Northern Southeast Regional Aquaculture Association

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

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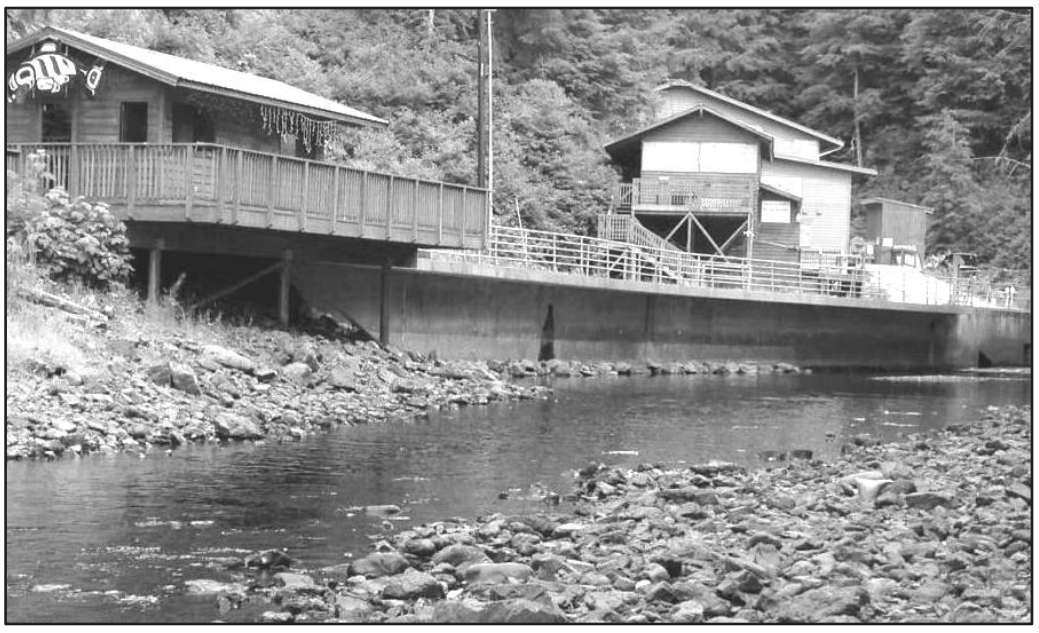
Gunnuk Creek Hatchery in Kake



Gunnuk Creek in foreground with gift shop (left) and hatchery building center right.

Inside

NSRAA Reviews Risks, Rewards At Gunnuk Creek Hatchery

When the NSRAA board recently directed staff to explore opportunities to expand its programs and production, Gunnuk Creek was not on its list of options. But when Gunnuk Creek Hatchery declared bankruptcy early in 2014, it put NSRAA first in line to take over operations at the failed hatchery. The NSRAA board has yet to determine whether the rewards of doing so would be worth the risk and discussions with the state have halted.

Though the Gunnuk Creek Hatchery operated for about 25 years, it made little contribution to the fleets and accumulated a large debt in the process. There are likely a number of reasons contributing to the hatchery's failure, says Steve Reifenstuhl, NSRAA General Manager, but the main factor was likely due to poor site selection.

NSRAA hired TetraTech Engineering to evaluate the site and estimate the costs of updating the Gunnuk Creek Hatchery to make a program there feasible.

"The biggest issues with that program is really the water," he explains. "It's a poorly sited facility. It is unlike anything NSRAA operates to date." The water for the hatchery comes from a relatively small watershed that has been logged, resulting in extreme changes in water temperature. "It's a watershed that delivers very cold temperature waters in the wintertime and very warm temperatures in the summertime."

The water temperatures alone would make incubation and hatchery operations there challenging, but, in addition, the hatchery's water is also subject to high organic loads and frequent low water flows.

The water is the biggest challenge, but the site is not without additional problems. Most of the buildings and the weir are in poor condition or dilapidated and would require significant repairs, if not total replacement. Tetratech's evaluation estimated it would cost NSRAA $2 million to update and reconfigure the buildings and water and mechanical systems to make the hatchery viable for operations.

"We're talking roughly $2.5 million in capital improvements," Steve says. The evaluation included conceptual designs based on the goal of incubating 30 to 65 million chum salmon eggs annually. The operational costs of doing so – once the capital improvements were completed – are an estimated $600,000 - $900,000.

The board is interested in pursuing the program at Gunnuk Creek, despite the risks, but any discussion of doing so came to a halt when the state's Division of Community and Economic Development – which is handling the default – announced it wanted $4 million for the property.

The state loaned approximately $22 million over the years to KAKE Nonprofit Fisheries Corp to run the Gunnuk Creek Hatchery.

"They're trying to capture some of the capital loan money from us," Steve explains. "Our position is that kind of value is not there. We maybe can make that kind of value by investing $2.5 million into it and bringing our expertise, but there's no guarantee. To try to make us responsible for the loans, we see it as unfair."

NSRAA won't pay $4 million for the dilapidated facility and, as of the last discussions, the state was unwilling to negotiate.

"We're at an impasse," says Steve.

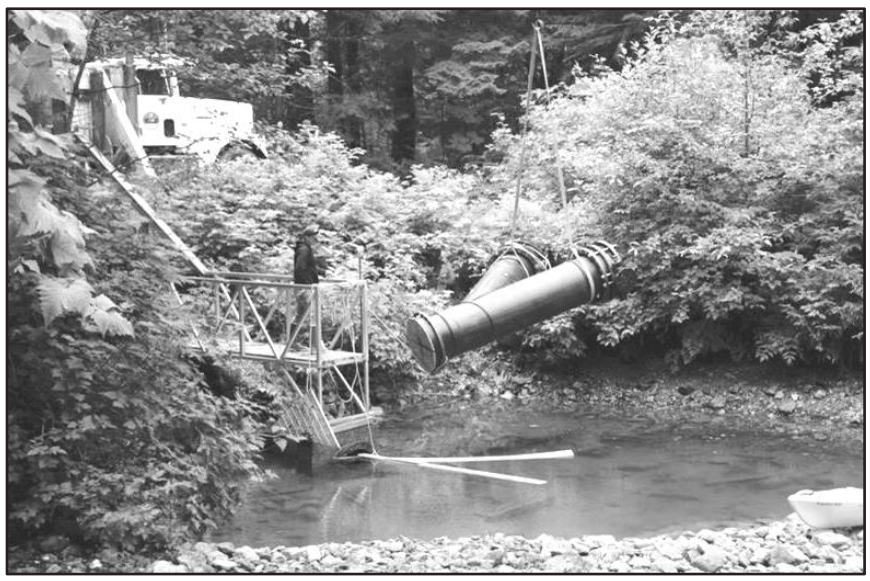
Even if the state were to give the property to NSRAA at a discounted rate, neither NSRAA staff nor the board are sure it's a project they wish to pursue, especially when the organization already has the means and the permits to remotely release chum from Southeast Cove, the failed hatchery's remote release site.

Having Gunnuk Creek Hatchery would take some of the pressure off of the Hidden Falls Hatchery and broodstock collections there, but is it worth the investment? Steve isn't sure.

"It will be really challenging if we get it," he says. "Hugely challenging. We're fighting to make this happen and it's going to be the most challenging project we've ever embarked on. It's got unknowns. It's got technology that will be new to us. It's going to take a lot of work and intelligence and trial and error, I'm sure, to make it work. But it does have potential to contribute significantly to common property fisheries. I think one of the bigger reasons we'd like to have it is that it gives us another broodstock site with the same stock as Hidden Falls."

Southeast Cove will see it's first 3-year-old adults this year - the first adults from NSRAA-reared fry. Eventually, the project is expected to produce returns of 1 to 1.5 million chum.

Hatchery Reports

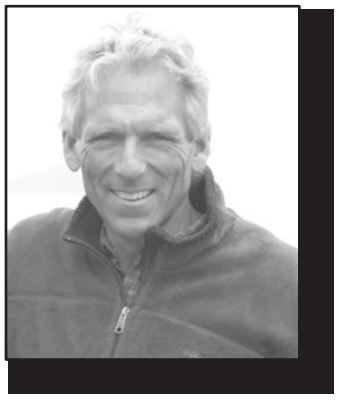


Major improvements were completed on Medvejie's water supply system this summer Above: A new intake is lowered into position.

General Manager's Notes

In 2012, ADF&G embarked on landmark research to better understand the impacts, if any, of enhanced pink and chum salmon straying into wildstock streams in Prince William Sound and Southeast Alaska. The private nonprofit (PNP) enhancement organizations were a major driver to initiating the research and developing the research study plan, as well as securing funding through the state legislature and private sources. The entirety of the work will take eleven years and $20 million. The preliminary findings from the first two years of field work were presented to the public in December in Anchorage.

Synergies of ADF&G, PNP organizations, legislative funding, and sustainable salmon certification coalesced in 2011. A small group from the PNPs and ADF&G drafted a plan to create an expert science panel to help formulate the hypotheses and study plan. Geneticists and scientists from National Marine Fisheries Service (NMFS) and ADF&G, biometricians, and fishery scientists from the University of Alaska and the PNP sector were included in the panel and contributed to the study plan. The department used the study plan to craft the scope of work and a bid request for proposals to conduct the field work. Prince William Sound and Sitka Sound Science Centers won the bid and were contracted for the work, with initial field-testing in 2012.



Simultaneously, the PNP's and ADF&G built a budget for the research to seek funding through the Alaska legislative capital budget. Senator Stedman was instrumental in pushing through the funding for the first two years. Additional contributions from processors and Douglas Island Pink and Chum (DIPAC) have, in total, secured the first third of the funding, which supports the work through late 2016.

The research is expected to answer three fundamental questions: 1) genetic stock status (GSI) by genetically defining pink and chum stocks with in-season sampling, and by using archival samples for retrospective analyses, 2) define the numerical fraction of strays in wild systems by sampling 64 randomly distributed streams; 32 in Southeast and 32 in PWS, and 3) determine fitness (reproductive spawning success) of wild and hatchery fish by conducting a salmon pedigree study on representative streams with varying stray rates.

Progress has been made in all three areas, although the fitness question will take two full pink and chum salmon generations to answer – approximately three more years for pink salmon and 8 more years for chum. The genetics facet of the research is groundbreaking and has not been conducted anywhere else in the world. We already know wild fish stray and hatchery fish stray, and that the closer a wild system is to a hatchery, the greater the stray rate is likely to be. What we don't know: is there an effect, and, if so, to what degree? Stay tuned.

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

Steve Reifenstuhl

Medvejie Revamped For Increased Production

Expanded enhancement programs at NSRAA required continual work at Medvejie to increase capacity and improve the hatchery's systems to care for the augmented number of fish. This year, Medvejie's chum eggtake alone increased by 36 percent, for a total of 90 million eggs.

NSRAA was already permitted and prepared to increase the eggtake by 9 million for Deep Inlet when it was approved for the new Crawfish Inlet project. Like Deep Inlet, Crawfish Inlet is a remote project. The eggs are collected and thermal-marked at Medvejie before being transferred to Sawmill Creek Hatchery for incubation and then to Crawfish Inlet as fry. The Crawfish Inlet program added another 15 million to Medvejie's eggtake goals.

If that weren't enough, when Hidden Falls' eggtake fell short by 25 million, Medvejie's staff worked hard to compensate. It was able collect an extra 10 million to make up for the shortfall at Hidden Falls. These eggs will be incubated at Hidden Falls and then transferred to Deep Inlet for rearing there. Thanks to the eggtake efforts at Medvejie, Deep Inlet won't be short on numbers this year.

In order to care for such a large jump in production, Medvejie needed to be revamped. The staff has worked diligently to renovate the incubation systems, install a new water intake, add airlift baffles for the raceways, and other facility improvements.

Medvejie Report Continued on page 3

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

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Medvejie Report (continued)

"Our maintenance crew did an amazing job fabricating the airlift baffles," says Angie Bowers, Medvejie Hatchery Manager. "I'm not sure what we would have done without them."

There was a long list of improvements required before last fall's unusually large eggtake was completed, but the staff was able to accomplish it all in time.

"All goals were met," says Angie, adding that Medvejie was also caring for Sawmill Creek Hatchery's fish during this time. "We are happy to report that the brood year 2013 coho and Crawfish eggs made it safely back to Sawmill Creek Hatchery, which now has water flowing, and all of our revamps were a success."

NSRAA In Search Of Hatchery Manager

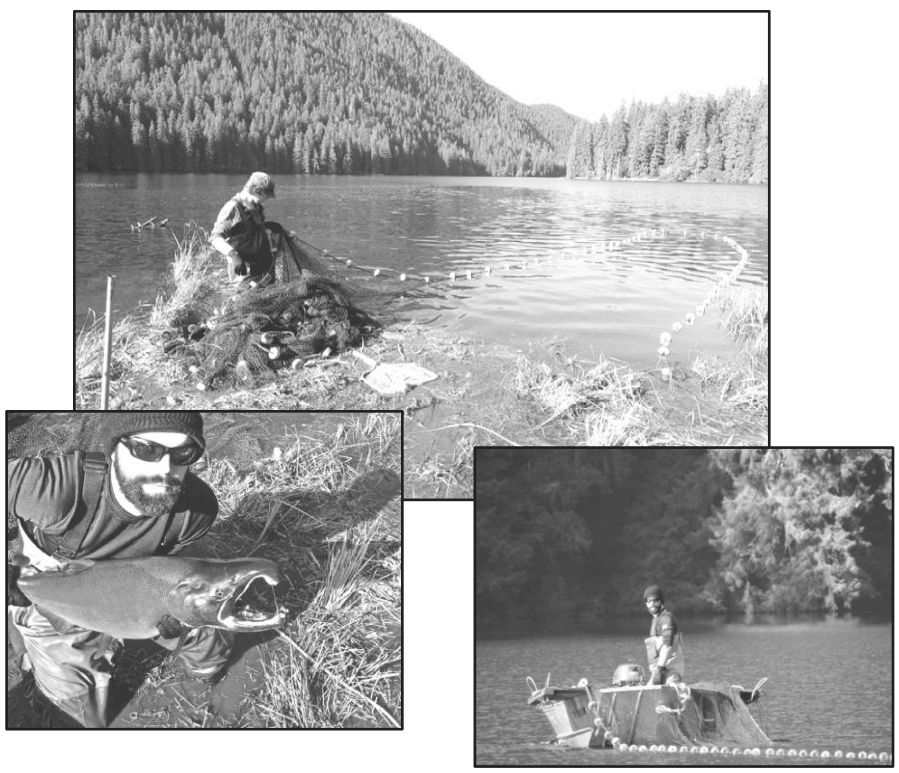
As of December, NSRAA was still in search of the right candidate to fill the Hidden Falls Hatchery Manager position. It's not ideal timing to have an open manager position, as Hidden Falls works to increase the production for the expanding Southeast Cove program, but staff is improvising until the position is filled.

"We're looking for someone with multiple years of fish culture experience and, hopefully, several years of supervisor or management experience," says Scott Wagner, NSRAA Operations Manager. "Ideally, they'd have some planning and budgeting experience, as well."

Previous manager Adam Olson and his wife, Rebecca, moved to Sitka to start a family. Adam is now working as the Assistant Manager at Medvejie and Rebecca as Assistant Manager at Sawmill Creek.

Adam and long-time Medvejie employee, Ritch Phillips, who stepped down from his position as Medvejie Assistant Manager in anticipation of retirement, have helped fill the gap by travelling to Hidden Falls to help Carrington Gorman, Hidden Falls Assistant Manager, during major projects. Carrington was recently promoted from NSRAA's Deer Lake Project Leader. Woody Cyr is now the Project Leader for Deer Lake.

Two new employees have joined NSRAA's year-round staff this year: Jon Pearce, who worked as a seasonal employee at NSRAA before leaving for school, has returned to as a full-time fish culturist at Hidden Falls and Richard Flagg is the new Maintenance Engineer at Hidden Falls.



Rob Bodnar and Zac Papovich beach seine at Salmon Lake as part of a coho population study.

Hidden Falls' crew tow coho net pens out into Chatham Strait for release, in an attempt to reduce near-shore predation.

Hidden Falls Builds To Accommodate Expanded Production

When Gunnuk Creek Hatchery declared bankruptcy early in 2014, it provided NSRAA's Hidden Falls Hatchery with the opportunity to expand its programs at Southeast Cove. The organization has first right of refusal to take over the hatchery, but until it decides whether doing so is a worthwhile endeavor, NSRAA is collecting and incubating the eggs for its Southeast Cove project at Hidden Falls.

Two years ago, NSRAA began working cooperatively with Gunnuk Creek Hatchery to increase production for the fleets at Southeast Cove. In addition to helping KAKE Nonprofit Fisheries, the organization in charge of Gunnuk Creek Hatchery, maximize its production for the fleets, the joint effort diversified release sites for NSRAA on the eastern side of Baranof Island.

NSRAA was permitted to take 35 million eggs for remote release at Southeast Cove when the cooperative project began in 2012, for a total eggtake of 55 million between the two organizations. Now that Gunnuk Creek Hatchery is no longer operational, NSRAA has taken over Gunnuk Creek's portion of production and Hidden Falls may increase its eggtake for the project to 55 million as early as 2015.

If NSRAA decides to take over operations at the Gunnuk Creek Hatchery, it will provide the organization with another site and facility to collect and incubate those eggs. For now, however, the burden falls upon Hidden Falls Hatchery. The dramatic increase in production not only necessitates additional equipment – up to 30 bulk incubators and 250 incubation boxes – but also means that Hidden Falls must expand its facilities to accommodate the increased expansion.

Though a number of structures have been built over the years at the remote hatchery, few desirable building sites remain. NSRAA is building a 50' by 50' steel building to house the equipment for its Southeast Cove project and has contracted CBC Construction, of Sitka, to complete the work.

Large construction projects at the remote hatchery pose their own set of challenges, including the transport and delivery of materials. This structure is being built on an old rock burrow area, one of the few locations remaining at Hidden Falls and a challenging one at that. Construction began in October and crews expected to complete the project by the end of 2014.

"Not only will the new storage building be paramount in keeping all the valuable incubation components in good order, it will serve as a useful location for onsite rearing net inspections and repairs," says Adam Olson, Hatchery Manager at Hidden Falls. "As Hidden Falls continues to expand its operations, it is great to have NSRAA put in the funds and infrastructure to allow the staff to most effectively continue to produce the best fry and smolt possible for the common property fishermen of Northern Southeast."

Market report: Chum Prices Soft But Steady

Like the waves of the ocean, salmon prices go up and down, always changing. We hope for the best, prepare for the worst. And while there always seems to be some factor on the horizon signaling possible downward pressure on salmon prices – excess inventory and a strong dollar, for example – there doesn't seem to be anything too alarming on the horizon as we enter the new year.

Chum returns this season were substantially lower than those forecasted, throughout Alaska and all the way to Japan. No doubt the smaller catch was disappointing, but it may help keep chum prices steady in the face of a rapidly declining yen and an increasingly strong dollar.

"The big pressure is coming in the roe market," says Andy Wink, Seafood Analyst with the McDowell Group, an Alaska tourism research and consulting firm. "The yen has lost about a third of its value from 2012 versus the dollar."

The weak yen translates into lessened buying power for Japan.

Russia's trade embargo and the conflict with the Ukraine may also come into play, Wink says. "It just puts Japan in a better bargaining position for roe

"The Russian situation, with their inability to buy directly from the U.S., puts a difficult situation on buying green roe or buying ikura," agrees Jeff Reynolds, sales manager for Seafood Producers Coop out of Bellingham, Washington.

Wink points out that Alaska's chum prices have also benefitted over the past few years, since the Japan tsunami, which destroyed the country's inventory and hatcheries at the same time the yen had increased in value.

"All those things inadvertently made Alaska chum and its roe more valuable," he explains. "Now that situation is unwinding."

Lessened demand for roe and Japan's renewed production certainly impact chum prices, but, for now, chum prices have continued to climb.

"Interestingly, as far as all salmon species, the only prices that went up this year, on average, were for chum and coho," says Laine Welch, fish journalist. "They both went up about a dime per pound. The other species – pinks, kings and sockeye – those prices were down."

"Chums, right now, are kind of a hot commodity," says Jeff. "The availability is down and demand is up. The prices of chums have been going up more than anything else."

"It's interesting, chums have gained price for years," agrees Laine. "Every single year they just seem to go up a little, up, up, up – at the ex vessel and wholesale prices. I think people are turning to this less expensive but wonderful fish as an alternative to the higher-priced sockeye salmon."

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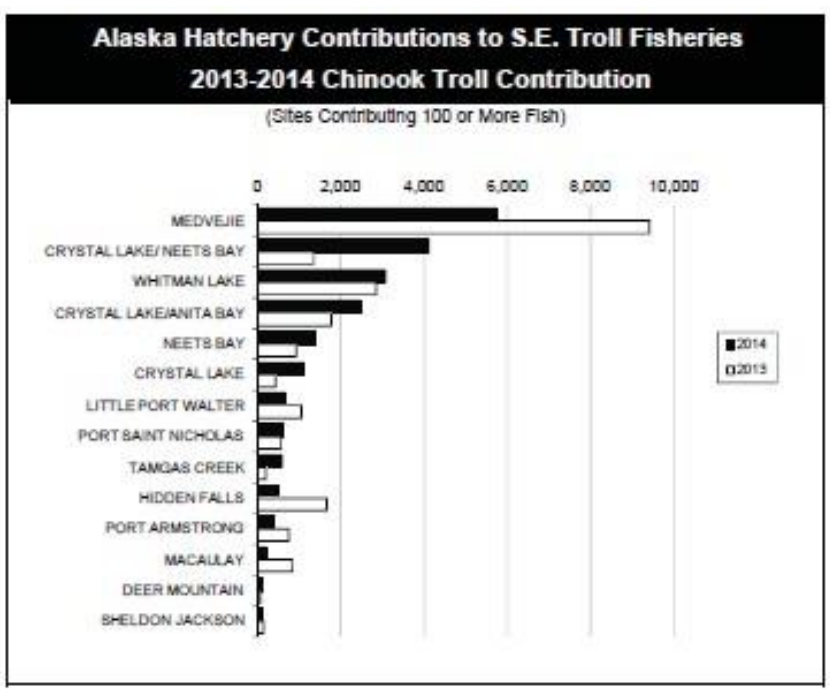
This season's low chum returns have helped keep demand for flesh products high, but prices may eventually be affected by the remaining 2013 inventory and large forecasted 2015 returns of pink salmon.

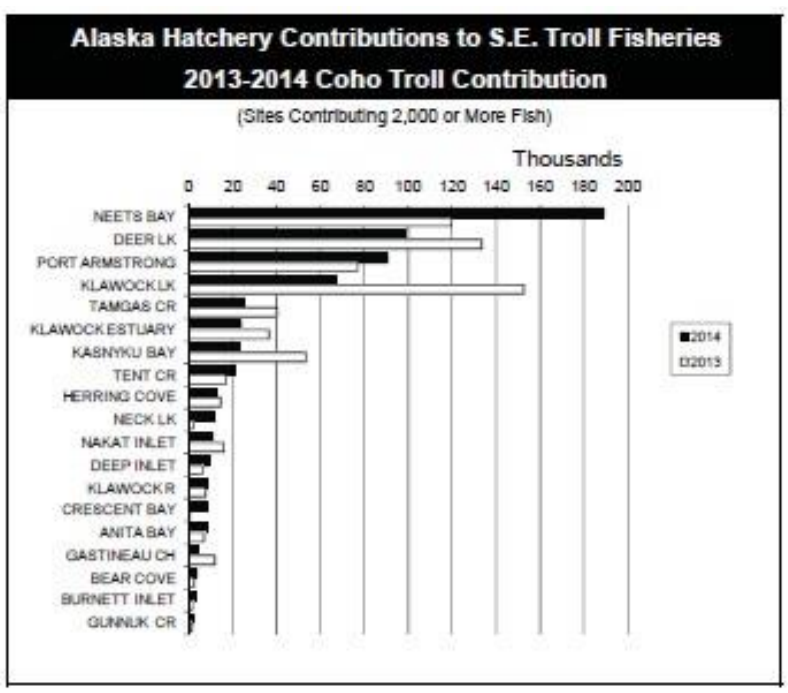
"It's bigger inventory then we've had in a while," Wink says. "Processors know that 2015 is an up year, so if we do get a big harvest, they're probably going to be more ready for it than they were in 2013 to freeze."

If processors freeze more and can less, it could help move inventory and keep prices steady. Some processors, such as Ocean Beauty, Laine explains, are also looking at new marketing efforts, such as offering smaller 7-ounce can sizes instead of the traditional 15-oz. can, similar to canned tuna sizes.

Ever the optimist, Laine points out that salmon recently replaced tuna as America's most popular seafood, second to shrimp. "That's a huge testament to the fabulous selling job that not only Alaska Seafood Marketing Institute, but also the Alaska processors and fishermen, have done to promote their product. Here we have Alaska salmon toppling canned tuna as the second most popular species, following shrimp. That's been really encouraging."

"In terms of optimism in the industry: permit prices have been kicking up a bit and more people this year fished for salmon than they have in many years, especially in Southeast AK," she says. "There just seems to be a lot of energy and excitement going ahead. I think wild Alaska salmon, that generic brand, has really gained such a strong foothold. Even though there's always the ups and downs of the markets, the ups and downs of the fish runs, it will always have a premier place in world markets, I believe."





Salmon Prices Offset Poor Returns

NSRAA's chum returns were significantly less than forecasted this season, but strong prices and a good coho return brought the ex-vessel value of NSRAA's total catch to about $8 million despite the low numbers.

"It wasn't a great year for chum," says Chip Blair, NSRAA Data Analyst. "It wasn't just NSRAA. It was region-wide."

The disappointing chum returns at NSRAA were reflective of chum numbers around Alaska and even in Japan. At NSRAA, chum returns at Medvejie, Deep Inlet and Hidden Falls ranged between 10 and 70 percent below the 10-year average for marine survival.

Deep Inlet saw the best survival of NSRAA's locations, with just over 1,060,000, or 90 percent, of the forecasted chum returning, while Hidden Falls' return of 470,000 fish came in at only 44 percent of the forecasted 1,170,000.

"The chum at Hidden Falls was kind of a major disappointment," he says.

The widespread poor turnout indicates poor or unfavorable ocean conditions.

Chum typically return in the largest numbers as four-year-olds, making the majority of the chum expected in the 2014 return from fry released in 2011. NSRAA's Chinook, which also came short of forecasts this season, were released in 2011, too. Reviewing NSRAA's return data, Chip also noticed that the coho released in 2011 had a poor showing for their return the following year as well.

"It seems like all species were impacted by ocean conditions that year," he says.

Unfortunately, there is no way to determine whether the poor survival rates were due to ocean temperatures, predation or a combination of factors. NSRAA continues to work to increase its chum numbers by expanding its programs, increasing production and raising 20 percent of its chum to the larger size of 4 grams before release.

The low returns made chum broodstock collections and eggtakes goals challenging, especially now that NSRAA has been permitted to increase its production and begin new programs at Southeast Cove and Crawfish Inlet. Medvejie alone needed to collect 90 million eggs for its programs at Medvejie, Deep Inlet, Sawmill Creek and Crawfish Inlet. Eggtakes at Hidden Falls fell short by 25 million eggs, though the staff at Medvejie was able to compensate by collecting an extra 10 million for the remote hatchery on Chatham Strait. In the end, Hidden Falls was only short by about 10-15 million eggs.

"On the brighter side of things, we did have very good returns to Deer Lake and Medvejie and Deep Inlet for coho," Chip says. "It was a tough year in a lot of ways because we didn't get as many fish back as expected, but in the end, with prices, the fish return was still somewhat successful."

New NOPAD incubators at Sawmill Creek Hatchery await the delivery of chum eggs from Medvejie.

Deer Lake Coho Numbers Strong

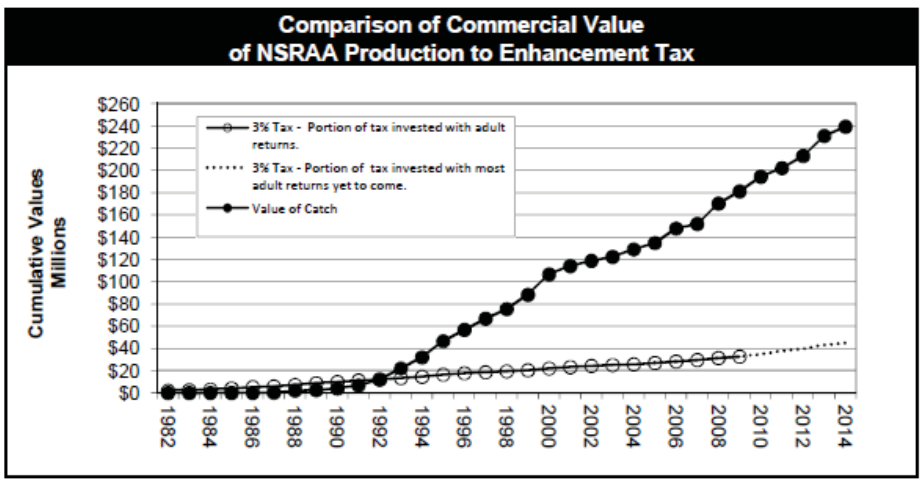
NSRAA's lake rearing coho project at Deer Lake continues to show strong numbers, both with returns and releases. In fact, Deer Lake's return this season ranked second among Alaska enhancement coho returns, with a marine survival of 10 percent.

The organization has been overwintering coho at the remote Deer Lake site for about seven years now and struggled for several years to work through the kinks of overwintering fish in the lake there. Overcrowding, escapement, predation and malnourishment have impacted fish survivals.

But the success of the program has increased dramatically over the past few years, with some of the highest overwinter survival rates on record. Last spring, the crew at Deer Lake released more than 2.4 million high-quality, coho smolts.

Typically Deer Lake coho are released in Mist Cove using a trickle method, but this year there were a significant number of whales in the area. In an effort to minimize loss to whale predation, staff towed the fish out into Chatham Strait for remote release instead.

Project Leader, Woody Cyr, says he anticipates another strong coho return to Mist Cove in 2015.



NSRAA Contribution to Southeast Alaska Commercial Fisheries
Number of Fish : 2013 - 2014

	Gillnet		Seine		Troll		All Gear	
	2013	2014	2013	2014	2013	2014	2013	2014
Chinook	6,377	3,528	6,541	1,874	11,181	6,048	24,099	11,450
Chum	609,843	290,538	2,346,544	880,564	455,590	16,726	3,411,977	1,187,828
Coho	2,871	881	58,894	2,303	196,327	135,092	258,092	138,276
All	619,000	295,000	2,412,000	885,000	663,000	158,000	3,694,000	1,338,000

Board Profile: Marlene Campbell Retires After Almost 20 Years

As the NSRAA's Board of Directors' Municipal Representative, Marlene Campbell is one of the few board members who doesn't make a living catching fish. When she first took the seat, in 1996, serving on the board was just another part of her job with the City and Borough of Sitka (CBS). Over the years, however, Marlene has become passionate about her role on the board and an ardent supporter of NSRAA's mission.

NSRAA's municipal seat was created so the organization would have input from municipalities that could be impacted by its operations. Other non-gear-group seats include Interested Party, Conservation and Native Organization. Marlene works as the Government Relations Director for CBS.

"When I first joined the NSRAA's board, it was 'one more duty as assigned,'" says Marlene. "It soon became apparent that this wasn't just one of my CBS job responsibilities, but rather a long-term serious fiduciary responsibility and commitment to NSRAA. CBS has partnered with NSRAA to secure funding and site for the Sawmill Creek fish hatchery and water rights for both Sawmill Creek and Medvejie hatcheries, and NSRAA has been an economic driver in the central Panhandle. Over the years, I've felt my role as a board member has broadened to support NSRAA's mission statement – basically, to supplement Alaska's fisheries by enhancing the availability of salmon for all common property users without adversely affecting wild stocks."

"Marlene has been an outstanding board member," says Steve Reifenstuhl, NSRAA General Manager. "In fact, she was the one who first brought the idea of using Senator Ted Steven's grant money for a new hatchery at the Sawmill Cove Industrial Park in 2003. We took the idea and ran with it; five years later we had a new $2.5 million coho hatchery built with grant money."

Marlene's position as Government Relations Director is a demanding one; she directs lobbying for federal and state fundraising, is the City's specialist on transportation, water rights and other technical issues, and oversees coastal and resource management and permitting. It has left her with little to no spare time since she began working for CBS in 1987.

That is about to change. Marlene will retire in May.

"I want a life!" she says, only half-joking when asked about her plans for retirement. Marlene lives a subsistence lifestyle on an island in Sitka with her husband, Dave Magnus, a retired fisheries biologist. The couple is looking forward to spending more time at home, exploring the region, traveling in their new camper and taking "real" vacations together.

It will be a learning curve for the person who replaces Marlene as NSRAA's Municipal Representative. If only she could leave a manual with all she's learned in almost 20 years on the board. So much has changed in that time.

"NSRAA has moved beyond 'survival mode' and allocations issues to institutional stability and long-term commitment to keeping Southeast salmon resources healthy, providing fish for the region's common property users, and supporting Alaska Department of Fish and Game's (ADF&G) efforts to care for the resources," Marlene says. "NSRAA is now in the exciting position of being able to fulfill its mission by providing sustainable salmon to common property users while protecting the resources through education, good management, and improvement of fish habitat."

There have been dramatic changes in the salmon industry, as well – both good and bad. In addition to the demise of ADF&G's hatchery program and the development of private, nonprofit aquaculture associations, there's been an increase in fish politics, more emphasis on fish management based on sound science, increased regulations for both hatcheries and fishermen, environmental changes and more.

In other words, there are many challenges ahead for NSRAA and the fleets. But Marlene feels confident in NSRAA's ability to anticipate, plan for and come up with creative solutions to tackle as problem as it arises.

"NSRAA's amazing staff's prudent management, dedication, and innovative solutions to costly challenges, and the Board's willingness to plan for and support these costly development efforts over the years, has led to financial independence and great success in achieving its mission," she says.

Tax Assessment Moves To Flat Rate

In response to feedback from the fleets, NSRAA is working to update its tax assessment from a percentage to a flat rate. Doing so would prevent any inequalities for fishermen working with processors paying different rates per pound.

This was the third season NSRAA utilized a tax assessment for the Hidden Falls Terminal Harvest Area (THA). In the past, NSRAA closed down fisheries for its cost recovery harvests. The number of closures varied each season, but typically required one to three closures per season, depending on the size of the run and the organization's budget requirements.

The Deer Lake crew uses a throw net to sample coho sizes.

"The biggest variable is the size of the run," Steve Reifenstuhl, NSRAA General Manager, explains. "When there are runs of only a million, like we've been having the last several years, it's almost impossible to get your cost recovery done without shutting the fishery down."

In an effort to minimize shutdowns and maximize time for the fisheries, NSRAA worked with the Alaska legislature to write a law enabling the Department of Revenue to impose a tax assessment at NSRAA's Hidden Falls THA. Though there was some opposition to the tax initially, the tax assessment seems to have worked well for fishermen, Steve says.

"The beauty of it, from the fishermen's perspective, is allowing more openings and more fisheries without having to shut it down for cost recovery," he explains. "One way or another, we're going to have to capture a value out of the fish coming out of the water, whether we harvest them for cost recovery or it's done via tax, because we need operating revenues to conduct the program. In this case, a self-imposed tax was seen as the lesser evil."

Still, with a percentage tax, some fishermen were paying more than others on the same amount of fish, since processors pay different rates per pound. The flat tax is intended to erase any inequities, as fishermen would, instead, pay a flat fee per pound.

Steve has been working with the legislature since early January to get the necessary legislation written to get a flat tax option. The bill was passed into law in April, but NSRAA and fishermen are still awaiting the final regulation from the Department of Revenue (DOR), which will enable the final tax.

"It was actually a fairly major coup to get this through the legislature," he says, adding that, after reviewing its budget and operational needs, NSRAA expects to propose a flat fee of approximately 7 to 10 cents per pound. The DOR will then review NSRAA's recommendation before making the final decision, which should be announced by the end of April.

Sawmill Creek Up And Running Again

Sawmill Creek Hatchery is back up and running after a planned water shutdown forced NSRAA to close operations there for several months in 2014.

NSRAA's newest hatchery, Sawmill Creek, is an incubation and fresh water rearing facility located on the outskirts of Sitka. The penstock for Blue Lake, the water source for the City and for Sawmill Creek, was shut down for several months, beginning in August, during construction to expand the dam and increase the hydro capacity of Blue Lake.

In preparation for the shutdown, NSRAA staff transferred the new fry at Sawmill Creek to nearby Medvejie. This involved transporting more than 1 million 0.35 gram fry safely between the two hatcheries and finding room for the homeless fry in a hatchery that was already tasked with increasing its production by 24 million chum eggs to expand chum production at Deep Inlet and for NSRAA's new Crawfish Inlet project.

Fortunately, operations went relatively smoothly during the shutdown, despite space and water constraints. NSRAA was able to regain water to Sawmill Creek Hatchery in early November and returned the fish and eggs shortly afterwards.

Nearly 14 million newly hatched chum alevin are now incubating at Sawmill Creek. These fish are the first group for NSRAA's new Crawfish Inlet project. In March, the chum fry will be moved to Crawfish Inlet, where they will be raised and released remotely.

NSRAA also transported nearly 1 million coho from Medvejie back to Sawmill Creek, where they are being reared in round ponds. The fish are smaller than they would normally be at this time of year, due to the space and water constraints during their time at Medvejie, but Hatchery Manager, Rebecca Olson, feels hopeful the fish will still meet the goal of 22 grams before entering saltwater in May.

Construction crews estimated the dam work would be complete and the water running again by the end of October. NSRAA staff hoped Sawmill Creek could be operational again before the coho began to spawn in late October. Though water was available only a few weeks after the estimated date, the delay required NSRAA staff to fertilize and incubate the brood year 2014 coho eggs at Medvejie, instead of Sawmill. Approximately 828,000 eggs remained at Medvejie until they were mature enough to be transported safely to Sawmill in late December.

"Everyone within the company did a great job overcoming the challenges created by the water shutdown," says Rebecca. "It feels great to have that behind us and know we can return to regular operations at Sawmill Creek Hatchery."

Over 14 million chum eggs were transferred to Sawmill Creek, the inaugural year for chum incubation at the hatchery. Fry will be transferred to Crawfish Inlet for the first year of chum rearing at the site.

Maintenance Engineer Kenny Gray adjusts a valve on the new PRV (Pressure-Relief Valve), a critical part of the water supply to Sawmill Creek.

NSRAA Examines Success Of Haines Programs

It's been exactly 30 years since NSRAA began using a variety of techniques to enhance salmon production in the Haines area, but the staff has never been able to measure whether or not its efforts have been successful.

"We've monitored out-migration before and trapped the fry leaving, so you know at least they're surviving and leaving," explains NSRAA Operations Manager, Scott Wagner, "but we've never known how many returning fish are ours, which is what really counts. It doesn't matter how many fish leave."

These days, NSRAA's Haines program is focused on chum production, with four spawning channels and three streamside incubation boxes. A few years ago, staff was able to otolith mark about 20-30 percent of the fry before they were released. Those fry returned this year, finally giving NSRAA some limited data to gauge whether or not its efforts in the Haines area have added to the catch there.

"We've never really had returning marked fish to look for," Scott explains. "We never knew if a returning fish was one of ours or natural production. Maybe two of our fish come back each year, maybe half a million. We really don't know."

In 2012, NSRAA received a grant to expand the enhancement program in the Lynn Canal area. But only one of the four spawning channels it operates in Haines has met expectations so far, so the organization has been collecting data from that site and using it to measure the potential success of new sites before proceeding.

NSRAA will review the data collected – both regarding new sites and estimated success of returns based on the otolith sampling – to determine whether it's worthwhile to continue its programs in the Haines area.

"We're at a crossroads," explains Scott. "Basically, we're going to decide whether we're going to quit or we're going to make additional spawning channels and incubation boxes."

Staff plans to have a recommendation for the board at its meeting in March.

Mike Pountney positions Sawmill Creek's bridge crane into place. The crane is used to empty incubators.

NSRAA Moves Forward With New Projects

As NSRAA explored opportunities and selected projects to expand its production away from the Sitka area, it chose those with the quickest turnaround, the least amount of time required until fish were in the hands of the fleets. Just one year later, the organization has made great strides toward that goal.

"We're charging ahead on development of two new and major projects: Southeast Cove and Crawfish Inlet," says Steve Reifenstuhl, NSRAA General Manager.

NSRAA has searched the northern Southeast, from Skagway down to Petersburg, over the past several years in search of suitable locations for new chum salmon projects. In 2013, the board decided against developing a new hatchery, primarily due to the upfront cost and time required to build the facility, and, instead, agreed it preferred to focus on the projects easiest to implement, requiring the least amount of time to get new fish into the water.

Though it was not among the initial projects considered, Southeast Cove quickly became the organization's most viable and cost-effective option for immediately increasing production. NSRAA was already approved to raise 35 million eggs annually for remote release at Southeast Cove, through a cooperative project with Gunnuk Creek Hatchery, so expanding production there would be a relatively simple and inexpensive process.

Now that the Gunnuk Creek Hatchery has claimed bankruptcy and closed its doors, NSRAA is first in line to take over, should it choose to do so. Meanwhile, it updated its permit to increase its eggtake for Gunnuk Creek to 55 million eggs in 2014, and up to 65 million, annually, by 2016, has received the necessary permits for ownership of the remote site, and continues to work toward increased production for the fleets.

"2015 will be our third year for production in the water at Southeast Cove, but it will be our first year we actually own the site," explains Steve. "It's all our facility now. The anchoring system and floats and net pens all belong to us. It will be our first year for full ownership of that program."

The organization has also received all the necessary permits and loans for its project at Crawfish Inlet, on the west side of Baranof Island, south of Sitka. With natural topography that makes it ideal for trollers, Crawfish Inlet will help NSRAA in its effort to address the troll fleet imbalance.

This will be NSRAA's first year releasing fish at Crawfish Inlet and though Steve is optimistic about the project, only time will tell whether execution of the project will go as smoothly as anticipated.

"There's always a little something to learn when you first get in the water," he says. "So we still have that ahead of us for Crawfish, but I don't foresee any problems."

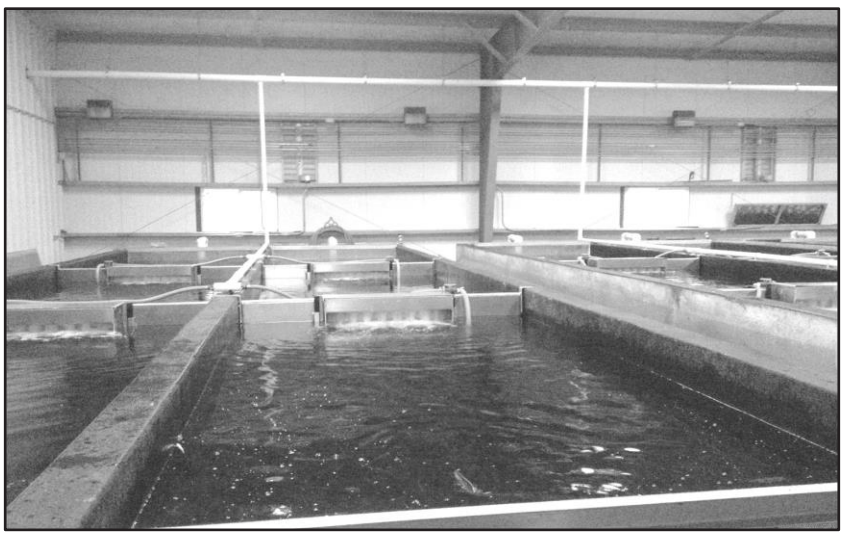
Work is underway on a new 50' x 50 ' incubator storage building at Hidden Falls Htchery. The building will house the extra incubators needed for the Southeast Cove chum project when they aren't in use at the hatchery.

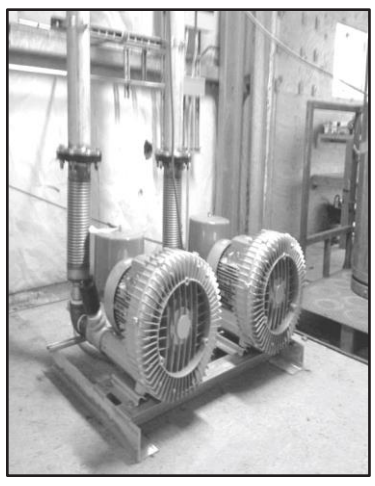
So far, the biggest challenge for both programs has been collecting broodstock. Last season's poor returns translated into lower than anticipated eggtakes at both NSRAA's Medvejie and Hidden Falls hatcheries.

"With the poor chum returns, we had quite some difficulty getting the broodstock we needed," Steve says. "We actually came up about 10 million eggs short at Hidden Falls, which affected the Southeast Cove program. We were hoping to put in 30 million fry next year. But through kind of extraordinary measures on the Medvejie side, we were able to counterbalance that shortage. So, we're in pretty good shape."

Broodstock collections aside, progress on both projects has moved smoothly and efficiently to date.

"We're quite happy that from the first mention of these projects, a year ago, we secured the permits from Alaska Department of Fish and Game, Army Corp of Engineers and Department of Natural Resources for the tidelands and have initiated all the capital improvements," he says. NSRAA has also been approved for the loans necessary for both projects. "So within 12 months of conception, we're going to be in the water, in production."





Medvejie installed an "Airlift" system to allow higher fish densities this summer in coho raceways. The system was integral in allowing us to rear both Medvejie and Sawmill Creek production while Sawmill was without water due to Sitka's hydro expansion project.