large power troll seat formerly held by Bill Paden, who recently sold his permit and therefore had to give up his board seat.

Allensworth has been a commercial fisherman for 14 years. His boat is the F/V Aloma. When it comes to his preferred fishing grounds, he says he likes to go west.

He heard about the board seat opening from board member Alan Andersen and decided it was time to learn more about what NSRAA does.

"NSRAA has always done a good job as far as I can see, and it is interesting to me," Allensworth said. "I decided it would be nice to know more about the fish, how they come back. I just want to understand how it all works."

Brian Massey was elected to the sports seat, and says that he's been a sport fisherman for a very long time but emphasized that he is not affiliated with any charter fishing companies. He has worked for the Alaska Housing Finance Corporation for four years.

Massey commercial trolled with his father in the late 60's and early 70's, and has been the chairman of the Sitka Fish and Game Advisory Committee for five years, as well as serving on the City and Borough Fisheries Economic Advisory Committee.

"I think NSRAA is an important part of the sport fishery because they supply so many king salmon. It's a big part of Sitka's economy, and I want sport fishing to continue to be enjoyed by local fishermen," Massey said.