

FISH RAP

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

Vol. 30 No. 2
December 2012

Hidden Falls Tax Assessment Doubles Expectations



A good haul in Chatham during this summer's Hidden Falls chum fishery.

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NSRAA's First Tax Assessment A Success

This summer, the Department of Revenue approved NSRAA's request to implement a tax assessment at the Hidden Falls terminal harvest area (THA) – just in time for the first opening.

"The implementation and execution of the tax assessment was as good as anyone could expect," says Steve Reifenstuhel, NSRAA General Manager. "I didn't hear any complaints."

According to NSRAA's calculations, this year's tax assessment should bring in an estimated 1.28 million – almost double what the association anticipated.

"The run was bigger than expected," says Steve, explaining the large difference between NSRAA's forecasts and the estimated revenue from the tax assessment.

Of course, the numbers aren't final until NSRAA receives the money from the state. Similar to the Southeast Enhancement Tax (SET), processors collect the money for the tax assessment and forward it to the Department of Revenue (DOR). The state legislature returns the money to NSRAA the following year as a grant.

While Steve says he feels confident in NSRAA's \$1.3 million estimate, there is always room for error. Perhaps a processor didn't collect the right amount of money or the fish tickets were incorrect – Steve won't know until the DOR calculates the revenue collected and completes its final report in the early part of 2013.

NSRAA is the first to implement a tax assessment and while Steve is optimistic, he's also cautious.

"I'm cautiously optimistic, but there are unknowns," he says.

Other than financial discrepancies, one of Steve's biggest concerns about the tax was enforcement. The bulk of the monitoring fell to NSRAA, but it seemed to go smoothly. Staff patrolled the area daily, documented the boats fishing there and sent its reports to the Alaska Department of Fish and Game (ADF&G) which then cross-checked NSRAA's list with its fish tickets.

With a 20 percent tax, Steve acknowledged there could be incentive to avoid the tax, but – so far – it appears there was only one discrepancy this season. The ADF&G is investigating it.

Before the tax assessment, NSRAA collected necessary revenues through cost recovery harvest and those monies were available immediately. NSRAA is using its reserves to fill the financial gap created this year as it awaits until the arrival of the tax assessment revenues.

NSRAA needed to collect \$722,000 from this season's tax assess-

ment to cover the cost of operations and programs and to fund the Hidden Falls tax assessment contingency fund. If the association's estimate of \$1.28 million is correct, that's \$500,000 extra. At its meeting in November, the board agreed to put the additional amount toward the 2014 season, reducing the amount needed for cost recovery that year.

NSRAA plans to keep the tax at 20 percent next year.

"Next year the forecast for pink salmon is really good," Steve explains. "In a year with large pink and chum abundance, it doesn't hurt as much to pay 20 percent. In 2014 (expected to be a low abundance of both species) the board will likely lower the tax."

While collecting monies to fund NSRAA's programs is an important aspect of the new tax assessment, it was not the only goal.

"The real goal was to have consistent and reliable openings from the beginning of the season to the end," Steve explains. "That goal was met: 100 percent. Most years, we have to shut down the Hidden Falls fisheries at some point to harvest cost recovery fish."



It's been a number of years since Kasnyku Bay has seen this many boats for an opening. The chum return of 1,240,000 fish was 3.3 times the 2011 return.

Hatchery Reports

Medvejie: Vaccine Controls Vibrio Losses

One of the most prevalent diseases in wild marine fish, Vibriosis can be devastating in a hatchery environment. NSRAA has struggled with losses – sometimes substantial – from the disease at the Medvejie Hatchery, but may have finally found a prevention.

Over the years, the staff at Medvejie has searched for solutions to the Vibrio problem, which has been especially damaging for the hatchery's Chinook and late-large or 4.0 chum (the fish are reared longer and are not released until they reach a weight of 4 grams).

“The thing about Vibrio is it's an extremely fast killer,” explains Bill Coltharp, Hatchery Manager. “When Vibrio strikes, it's rampant. It kills a lot of fish in a very short amount of time.”

On the day the staff discovers an outbreak, for example, they may have already lost 5,000 fish. Within a few days, they've lost as many as 70,000.

“When disease is that fast, there's not a lot of options for treatment,” Bill says.

In the past, the only sensible option was to release the fry, even though they hadn't reached their target weight. In the open ocean, the reduced densities gave the fish that hadn't been infected the best chance to survive.

NSRAA began administering a spray vaccine to its Chinook, which seemed to prevent any devastating outbreaks, but the spray is very costly, difficult to administer and stressful on the fish. And while the spray



Medvejie manager Bill Coltharp opens the valve, releasing the first coho into round ponds at Sawmill Creek Hatchery. This is the first group of fish to be reared at the new facility.

seems to be effective with the Chinook, it did not help the chum.

This year, for the first time, the staff at Medvejie experimented with an oral vaccine for the 4.0 chum when it detected the presence of Vibrio. Unlike the spray, the oral vaccine is mixed with food, so it's easy to administer and much less expensive.

“We actually had some low-level Vibrio in our chum pens this year,”

Medvejie Report Continued on page 3

General Manager's Notes

November 29th was a good day for fishermen and the private, non-profit (PNP) enhancement program in Alaska. The Internal Revenue Service folded its case against NSRAA, one that challenged the legitimacy of cost recovery as a non-taxable revenue stream. Many fishermen may not have been aware of this battle that has waged for two and a half years, but a negative result would have impacted the number of salmon available to the common property. At a 30 percent tax rate, the tax bill could have only been paid by harvesting more cost recovery – you can't get closer to the snake eating its tail analogy. This potential ‘fish liability’ now goes away, and means the fish remain in the water for you to catch.



I will not get into the nuances of the law in this case, but it is important to know that PNPs have the legal right to receive non-taxable royalty revenue from processors in exchange for licensing said processor the right to harvest fish in their Special Harvest Area (SHA). Overturning the IRS position was based on similarly situated non-profit organizations where the cases were won and went all the way to the Ninth Circuit Court of Appeals. However, the NSRAA case sets a specific State of Alaska PNP precedent that will certainly help our sister organizations in their cases and prevent other PNPs from ever needing to deal with the issue.

So this was a wonderful Christmas present for all of us.

Please check out our 2013 forecast as NSRAA seems to be on the uptick with chum salmon – 2.6 million next year.

Have a warm and Merry Christmas, Happy Holidays and New Year.

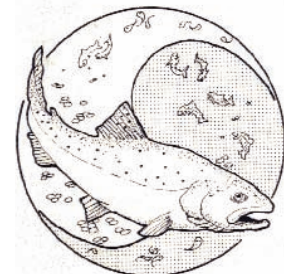
Steve Reifentuhl

Northern Southeast Regional Aquaculture Association FISH RAP

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Medvejie Report (continued)

Bill says, “but there was very little mortality.”

From all appearances, the oral vaccine was effective. The staff took a sample of the *Vibrio*, grew it in a dish and sent it to the vaccine manufacturer, who will then add that specific strain to its *Vibrio* vaccine so NSRAA can have a vaccine specific to the strain that affects its chum.

Bill and his staff are hopeful that the vaccine will prevent any large outbreaks of *Vibrio* in the future. They experimented with the oral vaccine on two pens of Chinook this year, while the remaining fish were given the spray vaccination. If it’s successful, the staff plans to use the oral vaccine on both its Chinook and chum.

“We’re pretty sure it will work on the Chinook, but why not be sure,” Bill says.

If the oral vaccine prevents future outbreaks of *Vibrio* at the hatchery, it will substantially increase survival rates during rearing, thus increasing the number of fish eventually released to sea.

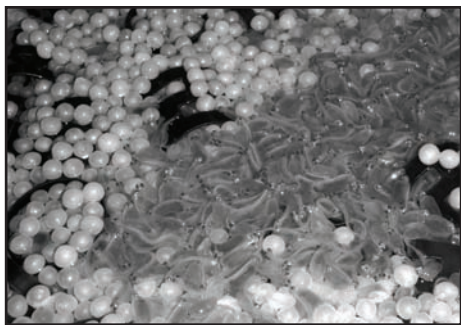
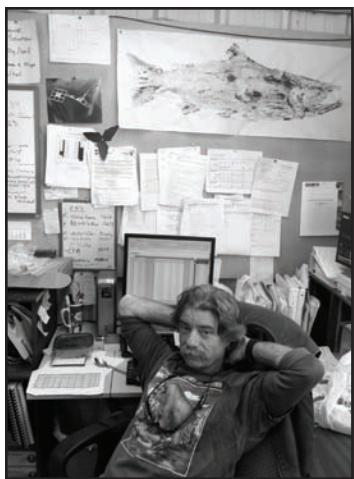
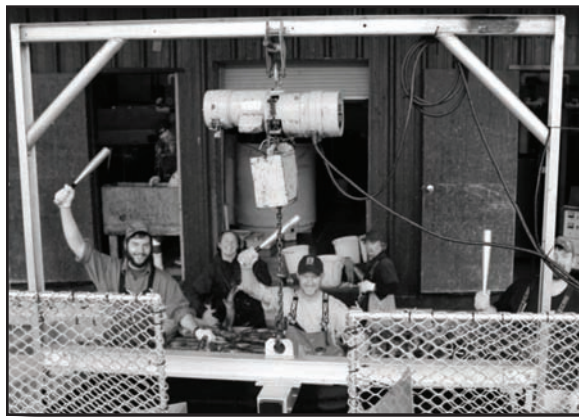
Employee Changes: Ben Smith Leaves NSRAA

While turnover is fairly common among NSRAA’s employees, there were few staff changes at the association this year.

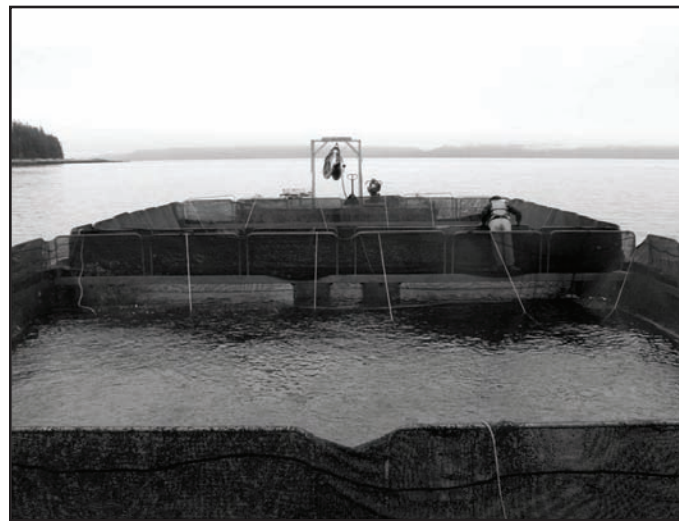
Two fish culturists left Hidden Falls for jobs at Little Port Walter, but the biggest change was when Ben Smith left his position as Hidden Falls’ maintenance supervisor after five years. Ben and his family moved to Seward, so they could live in town.

“Remote living is not for everyone,” says Steve Reifentstahl, NSRAA General Manager. “Even those who like it usually leave after five years, though the average would be closer to three.”

NSRAA was interviewing candidates to fill Ben’s position when this issue of the Fish Rap when to print.



Medvejie shots. Clockwise, from top: chum spawning, alevin hatch out in the incubators, manager Bill Coltharp at the end of a long day.



Chum salmon fry are towed out of Kasnyku Bay for release in an effort to reduce whale predation.

Hidden Falls Prepares For Southeast Cove Project

This spring, NSRAA will transfer an estimated 9.5 million chum fry from Hidden Falls to be reared and released in Southeast Cove – one of the longer fry transfers in NSRAA’s history – as part of a new, five-year cooperative project with Gunnuk Creek Hatchery.

Gunnuk Creek is permitted to collect a maximum of 65 million eggs, though it has rarely – if ever – been able to meet that permitted amount. NSRAA General Manager, Steve Reifentstahl, proposed the joint project early in 2012, in an effort to help Gunnuk Creek meet its maximum capacity and increase the number of fish available for harvest. If successful, the project should increase chum releases in Southeast Alaska by as much as 10 million.

As part of the project, the staff at Hidden Falls collected 10 million chum eggs for new production this summer, making this year’s total egg-take the largest in the facility’s history.

The new project also required that the staff at Hidden Falls renovate and upgrade the old feed barge and living quarters previously used for the Takatz project. The staff towed the barge, which will house NSRAA staff and fish feed for one season, to Kake Harbor this fall. The fish will be reared at Southeast Cove, on the east side of Kuiu Island – Gunnuk Creek’s remote release location.

The staff also modified Hidden Fall’s incubation, to accommodate the additional eggs, and purchased new net pen frames and rearing nets for Southeast Cove. The fry will be otolith marked to help processors identify the percentage of NSRAA’s contribution to the harvest so NSRAA can be compensated accordingly.

While the main goal of the project is to increase the number of chum available to the fisheries, there is potential for NSRAA to obtain revenue from the project, depending on production costs, fish survival and prices, says Scott Wagner, NSRAA Operations Manager.

The new project is known as the Southeast Cove 4.0 Chum Project. The 4.0 refers to the target weight of the fry for release. NSRAA has used a similar strategy in the past, previously known as the Late-large strategy, where the fish were released at a larger size and later date than normal. In this case, the focus is solely on the weight of the fry, not the release date, says Adam Olson, Hatchery Manager.

Once the fry reach 4 grams, they tend to move offshore and there’s less potential for predation, he explains. This should help increase their survival, particularly from humpback whales that prey upon fry released close to shore.

NSRAA will transfer the first fry for the project to Southeast Cove this spring. It’s a 35-40 mile boat ride.

That’s one of my biggest concerns,” says Adam. Though other associations have successfully transferred fry that distance before, “we want to make sure it goes right.”

The first significant chum return for the project will occur in 2017, when the fry released this spring return as 4-year-olds.

Angoon Petition On Hold - For Now

Secretaries Ken Salazar and Tom Vilsack did not choose to shut down Southeast Alaska fisheries after reviewing the Kootznoowoo Corporation's petition earlier this year, but that doesn't mean the threat does not still exist.

The Kootznoowoo Corporation petitioned the federal government to shut down almost 100 miles of commercial fisheries in Southeast Alaska, arguing that the fisheries at Hidden Falls and in Chatham and Peril Straits prevent the residents of Angoon, who depend primarily on wild sockeye from Kanalku Lake, from meeting some of their subsistence needs.

This summer, after reviewing recommendations on the case from the Regional Advisory Council (RAC) and Federal Subsistence Board, Secretaries Salazar and Vilsack announced their decision to defer any action on the case for three years, giving the parties involved an opportunity to determine whether seine fisheries are intercepting a significant portion of Kanalku sockeye and to investigate physical and productivity bottlenecks in the Kanalku system.

"The petition never should have gotten this far," says Steve Reifentstahl, NSRAA General Manager. "There is good evidence that the seine fishery has a very low potential to intercept Kanalku sockeye."

Years ago, the Alaska Department of Fish and Game (AGF&G) implemented time and area closures in the Chatham Strait seine fishery to allow Kanalku and other sockeye through, he explains. Since 1985, the first seine opening along the Admiralty shoreline has been in mid-July, after about 80 percent of the sockeye subsistence harvest was completed. Some years, the seine fishery in northern Chatham Strait didn't open until much later, when the subsistence sockeye harvest was already complete.

The ADF&G's management is effective, Steve adds, pointing to its 2011 management of pink salmon in Chatham Strait as an example.

"In 2011, the largest pink salmon fishery in history was prosecuted in Chatham Strait," he says. "That year, 728 sockeye got into Kanalku Lake. In 2012, no seine fishery occurred in Chatham Strait and 1,123 sockeye made it into the lake."

In their decision, the Secretaries didn't specify anything in terms of management, enhancement or research. Instead, they told the parties involved to have open and honest communication and to work together toward a resolution.

Due to the sensitivity of the issue, the federal government has hired a consulting group to oversee negotiations between stakeholders and send them a progress report every six months.

"We're optimistic that we can resolve this without shutting any of the fisheries down," Steve says. "We're going to stay on top of this so the Secretaries can see we're meeting their request for progress."

Already, the ADF&G officials have visited Angoon and Kanalku Lake and begun genetic sampling of the area's sockeye. Once the ADF&G

can identify the Kanalku stock specifically, it can use that information to determine where the fish are caught and by who.

The ADF&G is scheduled to expand its genetic sampling to the Hidden Falls and Chatham Strait fisheries in 2013.

Meanwhile, the US Forest Service (USFS) has been studying the terrain and monitoring the hydraulics of the partial barrier on the inlet stream to Kanalku Lake. In 2012, their studies indicated that only about 50 percent of the salmon returning to spawn were able to make it to the lake.

"The lake can't be productive if the adults can't get there to spawn," Steve explains. "The goal will be to change the hydraulics enough so all the fish can get to the lake, regardless of the water flow. No one knows the production potential of the lake, and without that, it is pretty difficult to say there is a problem. Lake limnology and productivity are areas of study that need to be pursued."

The USFS showed its dedication to the project when it approved a permit to restructure the bedrock barrier for improved fish passage. Deeper pools will be engineered to allow sockeye to jump higher to clear the barrier. The work is scheduled for 2013, despite its location in a wilderness area.

More fish will be able to get to the lake in 2013, Steve says. While three years is not enough time to see increased returns from fish spawned in 2013 and later, it will still show the government that the parties involved in the case are making progress.

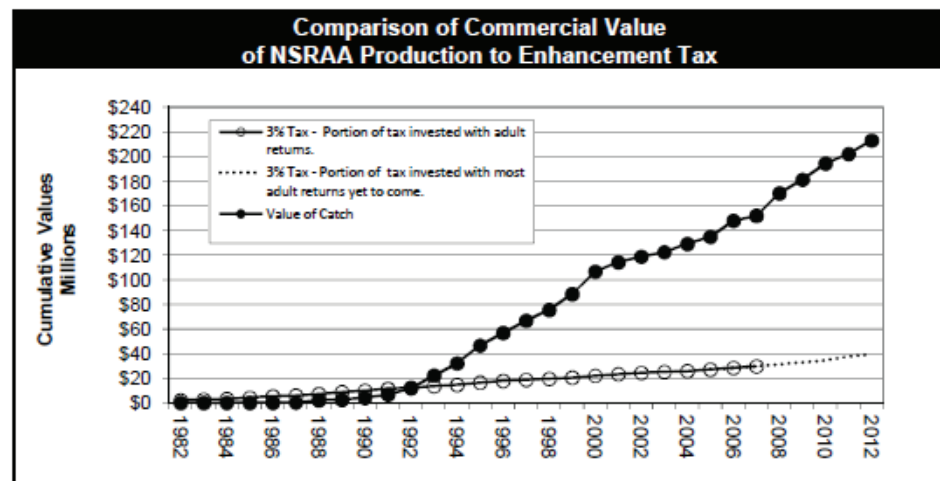
"We still don't know how many smolts the lake is capable of producing," says Steve, who offered NSRAA's assistance and expertise with the Kanalku system while testifying at the Federal Subsistence board proceedings this spring. Steve and Scott Wagner, NSRAA Operations Manager, are scheduled to visit Kanalku and the Kootznoowoo's hydropower site this spring.

While the government's decision this year regarding the Kootznoowoo's petition is certainly a relief to NSRAA and commercial fisheries, the issue remains a great concern – the potential for Southeast Alaska fisheries to be shut down remains.

"The whole subsistence commercial issue is a tough one all over the state," Steve says, acknowledging that many small, Native communities have struggled over the years with population loss and economic difficulty. There have been similar petitions around Alaska. The Kootznoowoo's petition is the first of its kind for salmon in Southeast Alaska.

Steve and his staff are dedicated to ensure that NSRAA does everything in its power to help find a resolution to the problem before the government can shut any fisheries down.

"We're optimistic that we can resolve this without shutting any of the fisheries down"



The US Coast Guard had to medivac a fisherman at Hidden Falls this summer. The coho in our round ponds must have wondered what was going on.

Pelican And Excursion Inlet Update

The Alaska Department of Fish and Game (ADF&G) has not been encouraging in its response to NSRAA's requests to expand its programs in Pelican or Excursion Inlet, but that doesn't mean NSRAA has scrapped its expansion endeavors.

Steve Reifentuhl and Scott Wagner, NSRAA General and Operations Managers, respectively, have been exploring potential locations for a new enhancement project away from Sitka Sound since the board directed them to do so in early 2011.

The association's initial request to the ADF&G proposed incubating 30 million chum and 300,000 coho at a salmon hatchery facility in Pelican and releasing the surviving fry in Lisianski Inlet. While Pelican still has potential as a central incubation facility, the ADF&G expressed concern about the potential impacts of the release on the wild stocks of pink and coho in Lisianski Inlet.

So Steve and Scott updated NSRAA's request, instead proposing to use summer run chum stock from Douglas Island Pink and Chum, Inc. (DIPAC) and release the fry in Excursion Inlet. This time, the proposal met with obstacles from the National Park, which will not allow new fisheries in the west half of the inlet; Neva Lake, which supports a subsistence fishery; and the ADF&G, with concerns about mixing with wild stock.

Now NSRAA is working on its latest strategy, an updated version of the Excursion Inlet proposal. This time, NSRAA is proposing to release the fish one mile north of the area originally proposed in Excursion Inlet. This slight change is to address the ADF&G concerns of run timing and the threat to Neva Lake's subsistence fishing, says Scott.

At its November meeting, the board instructed Steve to contact DIPAC with this latest proposal. NSRAA has worked on similar joint projects with DIPAC before, in Boat Harbor, Limestone and Lutak Inlet. Still, the association must wait for DIPAC's production committee, which is scheduled to meet in December, to review the proposal. If DIPAC ap-



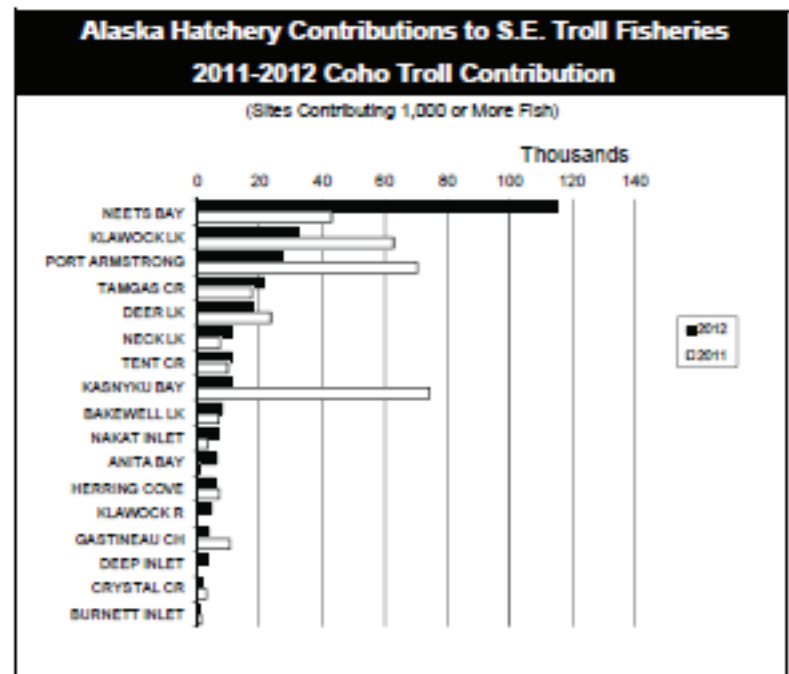
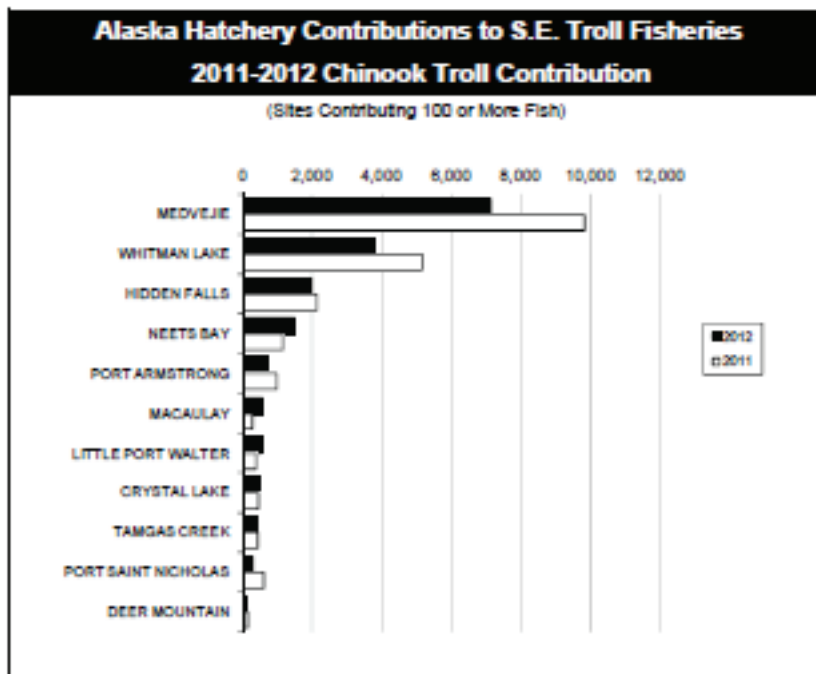
A gillnetter fishing for dogs in Deep Inlet.

proves the request, it must then apply for a permit alteration request (PAR) for permission from the ADF&G to collect and incubate the 30 million chum eggs required for the project.

The advantage of pursuing a joint project with DIPAC, Scott explains, is there would be a quicker turnaround than if NSRAA built a new hatchery. Instead of raising broodstock for a new hatchery – which can take up to five to 10 years – DIPAC could collect eggs for Excursion Inlet as soon as the fall.

But where does that leave Pelican? The town has made it clear to NSRAA it is very interested in having a hatchery program there.

"We haven't given up on the Pelican location," Scott says. "This is just a different tactic. We're still looking at all options."



NSRAA Contribution to Southeast Alaska Commercial Fisheries								
Number of Fish : 2011 - 2012								
	Gillnet		Seine		Troll		All Gear	
	2011	2012	2011	2012	2011	2012	2011	2012
Chinook	8,679	5,239	6,316	5,182	11,978	9,158	26,973	19,579
Chum	534,793	165,921	296,241	1,413,726	43,795	21,117	874,829	1,600,764
Coho	1,510	512	47,680	1,457	98,021	32,141	147,211	34,110
Sockeye	-	-	-	-	-	-	-	-
All	545,000	172,000	350,000	1,420,000	154,000	62,000	1,049,000	1,654,000

Board Member Profile: Eric Jordan



Eric Jordan shows off a beautiful troll-caught chum salmon.

Eric Jordan may have served only three years on NSRAA's board of directors, but he has a long history with the association.

"I probably have the distinction of attending more board meetings than anyone, other than staff and board members," he says, laughing.

Eric has made it a point to attend NSRAA board meetings as a member of the public as often as possible since the association was founded in the 1970s – in part, because he was one of the founders.

After graduating from the University of Oregon with a degree in health education and some time as a teacher and a health planning executive in Juneau, Eric decided to return to his roots: fisheries.

Eric was only five-months-old when his parents first took him on their 32-foot wooden troller with them. Growing up, Eric and his three sisters spent summers living on the boat with their parents. Fishing was in his blood.

So in 1976, Eric decided to get a fisheries technician degree at Sheldon Jackson College (SJC). This was when the state passed legislation to

allow private, nonprofit hatcheries, and Eric and his wife, Sarah, planned to open a "ma and pa" hatchery.

But while at SJC, Eric met Dexter Kyle, who wanted to start a fishermen's hatchery association, similar to those being formed in Ketchikan and Prince William Sound. Dexter became the founder of NSRAA and Eric became its secretary and its second employee, tasked with organizing fishermen to fund the association through taxes. But though he loved the concept of a hatchery association, Eric's heart wasn't into the work itself, so he bought a hand troller and went fishing instead.

For Eric, fishing is about being in the moment, adapting to the elements, the tides, and the fishes' behavior.

"In other words, being a predator and having to be alive, in the moment, to get the salmon to bite – that's what I love most about fishing," he says.

Though Eric didn't stay on with NSRAA, he's never lost interest in its welfare. He's followed its progress and attended numerous board meetings since its inception.

"This was a grand experiment," he says. "I was really interested in the concept of fishermen working together to control ocean ranching technology and I was really interested, as a fisherman, to see how these programs would work for us."

Eric's continuing interest in NSRAA and fish politics eventually led him to run for NSRAA's board. He was first elected in 2009 and is now running for a second term.

"One of the reasons I wanted to be on the board is because of my education and my past involvement and experience with NSRAA," Eric explains. "I really wanted to help contribute and help the association not only be successful at raising fish, but also be a successful fishermen's organization."

"I'm worried right now," Eric says, the tone of his voice changing. "I'm worried that the sharing of our returns is breaking down and we are unable to find sites for new production. I'm working hard to help the group solve these problems. NSRAA is blessed with great staff, board leadership and concept. I am optimistic we will solve these and future challenges."

Deer Lake: Record Survival & Outmigration

This year's record outmigration at Deer Lake marked the highest survival rate in the history of the coho lake-rearing project.

More than 2 million smolts headed to sea from Deer Lake this year, representing an overwinter survival rate of about 86 percent – the highest since the project began in 1986. The Deer Lake project has seen years with fry to smolt survival as low as 30 percent.

This year's record outmigration is the result of a combination of factors, explains Scott Wagner, NSRAA Operations Manager. When the project began in 1986, the coho were transferred from the hatchery to Deer Lake and immediately released into the lake. The staff fertilized the lake to benefit the fry, which resulted in phytoplankton blooms that were the food source for the zooplankton upon which the coho fry would feed. Most years this worked extremely well, but it created a boom or bust cycle. In addition, at a mere 1 gram, the fry that remained were easy targets for the resident rainbow trout population.

"Basically, we were just feeding the rainbows," he says. "The rainbow population started increasing, which had a dramatic effect on our salmon population."

Over the years, NSRAA has adjusted its procedures in response to its experience. In an effort to minimize predation, in 2007, the staff began overwintering the fry in net pens. The net pen rearing came with a learning curve of its own. The struggles have included overcrowding, escapement and malnourishment. Each year, NSRAA updates its equipment and procedures accordingly, to accommodate what it has learned that season.

The project's procedures now include transferring the fry from Hidden Falls to Deer Lake at 1 gram and rearing them in covered net pens until they've reached 20 grams. At this point (usually in December), the crew releases a portion of the fry into the lake. The larger size of the fry

and the time of release are critical to their survival, explains Scott. The rainbows' metabolism is down with the colder water temperatures, so they are not eating as aggressively, and the increased size of the coho makes them more difficult to capture.

"The strategy last year was about a quarter in the net pens," Scott says. "That went so well, this year we kept the same procedure but with a third in the net pens. If the lake fish do poorly, we have some in the pens and vice versa. This way, we're hedging our bets and give the project the best chance of consistent success."

About 355,000 of the smolts that outmigrated this season were age-2 smolts, a factor that typically increases their ocean survival rate. The forecast for the return of this season's release is approximately 124,000 in 2013.

Deer Lake's crew release fry into the lake netpens. Over 2.8 million fry were stocked in late May.



NSRAA Develops New Project Near Haines

NSRAA plans to expand its chum enhancement programs in the Haines area this year – work made possible by a \$620,000 legislative grant.

NSRAA received the grant, secured by State Legislator Bill Thomas, to locate and construct new spawning channels and install additional incubation boxes.

Scott Wagner, NSRAA Operations Manager, is investigating potential locations for new spawning channels and incubation boxes. Among the areas being considered is Klukwan. The Chilkat village is located where the Tsirku and Chilkat Rivers converge and is prime spawning habitat for chum, with a natural colony there already.

The village plans to build an interpretive trail and expressed interest in working with NSRAA. But when it comes to salmon enhancement, Klukwan is interested in sockeye, not chum, which is not the focus of the Haines enhancement project.

NSRAA has also begun discussions with the Department of Natural Resources to see if there is potential for enhancement projects in Skagway.

In his search for the right location for the new spawning channels, Scott is looking for natural spawning habitat.

“If there’s an area where the chum don’t tend to spawn naturally, there’s probably a reason why,” he explains.

Ultimately, the new spawning channels will be built where there is suitable hydrology and in a place where the project will be of maximum benefit to commercial fishermen and local residents, says Scott. He will continue to investigate and evaluate potential locations in 2013 and doesn’t anticipate permitting and construction to begin before 2014.

Some of the grant monies will be used to otolith mark the eggs in the incubation boxes already located in Haines.

“If we can do that for three or four years, we’ll have some idea of how successful the enhancement work we’re doing there is,” Scott explains. “So far, we have no idea if what we’re doing works.”



A cold fall morning on the Chilkat River near Haines.



The new Herman Creek Spawning Channel.



A troller fishing near Sitka this summer.

Salmon Lake: Broodstock Return Promising

The first coho from NSRAA’s Salmon Lake broodstock development project returned this year to Medvejie Hatchery. While the numbers were below expected, the results of the return were encouraging.

NSRAA manages the Salmon Lake weir as part of its agreement with the Alaska Department of Fish and Game (ADF&G) for the Salmon Lake stock coho program. The association must monitor for strays returning to Salmon Lake. Under the agreement, no more than 2 percent of the fish returning to the lake can be hatchery-raised.

All the coho broodstock raised for NSRAA’s Sawmill Creek Hatchery are otolith-marked, coded-wire-tagged and released from nearby Medvejie Hatchery. Each fish returning to Salmon Lake is inspected as it comes through the weir. Any hatchery-raised fish found there are returned downstream.

“It is not unusual for salmon to go up one stream and decide it’s the wrong one, but the weir at Salmon Lake prevents them from returning downstream naturally,” says Scott Wagner, NSRAA Operations Manager. “By returning them downstream, we give the hatchery-raised fish one chance to return to the hatchery. If they return a second time, we kill them.”

Out of the six hatchery-raised fish that strayed to Salmon Lake, two returned to Medvejie and only two returned to Salmon Lake a second time. Of more than 1,000 wild coho that returned to Salmon Lake, that represents about .02 percent – far from the ADF&G’s required 2 percent maximum.

“If we saw future issues, ADF&G would probably ask us to adjust our project,” he says, adding that though the enhanced salmon were raised in a hatchery, they do have the identical genetic makeup as the wild coho from Salmon Lake.

The lower than expected numbers of coho returning for the broodstock development project meant NSRAA was unable to meet its egg-take goals this season. Staff was only able to collect 530,000 of its 765,000 target.

“It’s definitely a huge jump over previous production, but just not where we wanted it to be,” Scott says. “Still, we’re increasing our production. The results so far have been encouraging.”

September harvest: A tote of gillnet-caught coho from Deep Inlet. The majority of these fish are Salmon Lake stock from Bear Cove and Deep Inlet releases.



2012 A Record Year For Southeast Enhanced Salmon Value

Southeast Alaska's ex-vessel value of \$65 million this season far exceeded that of any year to date, making it a record year for gillnetters and seiners and a second best for trollers.

"It was a huge year for enhanced fish in the Southeast – especially for Southern Southeast Regional Aquaculture Association (SSRAA) and Douglas Island Pink and Chum, Inc. (DIPAC)," says Chip Blair, NSRAA Data Analyst. "Chum was, by far, the biggest driver."

NSRAA's contribution of approximately \$11.4 million wasn't as dramatic as SSRAA's or DIPAC's, though it was a marked improvement over 2011. Last year's low chum returns were among NSRAA's worst in 20 years – whether it was the result of humpback whales targeting releases or low survival due to cold spring rearing temperatures, no one knows for sure.

So the associations increase of approximately \$6.4 million in chum returning this year was especially welcome. The value of the chum harvest at Hidden Falls was about six times what it was last year and at Medveje it was triple the 2011 value.

"In terms of return numbers for chum, they're still below long-term averages and where we'd like them to be," Chip says. "But they're definitely improving from where they were about a year ago. I think we're coming out of the period of extremely low chum returns."

This year's Deep Inlet chum catch included a lot of 3-year-olds, which is a promising sign for 4-year-olds returning next year, he says. NSRAA has forecasted 1.37 million chum returning in 2013. Hidden Falls saw fewer three-year-olds, but is forecasting 1.32 million for next season.

NSRAA's Chinook returns were average this year, with a similar re-

turn forecast for next season.

This year's coho numbers, however, were very low, with only about 34,000 of the 3.18 million released from Hidden Falls returning.

"It was the worst marine survival we've experienced there – just a little over 1 percent," says Chip. The average marine survival for coho at Hidden Falls is approximately 12 percent.

The staff at Hidden Falls is trying to determine what might have caused such poor returns. It could have been the result of health issues or overcrowding during rearing, increased predation by whales or fish or general ocean conditions, or a combination of factors, Chip says.

"We're hoping the poor survival at Hidden Falls is a one-year phenomenon and that it will bounce back next year," says Chip. "Overall, across Southeast Alaska, it seems like coho survivals were down."

Deer Lake coho performed better, with 6 percent marine survival and 42,000 returning this year.

The first adults of the Salmon Lake coho stock returned to Deep Inlet and Bear Cove this summer. These coho numbers were also below average and about half what NSRAA expected this year. Still, the fish that did return were healthy and weighed an average of 6- to 8-pounds – a market improvement over the Plotnikof stock they replaced.

Fortunately, forecasts for 2013 look good.

"For all three species, we're expecting higher returns next year – in particular the chum and coho," Chip says. "At Deep Inlet we're expecting at least double what we saw this year and at Hidden Falls, a similar return or maybe a slight improvement."

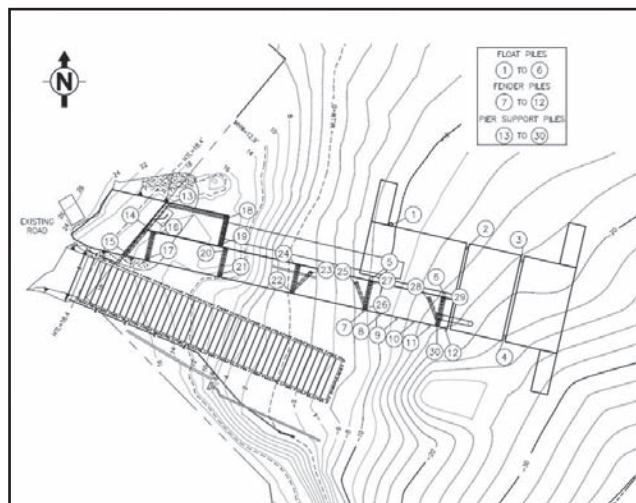
Grant & Capital Improvement Projects

NSRAA has been able to fund many capital improvements through various mitigation and legislative grants over the years. Most of our current grants are State of Alaska Legislature grants. Highlighted here are a couple of examples of recent and ongoing projects. Other projects include improvements to on-site housing at the hatcheries and deferred maintenance, including building upgrades and work on the Hidden Falls hydro.

Hidden Falls Pier Project

Funded by Legislative Deferred Maintenance Grant

The planning process for a new dock and loading ramp has been ongoing for some time. Construction is set to begin next June.



Hidden Falls Feed Shed

Funded by State Legislative Chum and Coho Expansion Grant

Construction of this project was completed this summer. The shed provides storage for the front round pond complex.