NORTHERN SOUTHEAST REGIONAL AQUACULTURE ASSOCIATION

FISH RAP

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

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Steve Reifenstuhl and Tim Yates load live coho on the tender Emily Jane for an experimental "Live Haul" program to the NorQuest plant in Petersburg. Several thousand pounds of Hidden Falls coho were successfully transported live. The program will be expanded next year to test the economic feasibility of the live haul strategy.

Inside

LOOKING FORWARD: GRANT MILLER'S PERSPECTIVE ON THE NEXT TWENTY YEARS

Technological developments and changes in fish handling techniques will change the face of the fishing industry, including NSRAA, according to board president Grant Miller.

A new process called suspension freezing was developed by engineer and commercial fisherman Jeff Knoff in Kodiak. He is partnering with an agricultural products company in Iowa which has worldwide markets already in place to help sell fish for food and pharmaceutical uses.

"This process will probably show up on the grounds this year but I'm not sure to what extent," Miller said. "The developer of the process is going to outfit a certain number of boats to get it started."

The process starts with live fish, right out of the seine, that are then placed into a stunning liquid in tanks on deck. The gills are slit, and then they move into a freezing tank, where the oxygen is removed from the body.

"It creates a frozen round fish, still in its slime, with no dimples, dents, or scars, that will last for a very long time, and when it is thawed and cut it will be just like it was taken out of the water," Miller explained. "This allows for full utilization of the carcass. The flesh will be excellent, the roe in top condition, any other pharmaceutical grade products such as fish oil can also be used, and there is tremendous value in that, probably in excess of the flesh and the roe."

Miller believes the process will give NSRAA an opportunity to take less of the resource to make its cost recovery needs.

And for fishermen, they may find themselves with more free time on their hands, because although the process is slightly slow, more money might be made on less fish.

"You'll fish less for the same amount of money," Miller said. "There's a lot of resource out there waiting to be harvested. It could even help the fleet expand again, so that everybody doesn't have to sell out."

Miller looks forward to the days when roe stripping is a thing of the past.

"The fuller utilization and better quality product can compete with farmed fish," Miller said. "It will put a better product on the market, and it won't be strictly a roe market any more."

Farmed fish are in ready supply, but for pharmaceutical uses a very high quality product is required from the start, for which wild, chemical free fish are naturally better suited.

Outfitting boats with suspension freezing capability is very expensive, between $80,000 and $100,000, which Miller admits is a big hurdle to its widespread use.

"Initially the developer and his partner will outfit a few boats, and there will also be 'mother ships' so you can hold your fish live and take them there if you don't have the capability on your own boat," Miller said.

Miller notes that even when the freebie period is past, fishermen who want to invest in the technology will qualify for many loans available to fishermen through community development funds, quality improvement funds, and others.

Knoff and his partners will be building the infrastructure to deal with the product because, as Miller notes, it will require a lot of cold storage space. A facility at Sawmill Cove Industrial Park may be in the works, involving a rebuilt dock and a new cold storage.

Miller is excited about what it means for the future but is disappointed in the state's lack of vision in not financially supporting the project.

> ***"The fuller utilization and better quality product can compete with farmed fish," Miller said.***

"The state has gone through all these task forces and work sessions, trying to come up with something that will help this industry, and here it is, laying in their laps, and they can't get it together to do it," Miller said. "They'd rather pass out relief money, because they didn't really take the time to read and understand what this process is and what it means."

Miller believes that the fishing industry needs to think creatively in order to insure that it has a future.

"We still talk about marketing and improving quality, but the old way," Miller said. "We have to get outside that trap."

University of Alaska economics professor Gunnar Knapp has been rooting for creative thinking for years. He doesn't follow technological developments, but upon hearing about suspension freezing, commented that "if it's possible to do what you've described, that would be great and it could be a big deal."

Knapp was more familiar with the "interesting things that have happened in the Chignik Co-op."

About 80 percent of the fishermen supported making the sockeye fishery a cooperative one, and went to the Board of Fisheries, who approved their request.

In a cooperative fishery, the processor would say how much product they needed, and the fishermen would decide how many boats to fish, and then split the money between all the co-op members, no matter who fishes.

The Chignik Co-op was quite successful in terms of raising the value of the fish for its members, and the fishermen who live-hauled their fish earned even higher prices.

"The Co-op is along the lines of what I've suggested might be possible with allocation-based management, unfortunately it has also illustrated the difficulty of making these kinds of changes because different folks have been affected in different ways, and there is a lot of polarization over the Co-op," Knapp said.

Miller knows such radical change as he envisions may take some getting used to as well.

"I really think this is what this industry needs, and once it takes hold I think it will take off," Miller said.

General Manager's Notes

I have just concluded what I believe is my forty-fifth regular meeting of the NSRAA Board of Directors. At several points throughout the meeting, I found myself thinking about the many board members who have served NSRAA over the past twenty plus years, and the many contributions they made and continue to make for the Association.

The diversity contained in the roster of past and present board members can certainly be credited with NSRAA's status within the aquaculture community. I won't try to mention each of those individuals by name here, but I think that if I really sat down and started to list each past and present board member, I could probably recall all of them and probably even remember at least one significant contribution each made to the Association.

Over the years as I watched the NSRAA Board do its work, I was continually amazed to see the process through which so many differing opinions could be molded to form something that everyone could get behind and support. The many hours spent dealing with sometimes very contentious issues, would have been a challenge for any governing board, but they always seemed to emerge from meetings with a compromise.

Even more significant than that, is the fact that all the decisions which emerged from the various NSRAA Boards helped keep the organization strong, and on track toward accomplishing its mission. Each and every one of us should be thankful that these individuals stepped forward to serve on NSRAA's Board of Directors.

Pete Esquiro

I would hope that many of you would consider running as seats become vacant. If you are not able to participate in that way, perhaps you can participate by discussing with your gear group representatives any ideas you may have which will make NSRAA more responsive to you. The other way that you can participate is through voting in elections for board members. To be quite honest, voter response in director elections has been very disappointing. You will be receiving in early 2004 an election ballot to fill seats on the NSRAA Board.

I hope you will take the time to vote. We need your participation.

Finally, on behalf of all of us at NSRAA, I want to wish you all a happy and safe holiday season.

Market Outlook for Chum Salmon 2004

Fishermen can expect more of the same for chum prices in 2004, according to commercial fisherman and chum caviar producer Randy Babich. Prices in 2003 hovered in the low $.20/lb. range, with an ex-vessel price of $.18/lb, and Babich doesn't expect any increases.

Babich, who lives in Gig Harbor, Washington, has been fishing in Alaska for 38 years, and processing caviar in Puget Sound for twelve. He also did Medvejie chinook cost recovery for seven consecutive years, until this year, when low salmon prices kept him at home.

"I'm familiar with chums, as I purchase anywhere between 2 and 4 million pounds a year," Babich said.

Several factors play into the depressed price for chums, Babich said.

"Americans eat very little caviar so the market is predicated upon Japan. Other countries, like Israel, Denmark, or Russia, are not going to pay any more than Japan. Also, Japan's major hatchery system, Hokkaido, just had a record run. That creates a lot of caviar which pushes the price down. Finally, for just over a year now the Japanese have been developing the sentiment to 'buy Japanese first.' So rather than get all excited about the exporters from Southeast Alaska, they're cleaning up their own internal inventory. Prices for caviar are the lowest I've seen them in six years."

One positive note in the chum market is that the flesh value increased, but only for what the market considers 'good meat color,' or GMC.

"For many years now the only driving force in the chum arena has been caviar, but this year and last year the caviar has been static and any fluctuations are due to GMC chums," Babich said.

Unfortunately for NSRAA, many of their Deep Inlet chums do not have good meat color, despite being bright on the outside.

"I put together a floater out there, and we'd get a nice bright fish, and cut into him and he's the color of cardboard," Babich recalled. "But Hidden Falls fish color is good early on."

Babich is still considering buying NSRAA chum, if cost recovery bids are segmented into smaller lots.

"I think it's important that everybody keep in mind that 18 cents a pound is still twice what a pink salmon is worth, and a chum weighs more than a pink. I'm a real firm believer in chums, and the ikura (caviar) is the only component the farmed salmon can't touch, so that gives chum an edge," Babich said.

Farmed ikura has fell

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Board Member Profile - Tim Grussendorf

Sitka native Tim Grussendorf, who joined the NSRAA board three years ago as an at-large gillnet seat and was elected vice-president in the spring of 2003.

He's glad to do the job but hopes that spring elections will see a more experienced board member and gillnetter, Kevin McDougall, take over board leadership responsibilities.

"He's been on the board a lot longer than I have so he'd probably be better at it," Grussendorf said. "But if he doesn't want it I'll certainly be happy to." "NSRAA opened up opportunities and spread the fleet out really well," Grussendorf said.

Grussendorf was born in Minnesota but moved with his parents, who were both teachers, to Sitka when he was just two years old. He started purse seining as a deckhand in 8th grade, and continued fishing all through college, supporting himself as he earned a political science degree from the University of Oregon.

He moved to Juneau after college and continued fishing. He bought into the gillnet fishery in 1990, and bought into the dungeness crab fishery in the mid-1990's. He still fishes out of Juneau in the summers.

"Usually I fish Taku Inlet and Lynn Canal, but I like to go over to Sitka for the chum run," Grussendorf said.

Grussendorf loves to fish in Sitka when he can because "it's a great family fishery."

"I bring my sons, Cody, who is 12, and Ty, who is 9, and my wife Christi over, and it gives me a chance to see my parents," Grussendorf said. "I think you'll see more and more people spending time in Sitka, especially if they like to have their family on the boat with them because, at least on the Deep Inlet side, the weather is usually fairly decent because it's in a protected area, and you're only twenty minutes out of town."

Grussendorf thinks NSRAA's conservative fiscal management has served the organization well.

"Even when we find ourselves in a tough position with prices, because the board has been conservative so long we haven't fallen into hard times like some other organizations," Grussendorf said. "Certainly we weren't ready for prices to drop like they did, I don't think anybody was, but we've been better able to handle it than other organizations."

The needs of the fishermen must be balanced with the health of the organization, as always, Grussendorf noted. "We've got to do the best we can for the fishermen, but as a board member I've got to make sure NSRAA comes first. The whole thing can't fold."

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The Hatchery Report

Medvejie

The staff at Medvejie hatchery accomplished all the usual summer tasks along with helping out with the extra work that included the construction of a new chum building and major improvements to the existing buildings.

Chum

A total of 48.2 million chum fry were released in 2003 which is an increase of 8 million over last year.

"Good environmental conditions at both the Deep Inlet and Bear Cove release sites produced above average fry, although plankton levels at both sites were a bit slow to develop this season," said hatchery manager Jim Seeland.

"We were able to hold onto the fry for a few extra days in order for conditions to improve, but they consume so much feed at that point that it is impossible to delay releases for very long," Seeland explained.

The eggtake goal for this fall was increased to 35 million from 30 million so that Medvejie could provide 5 million additional eggs for the Sheldon Jackson College (SJC) hatchery program.

Returning broodstock showed up in good numbers but staff were frustrated by the number of males.

"The 'male thing' got really old as the eggtake proceeded. Toward the end, we were considering same sex spawning...it didn't help much that the new radio station played 'The Boys are Back in Town' several times a day," Seeland joked.

The new chum building is full of 24 million Hidden Falls eggs that arrived in October. Incubation is going well so far, Seeland reports, although staff is making adjustments as they get used to the new building.

This spring, Medvejie plans to be ponding 4 million chum fry at Deep Inlet for SJC, 1 million to SJC for imprinting and release there, 7 million at Bear Cove, and 43 million at Deep Inlet, of which 24 million are Hidden Falls stock and 19 million Medvejie stock.

Chinook

Three distinct smolt groups were released from Bear Cove in spring of 2003: Medvejie, Green Lake, and "zero check" chinook, which are released their first summer instead of being held over the winter.

A little over 1 million brood year (BY) 01 Medvejie chinook were released at 32 grams. They were a little on the small size due to cooler freshwater temperatures during the summer of 2002, but they were in good condition.

The relatively new "zero check" chinook program released 262,000 BY02 chinook this year. Seeland reported that the group was aggressive and vigorous, much like the first release in 2000, which returned well this season.

The Hidden Falls staff assembles net pens for the Takatz chum salmon program during September. The new net pens will be towed to Takatz Bay in March 2004 for the 45 million chum fry rearing program.

It is too early to tell how successful the zero check program is so far, but Seeland believes the program has great potential because it saves precious freshwater and electricity, minimizes the rearing fish's exposure to pathogens (and bear attacks), and cuts feed costs way down.

Another new program launched this season is "Super Smolt" (SS) chinook, a process developed by the company Marical, located in Maine, which makes the chinook saltwater ready more quickly.

About 6 weeks before release, the fish are switched to a feed with extra salts added to it, they are given a "salt bath" twice a day, and put on 24 hour daylight.

"If successful, this promises to free up some freshwater in the winter which could be applied to other projects," Seeland said. "Also, a well-adapted smolt may increase marine survival rates."

The current inventory of 1.1 million Medvejie chinook and just over 1 million Green Lake chinook is the largest that Medvejie has ever carried, and so far they are doing well in their saltwater pens.

Seeland hopes they can release half a million zero check chinook in mid-June. "This is the logical time for them to take advantage of natural feed availability and long days, and we can also test the theory that smaller sized fish can survive well," Seeland said.

Coho

NSRAA staff kept four different coho stocks on hand, making it a challenge to keep them isolated, tracked, and hitting target sizes by specific dates. Seeland said Bill Coltharp kept the job under careful control.

BY01 Indian River coho smolts had no rearing problems. The allowed number of 10,000 were released at Bear Cove to assure broodstock and 220,000 were transported and released at Shamrock Bay.

BY02 Kadashan coho stock were short-term reared to about 1 gram, then flown in June to Indian River on Chichagof Island. This is a joint program between the United States Forest Service and NSRAA.

The BY02 Plotnikof summer run coho project was canceled due to funding issues. The 40,000 fish on hand will be released next spring and the project discontinued for now.

2.4 million BY02 Hidden Falls coho were flown into Deer Lake in mid-June and planted for a 2004 release.

Tourism and Marketing

NSRAA distributed lots of brochures to its many visitors this summer.

"In late June the printer finally delivered 5000 brochures that included consumer information and details on how to locate a product. We were disappointed at how late these arrived but they were nearly all distributed by the end of the season," Seeland said.

The Alaska Salmon Marketing Institute (ASMI) also provided thousands of informational leaflets. The recipe book-type information was very popular, Seeland reported.

Allen Marine provided brochure space and maintained the stock on all of their tour boats, and the Sitka Economic Development Association (SEDA) maintained the supply of NSRAA brochures at the Centennial Building and at the airport.

"We constructed several brochure racks at Medvejie and we restocked on a daily basis," Seeland said.

Seeland hopes to do more on the marketing and information front, by distributing some Medvejie canned king salmon, and to work on getting information on the Alaska Marine Highway.

Infrastructure and Personnel

Hatchery staff intend to spend the winter focusing on safety-related items, including dive and boating safety, and workplace safety.

"We hope to make a serious upgrade to the shop/warehouse area which has never been given much attention," Seeland said.

In Seeland's report to the NSRAA board he praised the Medvejie staff for another year of smooth operation despite all the new happenings.

"No obvious disasters occurred. You may get tired of hearing it, but this is mostly due to an exceptional group of individuals who pay attention to detail, work efficiently, and don't mind putting in extra time to get the job done. The crew remains the same this year: Ritch Phillips, Assistant Manager; Mike Pountney, Maintenance; Bill Coltharp, Fish Culturist; Scott Wagner, GL/Deep Inlet Fish Culturist; and Matt Golden, Seasonal Fish Technician. We also had some superior help from various hourly employees," Seeland said. "I have to say the Board should be particularly proud of how well this Association functions at the operational level."

Hidden Falls

"To say it has been a challenging year at Hidden Falls would be putting it mildly," said new hatchery manager Lon Garrison in his report to the board this fall.

In short, staff dealt with unusual and extreme challenges in transporting and rearing chum fry at Takatz Bay, unapproved changes in the chinook smolt program, administration changes mid-season, and large scale construction of the new chinook and coho expansion facility.

"Assistant hatchery manager Ben Contag and long time fish culturist Travis Petersen provided the invaluable experience necessary to see us through some difficult times," Garrison said.

Chum

Incubation of the broodyear (BY) '02 chum went well, reported Garrison, with none of last year's problems with silt deposits. Emergence and ponding was slightly earlier than normal due to unusually high water temperatures during the mild winter.

A total of 38.8 million chum fry were released in Kaznyku Bay in the spring at an average weight of 1.88 grams.

Difficulties during the first nine transports to the Takatz Bay remote release site resulted in 10 percent transport mortality. Once densities were reduced for each transport the mortality dropped to a more normal .6 percent.

"In all likelihood, the initial transport mortalities were due to emergent fry that were not quite ready for transport and tended to 'dogpile' and suffocate," Garrison said. "This could be an artifact of the early emergence and trying to push these fry out the door too quickly."

One week after the fry were transported a severe cold snap froze the bay and the fry were unable to get much feed despite the crew's efforts to drill holes or remove the ice. After eleven days the ice broke up and the fry were once again able to feed.

"This undoubtedly set these

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Hidden Falls cont. from page 3

fish back but they returned to feed and eventually grew to nearly 2 grams," Garrison said.

Then, late in April, warm water and poor water circulation through the old net pen complex forced the early release of 5.6 million fry from two pens, at 1.23 grams.

The remaining 31.03 million fry were released at the end of May at 2 grams, after increased glacial runoff, small tide exchanges, and no wind created stressful conditions which caused fry growth and performance to suffer.

"As a result of the difficulties encountered during this chum season, staff and administration convened a teleconference to review our chum rearing and feeding procedures," Garrison said. "Basic procedures and feeding guidelines will be standard for future years and deviations from tried and true techniques will not be allowed without the knowledge and consent of the hatchery manager and operations manager."

In contrast to the difficult rearing season, chum eggtakes went smoothly and set a new record of 127.5 million eggs in 26 days.

The warm dry summer in combination with a new and partially finished dike resulted in poor conditions for the broodstock in the holding lagoon. Large numbers died in the lagoon.

"Only through Herculean efforts by the staff to provide aeration at the base of the fish ladder using aerators and fire hoses were we able to keep broodstock alive and moving up the fishway," Garrison said.

With the dike completed this should not be a significant problem in the future, Garrison noted.

Chum continued to "dribble" in for some time after cost recovery and the common property fisheries were finished, so in the end staff ended up with excess broodstock, and were able to recover and sell 831 buckets of roe and bait eggs.

In mid-October, 24 million eyed chum eggs were transferred tothe Medvejie Deep Inlet program.

NSRAA Contribution to Southeast Alaska Commercial Fisheries
Number of Fish : 2002 - 2003

	Gillnet		Seine		Troll		All Gear	
	2002	2003	2002	2003	2002	2003	2002	2003
Chinook	2,252	937	7,401	5,614	20,287	15,698	29,940	22,249
Chum	356,920	331,448	1,515,889	1,870,542	85,576	96,709	1,958,385	2,298,699
Coho	1,190	197	44,730	10,320	109,559	58,941	155,479	69,458
Sockeye	5,065	-	-	-	-	-	5,065	-
All	365,427	332,582	1,568,020	1,886,476	215,422	171,348	2,148,869	2,390,406

Chinook

Chinook returns this year were about average with an estimated 28,675 fish returning to Hidden Falls. Approximately 6,313 were harvested in the common property fishery and 10,553 for cost recovery.

1.25 million BY01 chinook were released from the saltwater net pen complex on the first of June, averaging 39.75 grams.

"The fish looked good at the time of release," reported fish culturist Chris Holmes.

BY02 chinook eggs were incubated in warm water in an effort to speed up their development and pond them earlier than normal.

"This intentional advancement allowed us to pond 1.6 million chinook into raceways on January 4," Holmes said.

Overall, rearing went well although size variation of the fish continues to be a problem. 1.35 million chinook were transfered at 1.81 grams to the round ponds in mid-May.

"Rearing in the round ponds went well with no incidence of disease, low mortality, and a good feed conversion rate, despite the complication of day to day water temperature changes related to construction work," Holmes said.

Spawning for BY03 chinook began in mid-August with a ten person crew. It took only 2 1/2 days, setting a new record. The crew collected over 2 million eggs, of which over 12 percent were BKD (bacterial kidney disease) positive and had to be destroyed.

The remaining 1.4 million eggs were seeded and look very good at press time.

Coho

Adult coho returns were about 6 percent below average this year with a marine survival rate of approximately 10.3 percent, reported assistant hatchery manager Ben Contag.

Approximately 202,000 fish returned. 125,000 were harvested for cost recovery, 38,800 were intercepted in the troll fishery, and 10,000 showed up at the hatchery rack.

BY01 coho fry grew well in the raceways but dropped some weight once transferred to salt water, due to otter and bird harassment, a first in Contag's experience.

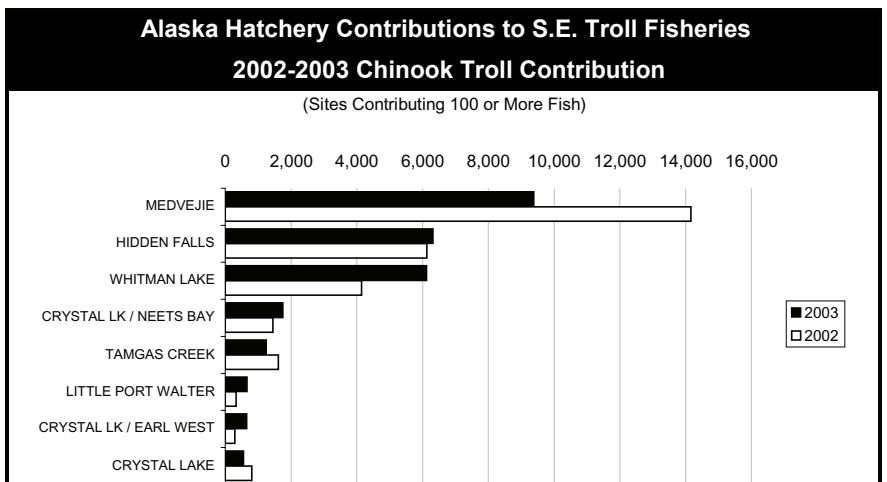
Just over 2 million BY01 smolt were released in May at 21.7 grams, a weight that still falls into the historical average for successful returns.

2.6 million BY02 fry were ponded in late March and early April. Raceway rearing went fine although there were some feed problems, and 2.27 million fish were transferred to round ponds at the end of June when the fish were at 1.73 grams.

"The transfer went okay although we had to go a little slower than past years because the fish were showing toxicity signs and we did not want to overstress them," Contag said.

Contag was hopeful that these coho would put on weight well in their new ponds and be at historically normal average weight by the end of November. Overall mortality for these fry since ponding has been a normal 2.2 percent.

Staff took 2.6 million BY03 coho eggs for Hidden Falls and 2.8 million eggs for Deer Lake in late October.



Dick Crone oversees the harvest of Mist Cove coho by F/V St. Janet. Dick has been the CLR project leader since 1978.

Field Reports

Coho Lake Rearing Project

The coho lake rearing project at Deer Lake "was a mixture of highs and lows," according to project leader Craig Chisam.

Chisam took full responsibility for the program this year after working for the past several years with long-time leader Dick Crone, who stepped down (see related story page 8).

Work began at Deer Lake on March 14, and a mild winter made set up of the weir, pipelines, and net pen complex go quickly.

While the total live release of 144,840 age 2 smolts was only about half of what they had expected, a large number of jacks returning this year bodes well for marine survival and the 2004 return.

The 2003 emigrating smolt were holdovers from the fry plant in 2001, as they did not attain the proper size to leave the lake after their first winter. The lake was not stocked in 2002 as a result.

"We were hoping for about 250,000 smolt to emigrate this spring, but apparently, predation in the lake resulted in lower in-lake survival," Chisam said.

The peak emigration in the latter part of May was accompanied by heavy rains. The high water level in Deer Lake and the outlet creek stressed the smolt trap and could have been disastrous for the emigrating smolt.

"The heroic efforts of our dedicated crew kept mortalities to a minimum," Chisam said. "As with the high water episode in 2002, the crew spent several sleepless days and nights working shifts at the weir to keep the ever-mounting debris from clogging up the weir and pipelines."

Chisam estimates that total mortality due to all factors was less than 1 percent of the total emigration.

The Deer Lake crew planted 2.4 million fry in the lake in early June, and although their summer growth rate was slow, they appear to have made excellent gains in September and October.

"Most of the fish will emigrate from the lake next spring," Chisam said, "allowing the lake to be stocked again next summer. That makes this growing season a success."

The planted fry were smaller than usual because stocking began a few weeks ahead of normal in the hopes of avoiding weather delays.

"But they were plump and in great condition when they arrived at the lake, and overnight mortalities were low, indicating good initial survival of the newly stocked fry," Chisam said.

The lake was fertilized throughout the season with a total of 12,815 gallons of liquid ammonium nitrate and ammonium phosphate, the full amount recommended by the Alaska Department of Fish and Game (ADF&G). In recent years only about 10,000 gallons of fertilizer was applied due to lack of storage tank space.

"The algae responded well to the fertilizer and a constant bloom was maintained throughout the growing season," Chisam said. "A population explosion of zooplankton, coupled with warmer-than-average water temperatures in the latter part of the season resulted in extraordinary fish growth in the fall."

This year's adult return was low, due to poor marine survival last year. A below average survival of 5.5 percent resulted in just 52,237 adult coho returning to Mist Cove this year. Commercial catch interception rates were accordingly low, with a combined harvest of 15,397 Deer Lake fish, 29 percent of the return.

Deer Lake contributed an estimated 1,765 coho to the sport catch this year in the Mist Cove area.

Chisam noted that marine conditions on southeast Baranof Island appeared poor last spring, as a low jack return to Mist Cove anecdotally indicated low early marine survival.

Cost recovery was also disappointing. 34,065 coho were harvested for cost recovery, with a combined weight of 255,055 pounds.

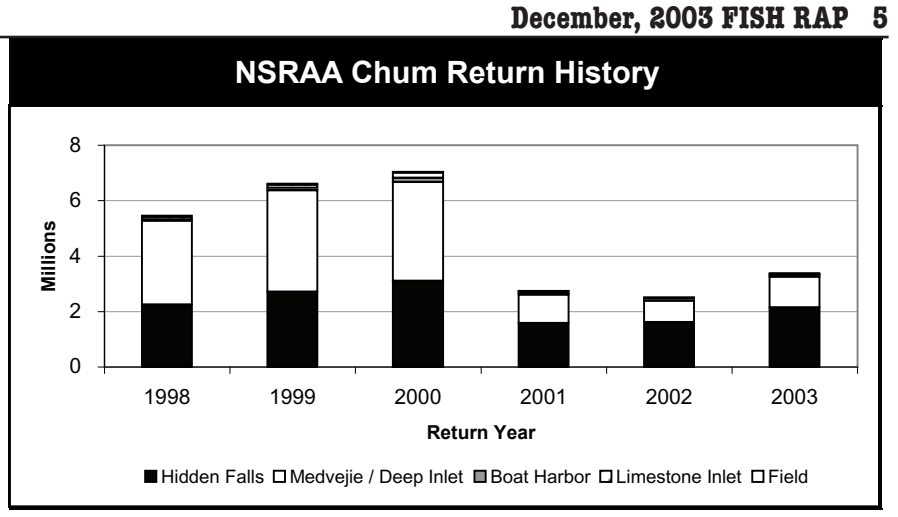
"Lower numbers of returning coho combined with a constant sea lion presence made cost recovery difficult," Chisam said. "But the St. Janet, Jean D, and Gallant Maid crews worked diligently to harvest all available fish."

Aside from taking care of the fish, the Deer Lake crew continued with work on the trail between Mist Cove and Deer Lake, as mandated by the Forest Service. Required work on the trail improvements was complete at the end of the 2003 season.

"Enough can't be said about the 2003 Deer Lake crew," Chisam said. "Luke Bastian, Josh Homer, and Tommy Sheridan were a pleasure to work with and made their leader proud."

Chisam is sorry to see Luke Bastian move on to other things after five years on the Deer Lake crew, but is glad that Josh Homer became a full-time employee this summer, serving as a Fisheries Technician.

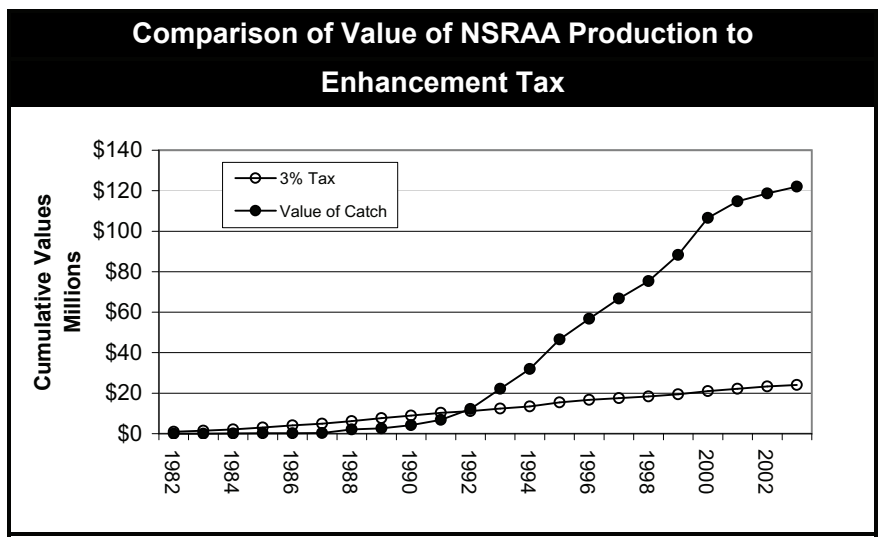
"Josh has been promoted to Fisheries Biologist, and will serve as an assistant to the project leader," Chisam said. "We look forward to next season."

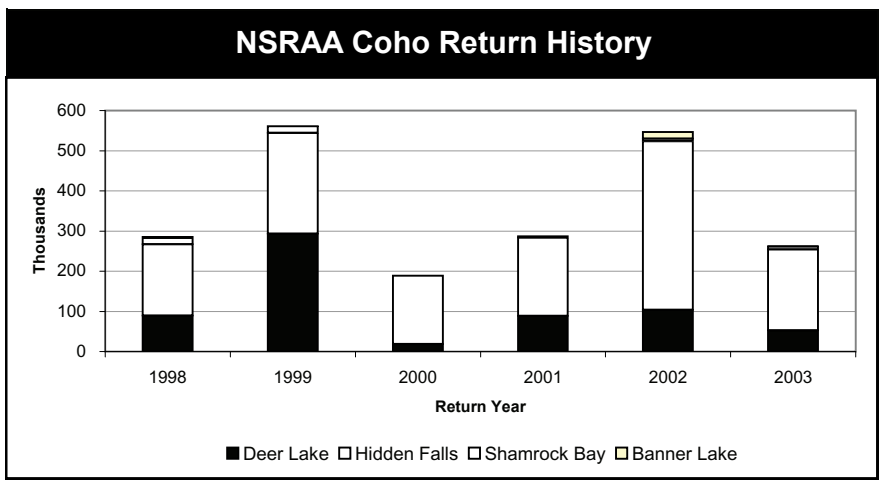


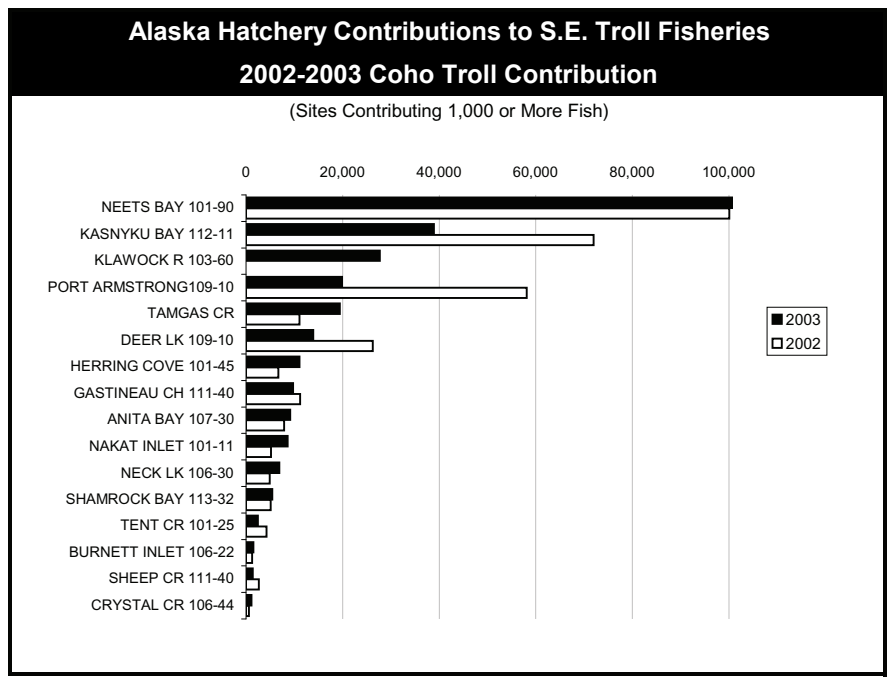
market outlook cont. from page 2

in favor around the world due to its lower quality.

"Chile tried it with farmed coho but it had a real metallic, dusty taste," Babich said. "The purists want the real thing, just like there is beginning to be a real trend towards favoring the real red meated wild fish, like kings and reds, which feed themselves and don't have residual antibiotics and chemicals in them."







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Haines Program

While Lynn Canal continues to be a popular area for commercial harvest of sockeye and chum salmon, fewer boats fished this year, noted Haines biologist Todd Buxton.

As a result, fewer than average sockeye and chum salmon were caught in District 15. Compounding the problem was a later than usual return, which meant the peak fishing effort missed the peak of the return.

NSRAA collected and is now incubating 50,000 sockeye eggs at the Spring Pond as a pilot experiment to restarting the Chilkat Lake sockeye enhancement program at a smaller scale than has been done in the past.

Larger contributions of rearing fry to the lake would be greater than what the lake's ecology can handle, NSRAA's research has concluded.

"We believe that restarting 1.2 million eggtakes at Spring Pond will help maintain production of adult sockeye while not hampering the lake's recovery," Buxton said.

This year's estimate of 1.4 million emigrating smolt from Chilkat Lake was more than triple last year's.

"Zooplankton levels at the lake remain severely depressed," Buxton said, "so we have no explanation for this spring's very strong smolt migration. Smolt numbers were three times greater this year than last year, and smolt weights and lengths were near their historic averages."

Chilkoot Lake's contribution of sockeye to the Lynn Canal fishery is on the upswing, Buxton reported.

Although low early run numbers caused harvest restrictions, a strong late run resulted in commercial harvests in Lutak Inlet from August 2 through September 7.

The combined catch and escapement of Chilkoot sockeye was 24,000 greater than last year.

Nearly 1.7 million smolt emigrated from Chilkoot Lake this spring, nearly a million more than the largest estimate in years past.

"Combining the large population estimates of both Chilkoot and Chilkat smolt, we can predict the years 2005 and 2006 should be near the high-end catches enjoyed in the early 1990's," Buxton said.

Chum salmon enhancement in the Chilkat Valley was not easy this year, but staff continues to make progress toward increasing production to 8.1 million fish.

"Low chum escapement to Herman and 24-mile spawning channels this and last year have complicated efforts to collect broodstock," Buxton said, " so we employed some creative ways of capturing fish from the mainstream Klehini and Chilkat Rivers and managed to take 1.2 million fall chum eggs this year."

The eggtake goal was met only at the 17-mile site. Chum incubation at 17-mile went very well last season, achieving a 98 percent survival rate and producing 193,550 fry. "Recognizing the potential of this site, we improved its water intake system and added two additional incubation boxes to accommodate the increased number of eggs permitted at this site," Buxton said.

Restoration and expansion of the 31-mile and 17-mile incubation sites completed this year increased the chum fry production capacity in Haines to 3.4 million, and site assessments and elevation surveys have been completed for development of several additional chum incubation sites in the Chilkat Valley.

Limestone Inlet/Boat Harbor

Limestone Inlet and Boat Harbor chum rearing and release are cooperative projects between NSRAA and Douglas Island Pink and Chum (DIPAC).

Limestone Inlet's annual goal is to produce 150,000 adult chum salmon in the Stephens Passage and Taku Inlet gillnet harvest, but has not met this objective since the year 2000. The gillnet catch for 2003 was estimated to be 54,102.

"Obviously last year's strong 3 year old component did not produce the number of age 4's anticipated and suggests some sort of mortality at sea," said field projects manager Lon Garrison.

The rearing program this season went very smoothly, Garrison reported.

"We produced some of the largest fry, 1.73 gram average, released from the project to date," Garrison said.

Mild winter weather made setup of the project much easier this year. A total of 14 million fry were successfully moved to the Inlet.

Warmer water temperatures translated into improved growth rates and better feed conversions, and in mid May, almost 14 million fry were released.

Boat Harbor's production goal is 90,000 adult chum for the gillnet fleet in lower Lynn Canal, and has been met in 1994, 1995, 1997, 1999, 2000, and 2002.

The projected return for 2003 was 178,000, while the actual gillnet catch of 91,507 fish was only 51 percent of the projection.

Use of a larger transport vessel helped staff avoid weather delays, and so the Boat Harbor fry were delivered to the site nearly two weeks earlier than previous years, which made a big difference in the final size at release, Garrison said.

Three net pens were reared for 56 days and released in mid May at 1.78 grams. DIPAC chose to rear the other two pens for another twelve days for a "late-large" release. These were released at the end of May at 2.62 grams.

Tommy Sheridan retrieves a fish trap at Deer Lake during routine sampling to assess growth and performance of the coho stocked in the lake.

Chum Returns 2003

Chum returns at Hidden Falls and Deep Inlet came in under the forecast by a significant amount, reported NSRAA data analyst Chip Blair and operations manager Steve Reifenstuhl.

Hidden Falls saw 2.2 million chum where 3.45 million had been expected, and Deep Inlet's return was 1.1 million instead of the forecast 1.45 million.

Fish came in small at both sites, averaging 6.2 pounds per fish this season instead of the usual 8 to 8.5 lb. average.

"It stressed things in terms of cost recovery revenue, because we set a target number of fish, not a target weight," Reifenstuhl said.

Cost recovery goals were adjusted accordingly, bumped up from 385,000 to 525,000 chum at Hidden Falls, and from 160,000 up to 220,000 chum at Deep Inlet.

Reifenstuhl said it was a "challenging season" for cost recovery and management of the return at Hidden Falls but fortunately for him he loves a challenge. The fishermen on the other hand may not have felt the same way.

"Our large cost recovery goal was the largest I've ever had to manage and it was a huge chunk, about 28 percent, out of the return," Reifenstuhl said.

Cost recovery was conducted early in the season by volunteers from Southeast Alaska Seiners (SEAS) but as the season wore on, fewer boats adhered to the harvesting schedule. NSRAA abandoned the volunteer effort in mid July as the cost recovery goal got further off track, and they contracted out the remaining cost recovery harvest.

Simultaneously, the sex ratio of the returning fish began to show fewer males, indicating that the run was past its peak. So common property fishing was suspended for a week.

"The fish coming in small made things difficult and the poor prices put everybody under a lot of stress," Reifenstuhl said.

Despite the difficulties with the volunteer cost recovery efforts this season, Reifenstuhl still believes it can work.

"We could just go out to bid for 3 or 4 boats for the whole thing, but another idea is that since early in the season there are very few other places for seiners to fish, we could use volunteers early on and then designate a date, around July 10, that we contract out the harvest. It could be bid in May," Reifenstuhl said. "That way SEAS would still get some lobbying money and we'd be sure to get the job done."

Nearly 75 percent of the Deep Inlet return was utilized by the commercial fleet (47 percent seine, 19 percent gillnet, and 8 percent troll), and 21 percent went to cost recovery. The remaining 5 percent returned to Medvejie for broodstock. NSRAA originally planned a cost recovery harvest of approximately 12 percent of the expected return, down from 20 percent in 2002.

"But Mother Nature has a way of over-riding the best-laid plans, and from the first fishing efforts this season, both at Deep Inlet and elsewhere, it was apparent that we would be seeing much smaller fish than normal," Blair said.

Blair noted that it was the third year in a row with returns ranging in the 770,000 to 1.1 million range, after five seasons averaging over 3 million fish. And it was the third year in a row commercial fishing had to be suspended to allow for cost recovery.

"Frankly, with returns of 1 million fish, I don't believe there is a method to accomplish cost recovery without some period of commercial closure," Blair said. "Two or three cost recovery boats simply can't keep pace with 25-30 seiners, 50 gillnetters, and 25-30 trollers that we see in August. We're talking about 2-3 boats with severe time and area restrictions trying to compete against 100 boats in an attempt to catch one out of every five fish returning."

Blair is hopeful that next year will be easier for everyone.

"Signs are for an increase in chum numbers. Our early projection is for about 1.8 million chum," Blair said. "The extra fish should ease the harvest conflicts we've had to deal with the past few years."

NSRAA Belt Tightening

A combination of low fish prices for fishermen, lower average weight per fish, low cost recovery bids, and lower than projected returns are forcing NSRAA's general manager Pete Esquiro to deal with a potentially serious financial situation.

"Generally, we can handle two of those conditions in one year, but having to compensate for all four things occurring in the same year is a formidable challenge," Esquiro said.

NSRAA tightened its belt immediately in the early summer by dropping the Plotnikof summer run coho stock development, and canceling the Sitka Sound adult chum monitoring project. Both projects could be picked up again if the economic situation improves.

NSRAA also notified the Alaska Department of Fish and Game (ADF&G) that they will no longer operate the Chilkat weir. This will save $80,000 on the Haines program budget next year.

NSRAA already produces fish more cheaply than any other organization in Alaska, so deciding where to make further cuts will require some soul searching.

"We need to face up to the likelihood that we could have a few more difficult years," Esquiro said. "We'll examine each and every project, to insure that we are getting the best value for our dollar. We need to consider whether or not NSRAA should continue funding projects which are not our own, and for which we have no opportunity to recover costs."

Esquiro also expects that some functions within NSRAA will be consolidated, but notes that the staff has done an exceptional job of holding down costs so far.

"I will not sacrifice project quality merely to save a small amount of money. Whatever we do must maintain the quality of our production," Esquiro said.

One consolidation is already in place: field projects manager Lon Garrison, who found himself with a little more time after his Plotnikof coho and chum monitoring projects were suspended, agreed to take on the management of Hidden Falls hatchery as well.

"Lon's got big shoulders and I think he's thrived with the new responsibilities," said Reifenstuhl. "We'll save $40,000 a year, and although sometime we will likely go back to a year round manager at Hidden Falls, I think we'll probably run it this way for the next few years."

Esquiro noted that in addition to saving operational costs wherever possible, NSRAA will be taking a long hard look at cost recovery.

"We'll look at ways to raise the value of the fish we sell for cost recovery, as well as the way in which we conduct our cost recovery harvests," Esquiro said. "I can't say yet what changes we'll make, but I can say that we'll be looking at fish quality, timing to meet processor needs and demands, and quite possibly at smaller bid lots, so that more companies can participate in the bidding process."

Reifenstuhl said NSRAA will continue to look for sources of revenue and grant moneys, despite the State of Alaska's refusal to use any more Southeast Sustainable Salmon Fund (SSSF) money for enhancement projects.

"It's pretty discouraging to put lots of work into applying for fourteen separate grants in a total package of 2.8 million dollars, which doesn't go anywhere because it's not the way the state government is currently viewing that [SSSF] money," Reifenstuhl said.

Other revenue sources, such as finding pharmaceutical uses for chum, increasing tourism revenue, and pursuing funds from the Sportfish Division of ADF&G, are all in development at NSRAA.

"Medvejie hatchery manager Jim Seeland collected the pituitary gland from chum broodstock this year and sold it to a chemical company that uses them for growth hormone. We didn't make a lot of money but it is promising," Reifenstuhl said. "And tourism there generates between $12,000 and $15,000 a year. We've sat down with Allen Marine and looked at how to increase those numbers."

NSRAA contributes several thousand chinook and coho for the sport fisheries, and so Reifenstuhl hopes the state will help support those programs. He notes the Sportfish Division provides a couple hundred thousand dollars per year to Southern Southeast Regional Aquaculture Association (SSRAA) and DIPAC for their chinook programs, which are no larger than NSRAA's chinook program.

"There are actually large fishing lodges on the Chatham side that target our chinook and coho, and the Deer Lake return on Mist Cove," Reifenstuhl said. "We're just looking for some recognition of that in terms of financial support."

More creatively, Reifenstuhl said, NSRAA could build its own sportfishing lodges.

"I don't know if the board would go for it, but we could put a lodge right in Kasnyku Bay, same thing at Deer Lake," Reifenstuhl said. "We'd start small but I bet in ten years we could probably be the main lodges fishing on these fish rather than just providing the fish for non-commercial fishing interests. It could help support other programs and give us a seat in the debate between sportfish and commercial fish allocation."

Construction Update

Construction was completed this fall at NSRAA's Medvejie hatchery for improvements to the chum and chinook incubation building, along with a new incubation building for chum salmon. The electrical system and electrical backup were upgraded as well.

A one million dollar grant from the Southeast Sustainable Salmon Fund (SSSF) made the work possible.

Operations manager Steve Reifenstuhl said by the time the Fish Rap is published this December the work will be complete, on time, and under budget.

"I'm really happy with the way things came together out there. I didn't have to spend as much time out there as I expected," Reifenstuhl said.

Reifenstuhl credits good work by the engineers along with excellent planning by hatchery manager Jim Seeland for the smooth progress on the job.

"Keystone Construction did a very good job for us, and the staff at Medvejie worked very closely with the contractors. Because of that we ended up with a very fine product out there that will give us years of service."

Reifenstuhl is confident that the electrical backup will start up without a blink if there is an interruption in city electrical service.

"We had concerns about that before, in fact six months ago the city electricity went out and the backup didn't start up as it was supposed to," Reifenstuhl said. "We don't have to worry anymore."

Since the project came in about $100,000 under budget, more upgrades may be in the works.

"Perhaps we'll improve the shop facility, and maybe we'll buy a fish counter to make sorting operations more efficient. Fish counters run about $25,000," Reifenstuhl said.

The construction work at Hidden Falls, funded by a 1.6 million dollar grant from SSSF, is ongoing. A new incubation building and pond complex are about three-quarters finished.

Aside from the inherent difficulties posed by the remote location, the Hidden Falls project has been much more challenging than work at Medvejie due to the many unknowns in the buried water supply pipes and drains.

"Some of the things that were assumed during the engineering phase didn't come true once they were field checked during the construction phase. That has slowed things down," Reifenstuhl said. "But so far it hasn't resulted in any extra costs because staff has jumped down in the ditch and done a lot of work to try to keep things moving along."

"It's been a much greater demand on staff time for all concerned, but everybody hung in there and did what they could to help. It's been a big challenge, especially with not having a hatchery manager for July and August," Reifenstuhl said.

The improvements will make operations more efficient for handling both the rearing fry and the returning adult salmon, and despite having to cut some elements out of the original plan due to higher than expected contractor bids, the core part that allows the chum and coho programs to expand is still intact.

"That's the heart of the grant, and we're in good shape there," Reifenstuhl said.

A new incubation building and round ponds have been constructed, which upon completion will allow NSRAA to increase coho production from 2.2 million to 2.8 million.

The building's plumbing and electrical work will continue through the winter. The main water supply hookups can't be completed until May, after the rearing fish have been moved out and it is safe to turn off the water.

Returning adult fish will benefit from a rehabilitated weir, causeway, and lagoon. New rock work and filter fabric makes it possible to control the water levels in the lagoon, providing a better holding environment for the returning broodstock, and allowing staff to drain it and clean it at the end of each season, leaving the water level low for winter.

"We haven't been able to do that since we began operating Hidden Falls," Reifenstuhl said.

New incubation and coho/chinook building at Hidden Falls will provide rearing space to increase coho production by 3/4 million. Sustainable Salmon grant money paid for the construction which is expected to be completed by May 2004.

The Man of Mist Cove Moves On

Dick Crone, the "man of Mist Cove," as he is known to a small group of people who frequent the waters of south Baranof Island, will be leaving NSRAA at the end of the year.

Crone joined NSRAA in 1979, establishing the organization's coho lake rearing (CLR) program. He has led the CLR project ever since.

He may be stepping down, but don't let it be said that he's "retiring."

"I'm actually just resigning from the project because I physically can't do it anymore," Crone said. "I put off having something done with my bad hip for several years, and hopefully this hip replacement will work and I can get active again, but it has weight bearing limits so I wouldn't be too effective at packing fuel cans or lumber, the kind of stuff that always needs doing."

Crone, a native of Oregon, was hired by the first NSRAA general manager Derek Poon, just as Crone was in the process of finishing up his Ph.D. in fisheries from the University of Michigan.

"I'd been working on lake rearing in the late 60's and through the 70's for my graduate work, and had done some experimental work at Little Port Walter that resulted in some big returns about the time that NSRAA was forming," Crone said. "There were a number of trollers on the board that felt they wanted to do that with their three percent money, so that kind of led to the job. From my perspective it was a chance to apply what I 'd been working on. I was fortunate."

Several NSRAA staff began their careers working for Crone, including operations manager Steve Reifenstuhl, data analyst Chip Blair, Hidden Falls assistant manager Ben Contag, and the new CLR project leader, Craig Chisam.

"He essentially self-made his career, and to the benefit of Southeast commercial fishermen. After surveying nearly every lake of any size on Chichagof and Baranof Islands, he eventually settled in on south Baranof, focusing his research in the Patterson Bay area, primarily at Deer Lake," noted Blair. "His project has been one of the top producers of coho in Southeast since the early 90's."

The CLR program has focused mainly on Deer Lake in recent years, and for a field biologist, it's a rigorous posting, requiring digging out from under the snow in order to set up camp in mid-March, and not closing down until after the November rains set in.

"In recent years I went out for three month chunks, but the other guys would rotate, be out for 20 days and in town for ten," Crone said.

"His ninety day trips are legendary around here," Blair said.

Blair thinks Crone's career, working as a field biologist on one project for over twenty years, is remarkable.

"Dick is probably the most knowledgeable fisheries biologist in terms of coho in Southeast and perhaps anywhere. His attention to detail and dedication to his work is almost unbelievable. The data set he has put together on the limnology of the lakes he has studied and the fisheries work he's done is in a class by itself."

Crone admitted that the opportunity he had at NSRAA to continue to work in the field until the age of 60 is unique.

"I feel lucky. In most places you get bumped upstairs to a desk job after you're about 35," Crone said.

Reifenstuhl echoed Blair's high opinion of Crone. "I've never worked with anybody that was so meticulous and knowledgeable about salmon biology. I learned much of what I know about salmon from him."

Former board president Dennis Eames believes that Crone knows more about coho than anyone else in the world, even if he keeps quiet about it.

"You couldn't get him to talk to the board, but if you took him out for a beer after the meeting, though, then you could get him talking," Eames recalled.

Blair noted that although Crone focused on the CLR project, Crone's influence within NSRAA goes much further.

"A lot of the ways we approach data collection and analysis in other parts of the organization can be traced to Dick's methods," Blair said. "I think NSRAA might be a very different organization had Dick not landed here."

As Crone prepares for a new era in his life, he expresses his thanks for the time he worked at NSRAA.

"I am appreciative of the opportunity to do what I've done over the years. They are a good outfit to work for," Crone said. "It would be nice to pass that on to the fishermen."

Dennis Eames Takes a Look Back

Former NSRAA board president Dennis Eames remembers a time, when NSRAA was in its infancy, when establishing the organization's priorities was a snap.

"It was pretty easy because there weren't any fish to fight over," Eames said. "It was pretty amazing actually, 25 people in a room all going the same direction because everybody needed help. Fisheries were dismal and prices were low. NSRAA was going to benefit everybody."

Eames joined in NSRAA's second year, as a handtroller, served as president for several years, and after a several year hiatus rejoined as a seiner. He recalls that he and other board members in those early days "didn't know much."

The main difference between NSRAA and other hatchery organizations, Eames feels, is that the NSRAA board started out very financially conservative, and that although the board isn't so much that way anymore, the conservative "legacy" still carries on.

The organization started out with two projects, one in Sitka and one in Juneau at Salmon Creek. Dropping the Salmon Creek hatchery was one of the hardest but smartest decisions the board ever made, Eames believes.

NSRAA shut the hatchery down, paid back the debt, and "walked away."

"It wasn't that that was such a bad project, it was a problem mostly because of water supply, and then we couldn't get decent fish where we could harvest them for cost recovery," Eames recalled. "It doesn't seem to matter now because all they want is the eggs anyway, but at that time when the chum came back they were in horrible shape, they'd lay out in front for two or three weeks, and when they came in they were alligators and no one wanted them.

Eames also believes that NSRAA was smart to have taken over the Hidden Falls facility, and the Medvejie facility. The Deer Lake coho project turned out to be quite successful, although Eames said he remembers "thinking that the program was going to have to start producing some fish or it doesn't make sense." "Just when I was ready to write it off fish started coming back."

NSRAA's program successes meant the end of idyllic board meetings. "As soon as there were fish to fight over, we fought over them," Eames said.

Allocation of the fish has always been the main battle, with cost recovery for the hatchery running a close second.

"There have been people on the board with just one agenda, their own pocketbook, and there have also been a lot of people who looked at the association first, with an attitude that if the association survives we'll all benefit," Eames said. "Fortunately there has always been enough of those people to carry the day."

Eames, as a former troller, really sympathizes with the trollers and their never-ending battle to come somewhat close to their allocation range.

"Reality is that with their gear type, as long as the prices are as low as they are, it's going to be very difficult for them to catch enough fish to make it work. I've thought and thought about it and don't have an answer. I don't know how the association can ever make it fair."

Cost recovery gets more or less attention depending on how many fish are returning. Eames said he was always looking for a way to avoid cost recovery but admitted that it's a hard thing to do.

"We've had good years and bad years throughout. The bottom line is still that if you take care of the association, it'll take care of all the fleet," Eames said. "The money we've invested there has been really well spent."

Everyone in the fleet suffers from another problem that's developed over the years: marketing.

"It really isn't how good a fisherman you are today, it's how good of a market you have," Eames said. "It's bad. There are an awful lot of people in the seine fishery who aren't fishing because they don't have a market."

NSRAA's past success has everything to do with the board members and staff who've been so dedicated to the organization and its projects.

"Probably the best decision we've ever made was hiring Pete Esquiro as the general manager," Eames said. "He just came in and took care of the money and made it work for us. He's been a tremendous addition to the organization."

Financially, Eames believes he caught enough NSRAA-produced fish to make it worth his while, but he measures the organization's success in another less tangible way.

"One thing I would say is that in twenty years on the board I certainly got a whole lot more out of the association than I ever gave," he said. "I learned how to speak in public, I learned how to run a meeting, I met hundreds of really good people.