

FISH RAP

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

Vol. 36 No.2
December 2018

*Seiners anchor
up for a
Crawfish Inlet
chum opening.
•
Over 3.5 million
fish returned to
the site in 2018.*



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2018 Recap: Record Breaking Returns

You know it's a good day fishing when the day's catch makes front-page headlines. That's what happened this summer after about 90 seiners caught a record-breaking 1 million chum in Crawfish Inlet in just one day of fishing. It was one of numerous records broken this season at NSRAA – a welcome surprise in what otherwise might have been a very difficult season.

"This was just enormous for us – we had an exceptional year," says Steve Reifentstahl, NSRAA General Manager.

This was the second year of chum for NSRAA's Crawfish Inlet project, the first return for four-year-olds. Though last year's return of 184,000 chum, more than five times than forecasted, indicated the project was off to a promising start, no one could have predicted this year's overwhelming success.

When Steve flew to Crawfish Inlet the day before the opening, the chum were so thick in the ocean below him, it looked like a river of fish for miles. "I had a good idea the numbers were big, but observing from the air, it was obvious to me I had never seen anything like it in my 40 years doing this work," he says.

Drone footage from August 30 (produced by a crew member on the Tsiu and viewable on YouTube) shows the dark inlet waters rippling white with chum leaping out of the water, swimming toward their release site, the deep waters dense with fish.

"When I saw that video, it brought tears to my eyes," Steve says. "It represented all the work, toil and anxiety that staff expended – and it finally paid off."

"It was pretty amazing to watch it unfold," agrees Chip Blair, NSRAA Data Analyst. "When these fish started coming back, we thought it would be a strong return, and then we wondered if it would rival the size of the Deep Inlet return. But then it surpassed Deep Inlet and it just kept going. The trollers were down there for an unprecedented length of time. Then we wondered if it was ever going to end, because the fish just kept coming."

All told, 3.5 million fish returned to Crawfish Inlet, five times the forecast and contributing to NSRAA's largest contribution to commercial fisheries ever: \$28.5 million. That's a jump of about \$10 million from its previous record.

"This year blew everything away, in a large part because of Crawfish," Chip says.

That number does not include the additional \$12.5 million caught for cost recovery – more than three times what NSRAA had hoped, and the highest ever recorded. "It was way above what we expected," says Steve.

It was the first year NSRAA wrote an open-ended contract for cost recovery, a decision that became controversial with the unexpectedly large return. When it became apparent the return (and cost recovery) would far exceed expectations, Steve and the processor, Silver Bay, decided to open to the fisheries, though it was not required. NSRAA marked the surplus cost recovery toward its 2020 fiscal budget and upcoming debt.

"In the end, it was all a good thing," he says. "For me, in some sense, it was fun to deal with a whole host of problems that were good problems to solve."

Thanks to the unexpected windfall for cost recovery, NSRAA will not require cost recovery at Crawfish Inlet next season, allowing more opportunity for the fleets.

Though Crawfish Inlet might have won the prize for the most exciting record breaker, NSRAA broke a number of other records this season as well.

The total commercial value included the highest contribution to seiners and to trollers: \$21.6 million and \$4.4 million, respectively. And the record-breaking season also boosted NSRAA's percentage of Southeast Alaska salmon to 26.7 percent – its largest ever.

Crawfish Inlet's enormous return also delivered another surprise, with nearly 3 million three-year-old chum. Typically, the fish return in the greatest numbers as four-year-olds. "Overall, 70 percent of the (Crawfish Inlet) fish were three-year-olds," Chip explains. "Typically, for Medvejie and Crawfish, we might expect 10 to 15 percent. For Hidden Falls and Southeast Cove, it might be closer to 3 percent."

While coho returns varied drastically throughout Southeast Alaska and among NSRAA's sites, the 86,000 that returned to NSRAA's Deep Inlet broke yet another record.

"It is nice to attain these records, but, more importantly, our enhancement program did what it was designed to do: supplement fisheries, particularly in low wild stock years like this one," Steve says. "Hearing 'NSRAA saved the season' from numerous fishermen is the greatest reward and record I could ask for."

Hatchery Reports



Cost recovery fishing in Crawfish Inlet.

General Manager's Notes

Southeast Alaska's salmon enhancement program has been supplementing commercial wild stock salmon harvests for over three decades, but perhaps never so significantly as in 2018, just as it was envisioned at creation in 1975. Coincidentally, 1975 was the only year in Southeast when pink salmon harvest was less than 7 million – until this year. In fact, the overwhelmingly poor salmon returns throughout coastal Alaska in the 1970s were instrumental in the creation of Alaska's salmon aquaculture program at ADF&G and, a few years later, at the private nonprofit regional associations.



The difference in 2018 is that this year's historic low wild stock return of pinks, Chinook, and coho were supplemented by large enhanced chum returns, and modest chinook and coho returns, and, most importantly, near record high prices. There is no doubt fishermen had a tough year, but without enhanced salmon, it would have been a disaster. NSRAA, SSRAA, and DIPAC salmon represented 61 percent of commercial salmon value or \$65 million this year. Of the \$107 million in all-Southeast salmon ex-vessel value, NSRAA's record proportion was just under 27 percent or \$28.5 million, breaking our old record by almost \$10 million. NSRAA broke many records this year as you will see in several of the following articles. Fishermen, with your foresight, you did this! Congratulations.

Next year's Southeast Alaska salmon forecast predicts better returns for wild stock pinks, but even higher enhanced stock returns than 2018, so maybe we have seen the bottom, just like 1975. Either way, know that we at NSRAA will continue to raise healthy salmon fry, improve our efficiencies, and maximize our program benefits for common property contribution.

Merry Christmas, Happy Holidays, and have a prosperous & Happy New Year.

Steve Reifentstahl

Medvejie Chinook Rebound

If this season is any indication, Medvejie's Chinook may be on the rebound.

The hatchery's Chinook have returned at numbers well below forecasts for several years, but this season, more than 24,000 fish returned to the hatchery south of Sitka. The return was twice the number forecasted, and a welcome change after years of struggling returns.

This season's return represented three times last year's return of 8,800 fish in 2017 (46 percent of forecast) and almost twice the return from 2016 (14,500 fish, 47 percent of forecast).

The strong return helped NSRAA staff reach its permitted eggtake goal of 5.2 million Chinook eggs this year. The staff ended up with a surplus of eggs, due to good fecundities (number of eggs per female), high fertility levels and a low incidence of Bacterial Kidney Disease, which will be used toward its zero-check program.

Traditionally, Chinook are overwintered in saltwater and released at 18 months. This makes them the most expensive species of salmon to raise. With the zero-check method, the fish are released after only six months. The resulting reduced cost and space requirements allow for increased production, but it is only worthwhile if the marine survival is high enough to justify the cost-savings benefit.

Medvejie first experimented with zero-check Chinook in 2000, but called it off when marine survivals suffered. The hatchery continues to raise the bulk of its Chinook under the traditional method, but decided

Medvejie Report - Continued on page 3

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Medvejie Report (continued)

to experiment again with the zero-check method several years ago. This time, instead of releasing some of the fish from Deep Inlet, where staff believes there are predators habituated to await the release, a portion of the zero-check Chinook will be released from Crawfish Inlet.

Thanks to this year's Chinook egg surplus, the staff was able to put more eggs toward the zero-check program, upping the program from 18 percent to 30 percent of the Chinook raised at Medvejie. The zero-check fish are coded-wire-tagged so the staff can analyze data as the fish return, and determine whether the program is worthwhile.

So far, there have been minimal returns from the reinstated zero-check program, but Hatchery Manager, Adam Olson, is encouraged by this season's returns.

"The complications recently with the Green Lake Chinook program highlight the necessity to adapt and diversify production," he says. "I am truly hopeful the Medvejie staff can develop a rearing strategy that will consistently produce good marine survival for the zero-check program. It would be great to see the Medvejie Chinook contribution to the commercial fleet return to the level it was more than a decade ago."



Taylor Colvin works on preparing the sand bedding for one of four new round ponds at Sawmill Creek hatchery.

Sawmill Creek Works To Optimize Production

It took more than a decade for NSRAA to get Sawmill Creek Hatchery to its maximum permitted production numbers. Now that it has reached that goal, the staff is working to optimize rearing conditions to produce the biggest, most resilient fish possible.

In September, staff installed four new round ponds to accommodate the increased production. By October, however, they realized the hatchery's permitted water maximum wasn't quite enough for the increased load, and the dissolved oxygen levels in the rearing areas dropped below the desired level.

Sawmill is currently rearing just under 2 million brood year 2017 (BY7) coho, incubating more than 3 million BY18 coho eggs and approximately 40 million chum alevin.

"Healthwise, the fish weren't affected much and the mortality level stayed low all fall," says Rebecca Olson, Hatchery Manager. The latest brood year is weighing in about 2 grams lighter than the target weight at this time, but otherwise faring well. "But too low dissolved oxygen can cause stress-induced disease and/or fish to die."

The facility was originally designed knowing oxygen supplementation may be necessary once it reached maximum production. Fortunately, there have not been problems to date, but NSRAA is working to resolve the issue to prevent potential problems in the future. The hatchery is permitted for 10 cubic-feet-per-second or approximately 4,500 gallons per minute at Sawmill Creek. Options vary in cost and time, and include getting permitted for more water from the City of Sitka, and/or installing oxygen generators or aeration systems to the water system.

"Finally having our coho to full production is a great feeling," Rebecca says. "It isn't really much more work than what we've been doing in the past. I was very happy with the great Deep Inlet coho returns this year, so knowing we are finally able to release our full permitted amount in May makes me really hopeful for what we could see with future return numbers."



Hidden Falls spawning shed renovation will streamline eggtakes.

Hidden Falls Updates Expedite Eggtake Process

The staff at Hidden Falls continues to revamp, improve and update its spawn shed in an effort to maximize efficiency during its eggtake season each fall.

The current structure used for spawning and eggtakes was designed and built in 1978, when the facility was rearing 20 million chum. While that might seem like a big number, today, the hatchery rears nearly ten times that amount: 190 million fish. At that number, efficiency is of the utmost importance and the old structure may be hampering productivity.

Last spring, NSRAA replaced the structure and installed a roof over the raceways. Now the staff is planning upgrades to the interior, including an electric overhaul, a new water distribution system and updated spawning stations to accommodate more spawners to facilitate eggtake. The staff is also considering installing a semi-automated fish stunner to increase efficiency and make the process as humane as possible.

Fish carcasses are a byproduct of the eggtake process. While NSRAA is often able to sell 90 percent of the carcasses, any carcasses that remain must be disposed of properly. The staff is looking into redesigning the conveyor belt used to remove carcasses from the eggtake area and adding a secondary grinder to expedite the process and prevent a backup in production.

"Updating the eggtake area has been an ongoing project for the last couple of years and we are hoping to get it buttoned up in the next fiscal year," says Jon Pearce, Hatchery Manager. "This revamp should bring the eggtake process up to date."



Trolling for chum in West Crawfish. These chum are incubated at Sawmill Creek hatchery.

2019 Chum Harvest Plan

It may seem simple to set up a harvest management plan for the upcoming season, but, sometimes, it's like a complex game of chess. To manage the harvest most efficiently, NSRAA General Manager, Steve Reifentstahl, and his staff must predict every possible scenario and get board approval months before the fish return.

"When I realized the 2019 forecasts were going to be so large, I quickly knew we needed to develop preliminary management plans for each site for the board to consider," Steve explains. "My goal was to think through each return and, based on either board policy or priority, lay out the fishery management, week by week, that would satisfy our goals and objectives. This way, there are fewer surprises for the fishermen and staff."

The 2018 season served up some unforeseen surprises that left NSRAA staff scrambling at the last minute. Even in their wildest dreams, Steve, staff and the board could never have predicted the historic 3.5 million chum return to Crawfish Inlet and its huge ratio (72 percent) of three-year-olds.

"We're just trying to wrap our heads around what it might mean for next year," says Chip Bair, NSRAA Data Analyst. "It's going to take a lot of planning to get ready for such a huge return. We're looking forward to that, but it's going to take a lot of work."

Deep Inlet

Though the chum harvest plan at Deep Inlet is already set by the Board of Fish (BOF) and cannot be altered, NSRAA must come up with harvest plans for its other chum projects.

The BOF updated the chum harvest plan at Deep Inlet to a 1:1 ratio for seine and gillnetters.

"This is a much better fishing ratio for the gillnetters than it was in 2018," Steve explains. "2018 was a tough year for them because they had the lowest amount of fishing time in Deep Inlet that they'd had in the history of rotations there. In 2019, the more favorable 1:1 rotation for gillnetters coincides with a 2.1 million forecast."

Crawfish Inlet

This season was the first four-year-old return at NSRAA's Crawfish Inlet project, which gave the organization and the fishermen a chance to better understand the nuances of the return. Trollers quickly discovered that the majority of fish entered West Crawfish Inlet, to the north of Crawfish Inlet, before heading through a tight channel that leads into the middle of Crawfish Inlet.

While this pattern was not a problem this season, it may lead to complications in 2019 as it is likely to coincide with the wild pink seine fishery in West Crawfish Inlet.

"If the pinks show up, the seiners are going to be fishing at the same time there are big numbers of chum in there," Steve explains. "The trollers will kind of get aced out. There's nothing you can do. The traditional wild-caught fishery has priority, so there's a chance that, in 2019, there will be seine fisheries that will cut off a lot of the chum trollers were able to get in 2018."

The Crawfish Inlet project was created, in part, in an effort to help mitigate the imbalance among the fleets and get more fish to the trollers. With that in mind, Steve and the board have created a provision in the upcoming season's management plan to make up for potential loss to the trollers due to the West Crawfish pink return by giving the trollers more access to the chum within Crawfish Inlet and moving the seiners further

into the bay.

The board also agreed to a provision that would allow NSRAA to add two seine days at the peak of the run, should the return size be similar to that of last season.

"I would probably have to put in two seine days a week to keep the fish harvested so we don't lose quality or get overwhelmed with fish," he explains.

Thomas Bay

It's been two years since the organization released chum from its remote site at Thomas Bay, near Petersburg, and the upcoming season will be the first return for chum there. It is an opportunity for NSRAA to sample fish and gather data and gain and understanding about the fishery there.

The returning chum will go through District 8, a gillnet fishery, before entering into Thomas Bay. Though there are only 10,000 fish forecasted to return to Thomas Bay, the management plan includes two days a week for seiners.

"It's not a lot of fish, but we want to get started with the management plan to learn as much as we can and, of course, get the benefit to the fishermen," Steve explains.

Hidden Falls

After so many years of lackluster (or less) returns to Hidden Falls, NSRAA was excited when the chum return this year looked like it would come in near forecast.

"We called for an opening and didn't think there was a risk of impacting broodstock returns," Steve says. "Turns out, we had an anomaly we've never seen in 35 years of management. The run just dropped off, and there weren't enough fish left to get all the eggs we needed."

As a result, NSRAA plans to revert to the management plan used in previous years at Hidden Falls. "We're going to have two or three openings the early part of the season to assess, but I won't be extending those openings. I'm going to manage much more conservatively for the broodstock portion before opening it to common properties."

Southeast Cove

This summer will be the final year in which Trident Seafoods is contracted to harvest 100 percent of the fish for cost recovery at Southeast Cove. The contract began when NSRAA partnered with Kake Nonprofit Fisheries Corporation, the former owner of Gunnuk Creek Hatchery to help supplement chum returns to the area. As part of the project, both Kake and NSRAA marked their fish and each organization received compensation according to the ratio of their portion each year.

This year, NSRAA has forecasted just below 1.8 million chum returning to Southeast Cove – which could mean as much as \$17 million in cost recovery at that site alone.

"We don't need that money," says Steve. "We don't want that money."

With this in mind, Steve approached Trident to discuss alternatives to the contract, alternatives he hopes will allow more fish for the fleets, if the returns match the forecast.

"Silver Bay did a similar thing this season at Crawfish Inlet, and Trident looks like they're going to agree to a similar thing," he explains. "It's unprecedented, as far as I know. I've never seen it happen where you have a contract that dictates one thing but they decide 'Well, let's benefit the fishermen, rather than just the corporation.'"



Forecast Promising For 2019

There are good problems and there are bad problems. The fact that this year’s chum return at Crawfish Inlet was an unforeseen success that threw off all formulas previously used to forecast the following year’s return is a good problem.

Normally, NSRAA’s Data Analyst, Chip Blair, would use the number of returning three-year-olds to predict the following year’s return.

“There’s a lot of variability, but typically you get four to eight four-year-olds for every three-year-old,” explains Steve Reifensstuhl, NSRAA General Manager.

Let’s say you have a conservative ratio of four four-year-olds for every three-year-old. Using this season’s numbers, that would result in a forecast of 13 million for next year. If this year’s return of 5.4 million was unprecedented, then 13 million “is ridiculous,” Steve says.

Of the 5.4 million chum that returned to Crawfish Inlet this year, 72 percent were three-year-olds. It is a phenomena that happened around Southeast Alaska this season, as a large ratio of chum salmon returned to their spawning grounds at a younger age. Typically, the percentage of chum three-year-olds might be in the single digits, or 10 to 15 percent at best. Experts are not sure if this is the beginning of a trend, like they’re seeing with Chinook, or merely a one-time event.

“It’s been pretty amazing to watch it unfold down at Crawfish with all these three-year-olds,” Chip says. “We’re just trying to wrap our heads around what it might mean for next year.”

“What we probably saw this year was an age class shift to more three-year-olds,” Steve explains. “That will probably come out of the four-year-old component next year.”

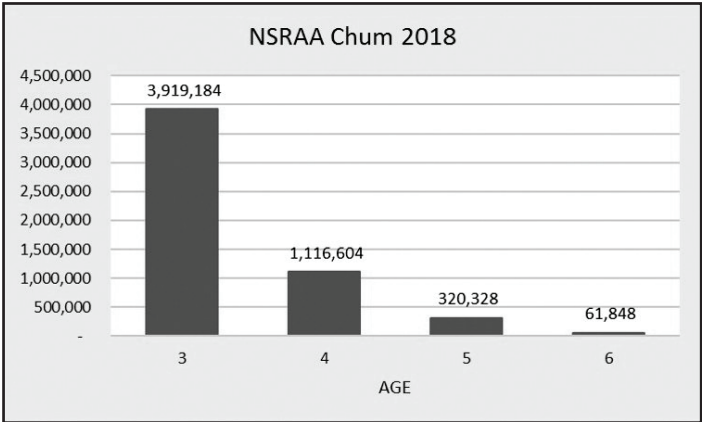
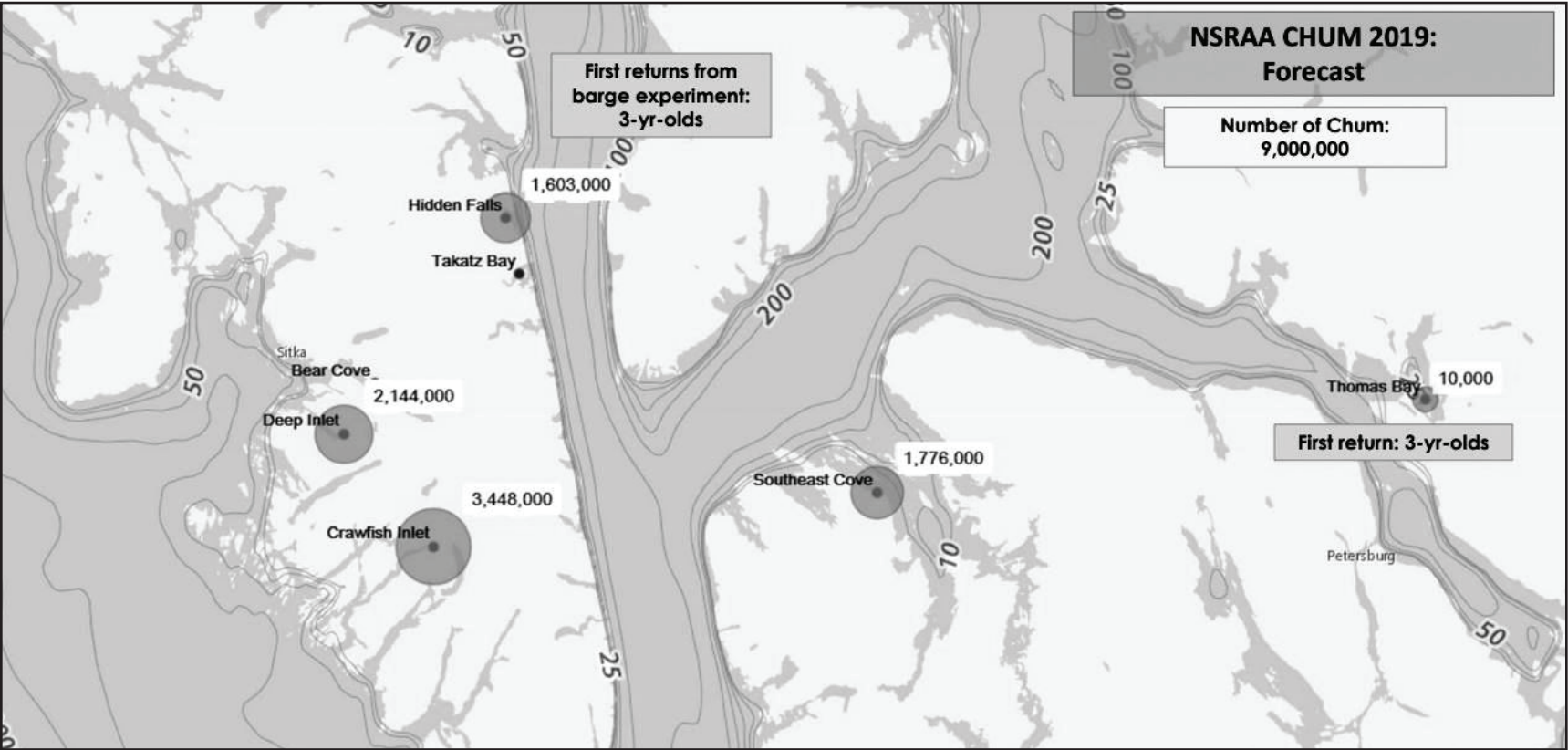
Once this season’s numbers were in, Chip began plugging in numbers according to the standard formula – a relatively simple mathematical equation using linear regression, a commonly-used form of predictive analysis. The results were absolutely unbelievable. So, Steve and Chip played with the numbers. They sorted through years of data in search of previous years with a similarly high percentage of three-year-olds and studied the following year’s return. They updated the formula and downgraded the numbers time and again. They erred on the conservative side in an effort to avoid overforecasting. After all, it’s better the return come in above forecasts than below, right?

“All that said, we still come up with the forecast of 9 million chum for NSRAA programs next year, which is by far the most we’ve ever forecasted,” Steve says. “We’ve never seen anything like it. We sure hope it comes true.”

“Anything’s possible,” says Chip. “We found that out this year with our returns. It’s our best guess. If we had twice as many four-year-olds in 2019, we’d have 6 million coming back to Crawfish next year. Can that happen? I don’t know. That would mean 30 percent marine survival. I’ve never seen more than 13 to 14 percent.”

All told, the combined forecast (with SSRAA and DIPAC) for Southeast Alaska next season is just under 18 million chum.

“In a year when there will be lots of restrictions because of Chinook wild stock, it’s going to be a tremendous benefit for the fleets for the opportunity to target hatchery fish,” says Steve. “It’s very important that they have this supplement during what could be another difficult year next year with wild stock.”



Record numbers of 3-year-old chum returned to NSRAA projects in 2018.

2019 Chum Forecast

Early Runs		Late Runs	
Southeast Cove	1,776,000	Deep Inlet (Medvejie stock)	1,347,000
Hidden Falls	1,603,000	Crawfish Inlet	3,448,000
Thomas Bay	10,000		
Deep Inlet (Hidden Falls stock)	798,000		

Strong chum returns are expected at all of our established sites next year. Thomas Bay will see it’s first return of 3-year-old fish. The total forecast is for a record 9 million chum to return.

NSRAA Board Member William Prisciandaro: At-Large Gillnet



William Prisciandaro, NSRAA Gillnet representative.

It takes grit and determination to be a commercial fisherman, but to do it when you've never fished before? That takes an extra dose of courage and guts.

Most commercial fishermen grow up fishing or, at a minimum, put in their time as a deckhand before deciding to make a career fishing from their own boat. William Prisciandaro isn't like most guys. He had, literally, only fished once before he drove his boat to his first opening.

"I had been out on my father-in-law's boat one day before that and there were no fish around – I don't even know if we caught any fish," William says, laughing. "I had never been commercial fishing in my life. I'd never set a net, never picked a fish. It was a learning experience."

It's been nearly ten years since his first season gillnetting, but William remembers that first day as if it were yesterday.

"I showed up and there were about 180 boats. I was always worried about getting the net caught in the props," he says.

Getting a boat was his wife's idea. Penny came from a family of gillnetters. William, on the other hand, was raised in upstate New York, hundreds of miles from the ocean. It was only by happenstance that he landed in Alaska. An avid runner throughout his childhood, William was awarded a running scholarship in to the Florida Institute of Technology,

where he studied marine biology.

"I went there thinking I wanted to study coral reefs, but then I realized Florida was way too hot for my liking," he says. He found an internship in Haines, Alaska that, coincidentally, was funded by NSRAA. It was the first time he'd been west of the Mississippi.

"Once I got here, I knew I'd be moving back," says William, who loved Alaska's slower pace. Indeed, after he graduated, William moved back to Haines. He worked two summers as a fish tech with NSRAA and five with the Alaska Department of Fish and Game, before becoming part-owner of an environmental consulting company that worked with contaminated site cleanups in Haines and native villages throughout the state.

After the economy tanked, Penny suggested the career change.

"I always thought it looked like a lot of fun to gillnet and fish," William says. It was 2009 when he showed up for that first opening. "It turned out to be a great move to get into fishing. I thoroughly enjoy fishing. I look forward to each season – it's an exciting adventure every time."

William laughs as he remembers the struggles and mishaps of those first days, those first few seasons on his boat. There was the time he accidentally drove his boat over his uncle's net, for example. "Our nets were sliding over each other the entire time we were picking." Maybe a newcomer to commercial fishing today would consult Google for tips. William used binoculars to learn from nearby fishermen. He quizzed his father-in-law. There were a lot of trials and errors, but William persisted.

He may have entered the commercial fishing world later than most, but William was quick to submerge himself. In just under ten years as a commercial gillnetter, he has also delved into fish politics. He is wrapping up a three-year term and running for re-election on the NSRAA board, and is on the board of directors for the United Southeast Alaska Gillnetter's Association. He also serves on the local ADFG advisory board and the Haines Borough Assembly.

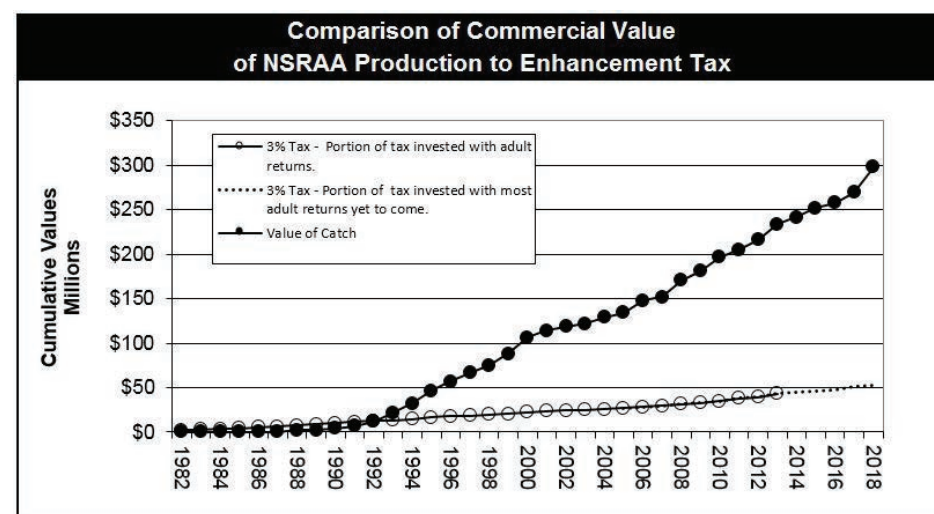
"It seems to me that if you're a fisherman, you should be involved in your industry," he says.

Though William had already gained first-hand knowledge of NSRAA's work from his early days in Alaska, he says he's learned so much more since joining the board.

"There's so much involved in raising fish. It can take years from permitting to when the fish return for the fleets to catch. Some of these projects, like Crawfish Inlet, were envisioned prior to me becoming a fisherman. It's been a long-time vision and it's cool to understand how the process works, to see the fish finally return and people benefitting from it."



A gillnet boat fishes in Deep Inlet. 2019 will bring additional gillnet opportunity in Deep Inlet as the rotational schedule shifts from 2:1 to 1:1 seine to gillnet.



This chart compares enhancement tax received by NSRAA and the commercial value of NSRAA production. NSRAA has received \$53 million in tax; ex-vessel value of commercial catch is \$298 million.

Deer Lake: New Release Strategy For 2019

After several years of poor coho returns to Mist Cove, NSRAA has decided to change the release strategy for a portion of the fish reared at its Deer Lake project. Beginning this spring, half of the lake-reared coho will be released from Port Malmesbury, on the east side of Chatham Strait.

NSRAA began stocking coho at Deer Lake, a remote project site on the southeast side of Baranof Island, north of Port Alexander, in 1985, and overwintering fish in net pens in 2005. The fish overwintered in net pens suffered from several years of high mortality before NSRAA staff was able to find a rearing strategy that finally led to high over-winter survival rates.

These days, half of the fish overwintered at the lake are kept in net pens, while the other half are released, loose, into the lake. Those coho loose in the lake emigrate naturally. The net pen fish are pumped to saltwater each spring. While coho returns have been poor in recent years, there appears to be a strong correlation between the rearing strategy of the coho and their ocean survival. Data collected from sampling of coded-wire-tagged coho returning to Mist Cove indicate the Deer Lake fish overwintered in net pens are mostly not returning.

Hatcheries all along the west side of Chatham Strait have been struggling with low coho returns, likely the result of predation. But why would the fish raised without net pens fare better?

“I think the fish we release into the lake have a practice run, so to speak,” says Woody Cyr, Project Manager. “They can learn to be fish out of the net pen before their released into the marine environment.”

Normally, the Deer Lake fish – both net pen and lake – are released from Mist Cove. This spring, NSRAA will put the net pen fish (approximately 1.3 million) into a tender and release them from Port Malmesbury instead. Woody feels fairly optimistic the new strategy will improve returns.

“I don’t see why the fish couldn’t come back at great marine survival and have a spectacular return, but given that we’re still in Chatham Strait (where returns have suffered extensively in recent years), I think we need to be cautious with predictions,” he says.

The new strategy is fairly inexpensive for NSRAA; the main costs are associated with transferring the fish across Chatham, and NSRAA already owns almost all the necessary infrastructure, including saltwater net pens. The one potential downside is that coho returning to Port Malmesbury will likely pass through some seine openings.

“While the trollers will lose some fish to the seiners, if the marine survival is improved, it will benefit everybody,” Woody says.



NSRAA continues work to prepare Gunnuk Creek Hatchery for incubation.

Gunnuk Creek Postpones Incubation

A shortfall in eggtakes at Hidden Falls combined with a longer than anticipated turnaround to update Gunnuk Creek’s water system prompted NSRAA to postpone incubation at the new hatchery for another year.

Since purchasing the hatchery in 2014, NSRAA staff and contractors have been working diligently to refurbish the mostly dilapidated facility. The hatchery was previously owned and operated by Kake Nonprofit Fisheries Corporation, which closed operations in the spring of 2014 due to bankruptcy. The hatchery is dependent on water from a watershed that has been heavily logged and is prone to erosion, drastic temperature fluctuations and low water flow. The water is likely the primary reason the previous owners struggled with egg, fry and marine survivals.

To combat those problems, NSRAA is installing a complex water system that includes several drum filters and settling tanks to remove solids and tannins; UV treatment to kill any bacteria, fungi or protozoa; heating and cooling tanks to keep the water at a consistent, optimal temperature; and a recirculation system to ensure no shortage of water.

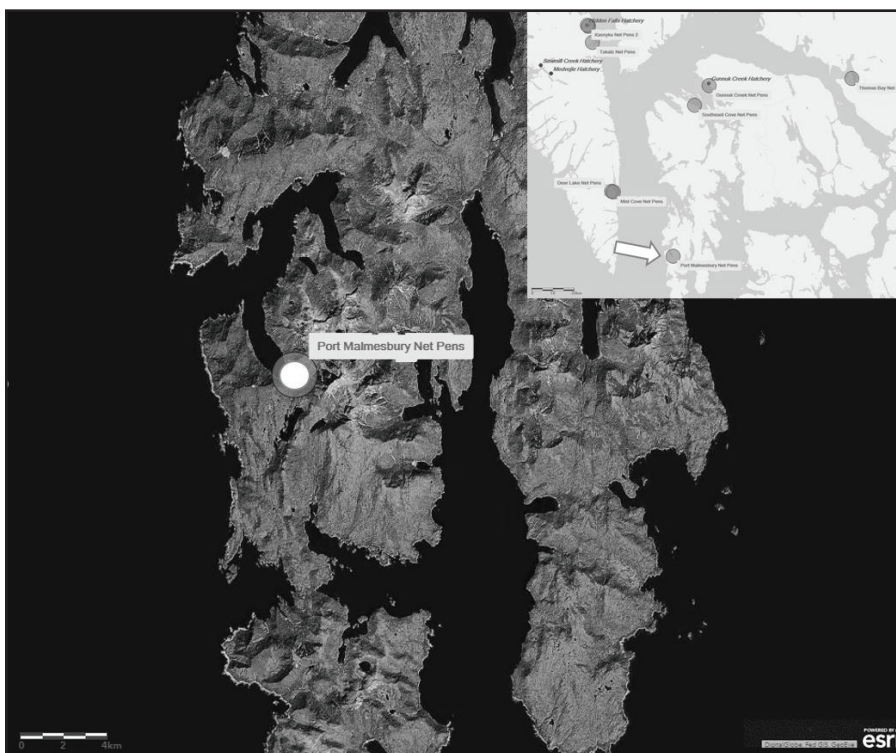
“The water quality isn’t ideal for rearing conditions on its own,” explains Ryan Schuman, interim on-site manager. “It ended up being a lot more work than anticipated.”

Initially, NSRAA planned to bring its first generation of eyed chum eggs from Hidden Falls to Gunnuk Creek for incubation this October. When staff at Hidden Falls was unable to reach its eggtake goals for those chum, they decided it wasn’t worth the risk of incubating them at the new hatchery unless the water system was fully updated and functional. Hidden Falls will incubate those eggs this year and NSRAA will wait until next year to begin incubation at Gunnuk Creek.

Ultimately, the eggs raised at Gunnuk Creek will be released from the net pens by the City of Kake.



Chum incubation at Hidden Falls Hatchery.



The Port Malmesbury rearing location on Kuiu Island.

Employee Changes

This year NSRAA welcomed new employees and bid farewell to others.

Two long time employees left NSRAA for new opportunities: Bill Coltharp and Mike Pountney. Bill left his position as fish culturist at Medvejie for an opportunity as Aquaculture Director at Sitka Sound Science Center. Mike, who has been with NSRAA for 24 years and, as Maintenance Manager, has overseen maintenance at all NSRAA’s sites and projects for the past four years, has accepted a position with Southeast Alaska Regional Health Consortium.

“We’re very disappointed to see him leave, but he wanted to try a different opportunity,” says Scott Wagner, NSRAA Operations Manager. “Mike left a huge hole to fill.”

Kenny Gray was promoted from Maintenance Engineer at Medvejie Hatchery to replace Mike as NSRAA Maintenance Manager.

Kelly McElligott was hired as the Evaluation Program Assistant. She replaced Duncan Coltharp, who is moving out of the area.

Annie Causey moved from a seasonal fish culturist position to a full-time position as Special Project Assistant. This new position was created to accommodate for the increased need for otolith sampling and tagging. Annie will also help with rearing and other special projects, as needed.

Ryan Schuman moved from a fish culturist at Hidden Falls to Assistant Manager and interim on-site manager at Gunnuk Creek Hatchery. Sean Allen, who was working as a fish tech at Gunnuk Creek, moved to a fish culturist position at Hidden Falls.

Kelsey Fisher and Michael Vargo also joined the staff at Hidden Falls, as fish culturist and maintenance engineer, respectively. Meanwhile, Cain Depriest joined the Medvejie staff as fish culturist. Cain worked for NSRAA previously as a fish culturist at Hidden Falls but left for some time with Southern Southeast Regional Aquaculture Association.



Maintenance Supervisor Mike Pountney is moving on after 24 years at NSRAA. Mike has done a tremendous job in building and maintaining NSRAA’s infrastructure. We wish him the best.



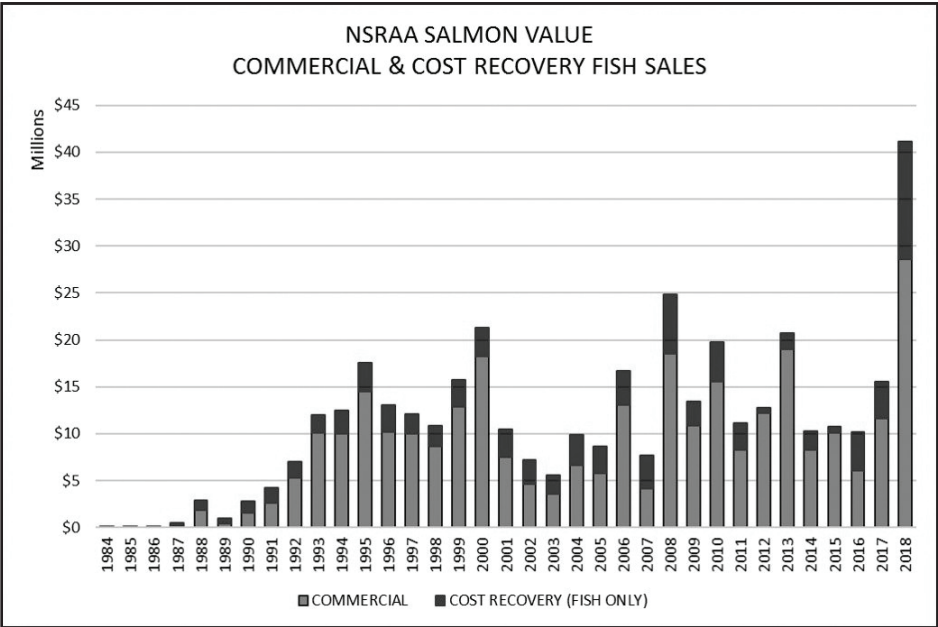
Figuring it all out. Clockwise from bottom left: Chip Blair, Annie Causey and Kelly McElligott, Ben Adams sampling this summer’s catch. Data collected helps us understand fish size trends, age structure, catch composition, run timing and more.



Kelly McElligott, NSRAA’s new Evaluation Program Assistant, demonstrates the otolith removal process at NSRAA’s annual picnic.

NSRAA Contribution to Southeast Alaska Commercial Fisheries								
Number of Fish : 2017 - 2018								
	Gillnet		Seine		Troll		All Gear	
	2017	2018	2017	2018	2017	2018	2017	2018
Chinook	1,607	3,364	934	5,598	2,256	3,679	4,797	12,641
Chum	362,071	323,999	1,170,005	3,169,569	144,880	371,136	1,676,956	3,864,704
Coho	3,969	10,726	20,558	30,365	127,381	70,390	151,908	111,481
All	368,000	338,000	1,191,000	3,206,000	275,000	445,000	1,834,000	3,989,000

NSRAA Commercial contributions doubled 2017 numbers, led by strong chum and improved Chinook returns. Deep Inlet coho had a record return, but coho numbers overall dropped from a year ago.



Higher prices and strong chum returns resulted in record value for NSRAA production. Commercial value was \$28.6 million, cost recovery \$12.6 million, total value was over \$41.1 million.