



Change Service Requested

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

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July 13, 2023 Hidden Falls chum opener

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2023 Market Crash Overshadows Successes

If you measured this year's success by the number of salmon, it was reason to celebrate. If you measured the return by its value, it was dreadful. All told, it was an incredibly difficult season.

"We came off historically high prices in 2022 to historical low prices in 2023," says NSRAA General Manager, Scott Wagner. "We harvested about one million more fish this season than last year, but the commercial value was about 60 percent less."

The season may not have started out with the promise of 2022, but fish returns were strong, prices were fair and it was mostly business as usual. When Trident sent a letter notifying fleets that it was dropping chum prices to \$0.20 per pound for the remainder of harvest and would stop buying salmon anywhere north of Petersburg starting September 1, other processors followed suit and the salmon market collapsed.

All the numbers that would normally be cause for celebration, such as record returns, were lost beneath the collapse of the salmon market. For many, the prices (especially when combined with the recent rise in inflation) were too low to justify continuing the season and they went home. NSRAA wasn't able to get interest for its cost recovery harvests of surplus broodstock collections and hatchery staff put in extra time to process all the additional fish for carcass price.

If not for the price crash, this season would have been a success. NSRAA's chum return totaled 4.8 million – the sixth highest return in the organization's history.

The summer run of 2.3 million fish came in at 141 percent of the forecast. Hidden Falls broke records for the largest eggtake (230 million) and the highest return of 3-year-olds (620,000 – more than double any previous year) in NSRAA's history. This season also marked the highest chum return to Hidden Falls since 2013 – a remarkable achievement, considering the hatchery's poor returns for the past decade.

NSRAA's fall run also exceeded forecasts, at 140 percent. While the survival of four-year-olds returning to Medvejie came in at the lowest on record (presumably the result of black cod predation at the time of release), the four-year-olds returned to Crawfish in an uncharacteristically large cohort with great survival rates.

Unfortunately, those numbers weren't enough to make up for this season's slashed salmon prices.

"No matter how you look at NSRAA's value – adjusted for inflation or not – it was terrible," Scott says. "It was really all driven by the low chum prices."

Seafood prices were poor this year, in general. Salmon prices were impacted by the lingering effects of two record harvests and their surplus, which coincided with lower consumer demand since COVID. Add to that Russia's record pink harvest and "the market just tanked."

Though NSRAA was able to meet its cost recovery goal at Crawfish Inlet, it fell \$2 million short of its goal at Southeast Cove. And with no interest from processors in cost recovery of surplus fish after

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Sawmill Creek: Coho Growth Improves

After five years of declining coho returns, the staff at NSRAA's Sawmill Creek Hatchery may have finally found a strategy to boost coho survival rates.

Cooler water temperatures over the past few years has inhibited fish growth, preventing the coho fry from reaching their release weight goal of 20 grams or larger. NSRAA landed on the 20 gram goal after evaluation from all its coho stocks. Sawmill Creek uses the Salmon Lake stock, a newer stock for NSRAA that are released from Deep Inlet. According to NSRAA's statistics, Deep Inlet's highest coho marine survivals correspond with those fish released at a weight of 25 grams or higher, but the higher weight also requires more rearing space or rearing fewer fish.

Cool water temperatures is only one factor contributing to the declining marine survivals. The coho at Sawmill Creek have also faced compro-

mised health from unforeseen problems with their fish feed, stress from transports resulting from water shutoffs at the facility, and increased disease and bacterial loads during incubation and rearing.

The staff has employed a variety of techniques in an effort to reverse declining marine survival among its coho.

Last year, it reinstated broodstock screening for the bacteria responsible for bacterial kidney disease (BKD), which is natural in the wild but highly contagious in a hatchery environment. This allows staff to cull eggs from any fish that exceed determined risk thresholds for the disease. Still, water temperatures and light can be the easiest factors to manipulate.

"At Sawmill Creek, the water temperatures peak in mid- to late October, but the natural light begins to decrease at the end of June, after summer solstice," explains Rebecca Olson, Hatchery Manager.

It's possible the decreasing light contributes to the slowed growth, even though the water temperatures continue to improve for another three to four months afterwards, so this year, the staff installed lighting over the coho round pond to provide the coho with extended "daylight" for the fish as the natural light waned.

"With the lighting, we were hoping to get better fall growth when we have warmer water temperatures," Rebecca says. "We definitely saw the benefits of great growth with the light and slightly higher than average water temperatures this fall. The fish this year were able to maintain much higher growth rates throughout the fall, which has led to the second largest fish at this time in the twelve years of the program's history."

At almost 18 grams, this year's release will easily surpass the old target weight and should approach the size that has produced the best historical marine survivals.

General Manager's Notes



Going into this year's salmon season, I knew prices weren't going to be great, but I would have never guessed they would drop to historical lows, particularly for chum. This year's cost recovery bids were significantly lower than recent years and about half of what we received for 2022. To make matters worse, the summer chum return to Southeast Cove, which we were depending on for half of our cost recovery harvest, came in at 69 percent of the forecast. Not

only did the return come in short, but the small fish size brought our cost recovery percentage down even further – to only 52 percent of our goal for that location.

At Crawfish Inlet, our main location for cost recovery since 2018, we had the opposite issue. The Crawfish Inlet fall chum return came in at 140 percent of the forecast. Suddenly, my concern switched from reaching our revenue goal to making sure the remainder of the return was harvested. We were fortunate that Silver Bay Seafoods allowed its boats to harvest the surplus chum at Crawfish Inlet after all other processors stopped buying chum in Southeast Alaska.

While the cost recovery harvest and management was a challenge, it paled in comparison to the financial impact experienced by you, the commercial salmon fishermen of Southeast Alaska. Looking just at the NSRAA value to the salmon fleet, we saw a total common property value of \$8.9 million in 2023, compared to \$24 million last year. That's a 63 percent drop in value in one year, despite an increase in total fish caught in 2023.

With this drop in value and lack of processor interest, we had the lowest Deep Inlet fleet participation, likely since the start of the program. When it was clear there was little interest from processors for the end of the fall chum run to Deep Inlet, I made the decision to reopen Deep Inlet after the broodstock closure, on August the 26th, seven days a week, for all gear groups. There were a handful of gillnet boats that stuck it out to the end, but no additional seine effort.

Despite this season's low prices, lack of interest from processors and general gloom felt by all, there were still a couple of bright spots. Hidden Falls saw its largest single day and largest total commercial chum harvest since 2013. Additionally, the forecast for Hidden Falls next year continues this recent trend in improving marine survivals and is projected to come in just under two million. The summer chum return to Deep Inlet next year, forecast at 1.4 million, could be the largest ever, topping this year's record return of summer chum to Deep Inlet.

What does all this mean? I wish I knew, as it would help me sleep better at night. I do know that, with our current forecast, if the fishermen and NSRAA can receive fair prices for our fish next season, we will be able to weather the current salmon price downturn.

Scott Wagner

Northern Southeast Regional Aquaculture Association

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Gunnuk Creek: Water Issues Persist

Water quality issues continue to plague NSRAA's Gunnuk Creek Hatchery, prompting the organization to explore new strategies moving forward.

"It's definitely been discouraging, but I think there is a solution to all of these problems," says Hatchery Manager, Ryan Schuman.

This is the third year the hatchery has lost close to 50 percent of its eggs before hatch, but Ryan remains optimistic despite the continued setbacks. "It's just a matter of time and making sure you're identifying the right thing before you spend the time and money to resolve the issue."

Located in Kake, on the northwest side of Kupreanof Island, Gunnuk Creek is NSRAA's newest hatchery. The organization purchased the facility from the State of Alaska in 2017. The hatchery uses water that comes from a heavily logged area of the Tongass Forest. Erosion, low water flows and dramatic temperature changes compromised production there before NSRAA took over ownership.

NSRAA built a complex water system to remove sediment from the water and regulate water flows and temperatures. But that hasn't been enough.

Since NSRAA began incubating eggs at the facility in 2021, the high loss has primarily occurred during the hatch phase. When eyed-eggs have been transferred to Gunnuk Creek from another facility, they've fared well, which leads Ryan to theorize the problems may be within the chemistry of the water and that perhaps there is too much or too little of a specific mineral that is affecting the eggs at their most vulnerable stages.

"We're pretty positive this is a water quality issue," he says.

NSRAA has submitted water samples from Gunnuk Creek to be tested for a variety of parameters. It has also ordered the same tests for its other hatcheries. The information gathered from the other locations will help establish a baseline for comparison.

After all the work they've done to upgrade the water system over the years, Ryan is hopeful this will be a simple fix – one that will resolve the problem before the next eggtake.

"If it's a water chemistry issue, there are a lot of fairly cheap additives we could add to the water," he says.

Meanwhile, he and his staff are exploring different strategies to avoid another season of high loss if the answer still remains unclear by next summer.

"If we can't pinpoint the problem before eggtake, we could keep a test group at Gunnuk Creek and send the bulk of the eggs collected at Gunnuk Creek to Hidden Falls for incubation," he explains. They may do that, regardless, even if they've determined the problem is easily treatable. "It seems a likely route to go, as a precautionary measure to protect our next generation of fish."



The incubation room at Gunnuk Creek Hatchery



F/V Archangel and Anna Marie offloading in front of Hidden Falls with Chichagof and Christina Dawn on anchor nearby

Hidden Falls Breaks Records

The stress and disappointment from this summer's salmon market collapse overshadowed some of this season's successes, including record numbers at NSRAA's Hidden Falls Hatchery.

"It was a good year for us," says Hatchery Manager, Kevin Connell. Hidden Falls broke records for the number of eggs it collected for broodstock and the number of fish that came through the rack, which led to the second highest average number of eggs collected daily in the program's history. In addition, its chum return exceeded forecasts.

Hidden Falls has struggled with drastic declines in the marine survivals for more than a decade, to the point that NSRAA was forced to close the hatchery's fisheries in 2020 and 2021 to ensure it had sufficient broodstock to meet its annual eggtake goals for the next generation of fish. The remote hatchery, located on the east side of Baranof Island, is one of a number of sites along Chatham Strait that have struggled with poor marine survivals in that time.

After so many years of dismal returns, last season's return of 486,000 chum (186,000 more than forecasted) marked the highest chum return to the facility since 2013 and sparked hope among the staff at Hidden Falls that salmon survivals are finally on the upswing.

This year, NSRAA forecasted a return of approximately 800,000 chum salmon to Hidden Falls. That in itself would have been a hearty return for the facility, especially these days, when the unprecedented number of age-3 chum returning has thrown off traditional forecasting formulas and made forecast increasingly undependable.

All totaled, 1.2 million chum returned to Hidden Falls this season – the largest return in 10 years. Next year's forecasts are for even more: an estimated 2 million.

This season's large return, combined with decreased fishing pressure after the market crashed mid-summer, led the staff at Hidden Falls to break records for the number of fish through the rack (313,000) and the number of eggs collected (210 million). The record eggtake also resulted in the second highest average daily eggtake (9.2 million), following a daily average of 10.2 million in 2013.

"It was a huge year for chum returns," Kevin says. "We still had a lot of extra fish out in the ocean (after broodstock collection). Typically, we would close out the barrier nets and let the processing plants put out bids for cost recovery, but because the chum market tanked and nobody was even fishing and nobody wanted them, we had to let them come in, spawn them. We sold some carcasses and green egg roe buckets."

The market crash dampened the excitement over the unexpectedly robust chum return. The staff was forced to work an additional 18 days to process the extra fish, but the improved chum returns have the staff feeling optimistic.

"We're very excited to see the change," says Kevin. "Hopefully this will put us in a better position moving forward."

Medvejie Suffers Flood Damage

The end of the unexpectedly difficult 2023 salmon season was nearly in sight when NSRAA’s Medvejie Hatchery was faced with yet another setback – a flood of Medvejie Creek threatened the facility for the second time in three years and made the remaining egg collections even more difficult.

Jared Nelson, Medvejie Hatchery Manager, who lives in the hatchery’s on-site housing, woke to the sound of rocks rolling down nearby Medvejie Creek in the early hours of the morning of September 18.

By dawn, the rushing waters had picked up enough force to erode the stream banks and a section of the creek above the hatchery’s intake. The hatchery alarms sounded when mud and debris clogged the reservoir that feeds water to the hatchery.

“It was a scary situation – it cut off water flow to the facility,” Jared says.

Fortunately, the staff responded immediately and was able to clear the reservoir intake in time to prevent any loss among the salmon fry. After ensuring water flow was restored to the facility, the staff moved to damage assessment and control. The flood had toppled over and completely destroyed the upper weir on Medvejie Creek, but the biggest damage was to the lower weir that keeps salmon out of the north fork of the creek.

“We have to have that weir – it keeps out all the fish that complete our eggtake,” Jared explains. It will also be the most expensive of the repairs.

Though it wasn’t a record rain event, the ground was saturated from rain a few days prior, which likely contributed to the flood. In addition, the banks of Medvejie Creek were already compromised from and rebuilt after a flood in 2020. That flood almost went over the stream banks and into the hatchery, so part of the work to stabilize the stream banks afterwards included building a barrier above and a diversion away from the hatchery.

It will take time to recover and repair from the flood damage. Jared hopes the repairs will be completed before fish begin to return in June.

“One of the worst things about the flood is that it was in the middle of our late-stage, fall chum eggtake,” Jared says. “We were already borderline for collecting eggs for broodstock. When the weir was compromised, we had about 10,000 – 20,000 fish in the creek, which meant we had to go into the creek to collect fish for eggtake.”

The staff had to wait several days before the water flows were low enough to get into the creek to collect eggs. Creek eggtakes are not nearly as efficient as those in the hatchery. They are more labor and time intensive, and often compromise the quality of the eggs.

Everyone among the hatchery staff, whether spawning was in their job description or not, pitched in for those ten days of creek spawning. Jared feels grateful his staff is willing to do whatever it takes to get the work done – both in response to the flood and then again for the creek eggtakes.

“It speaks volumes to our perseverance and willingness to work together to complete a goal,” he says.



Upper weir in Medvejie Creek during floodwaters



Lower weir in Medvejie Creek after flood damage

NSRAA Contributions to Fisheries 2022-2023

	Gillnet		Seine		Troll		All Gear	
	2022	2023	2022	2023	2022	2023	2022	2023
Chinook	2,266	1,649	982	2,407	4,174	2,693	7,422	6,749
Chum	491,266	465,349	1,444,230	2,762,086	956,156	161,318	2,891,652	3,388,753
Coho	1,124	1,255	7,725	4,861	57,747	31,191	66,596	37,307
All	494,656	468,253	1,452,937	2,769,354	1,018,077	195,202	2,965,670	3,432,809

NSRAA considers 2024 tax assessment

While no one can predict that salmon prices will turn around for 2024, NSRAA's forecasts are promising for strong returns.

"The marine survival for the 3-year-old chum that returned to Hidden Falls in 2023 was the highest we've seen in more than 40 years," says NSRAA General Manager, Scott Wagner. NSRAA's forecasts estimate nearly 2 million chum returning to Hidden Falls next season. "That's the largest forecast for Hidden Falls in 15 years."

All sites combined, NSRAA is forecasting a return of 6.7 million for all species, and 6.5 million for chum alone. In addition to a strong chum return at Hidden Falls, NSRAA expects a large return of both the summer and fall stocks to Medvejie and Deep Inlet.

"This year (2023) was the largest ever return (400,000) of the summer stock there," Scott says. "It was quite a dramatic survival event."

Next season's forecast for summer chum to Medvejie alone is an estimated 700,000 – a return that is exciting, but could also be problematic.

"We've never had that large of a return at Bear Cove," Scott explains. With such a large return, there will likely be more overlap between the summer and fall runs. The high numbers will make it more difficult for NSRAA staff to manage the salmon collected for broodstock and also minimize the impact on returning Chinook.

Gunnuk Creek is also expecting a strong chum return: almost 200,000. If it comes in as forecasted, it would be ten times any previous return there.

Still, strong returns may not be enough if prices don't also recover substantially.

The 2023 salmon market crash has complicated NSRAA's cost recovery procedures. Normally, the organization would close fisheries to collect eggs for broodstock and fish for cost recovery. The monies from cost recovery are used to fund NSRAA's wide range of programs.

But a combination of an unexpectedly poor return at Southeast Cove, one of NSRAA's two cost recovery sites this season, combined with lack of processor interest for additional end-of-season cost recovery opportunities, resulted in the organization falling \$2 million short of its cost recovery goal. This season's low prices likely means it would be challenging to meet cost recovery goals next season, as well.

"I think most fishermen realize that they, themselves, and aquaculture associations, like NSRAA, are in an extremely tough financial position after this year," Scott explains. "Hypothetically, if the price for chum were \$0.20/pound, it would take all the fish coming back to pay our bills – just to put it in perspective."

At the direction of the NSRAA board, Scott is researching a tax assessment to help supplement the organization's cost recovery operations. NSRAA implemented an assessment for a few years at Hidden Falls before the returns dropped too low to continue the fisheries there.

"Nobody wants to do it, but the assessment allows the fleets to continue fishing," Scott explains. "They can fish and we get some money. It retains opportunity for them."

Tax assessments can be set at a price per pound or a percentage rate. Given the unpredictability of this year's prices, the board has directed Scott to use a percentage rate, not exceeding 20 percent.

Unfortunately, unless salmon prices were to rebound substantially, 20 percent won't be enough to continue to fund NSRAA's programs as is. The organization will still need to close fisheries for some cost recovery operations. Even then, it may still come up short.

So far, the board is not considering budget cuts.

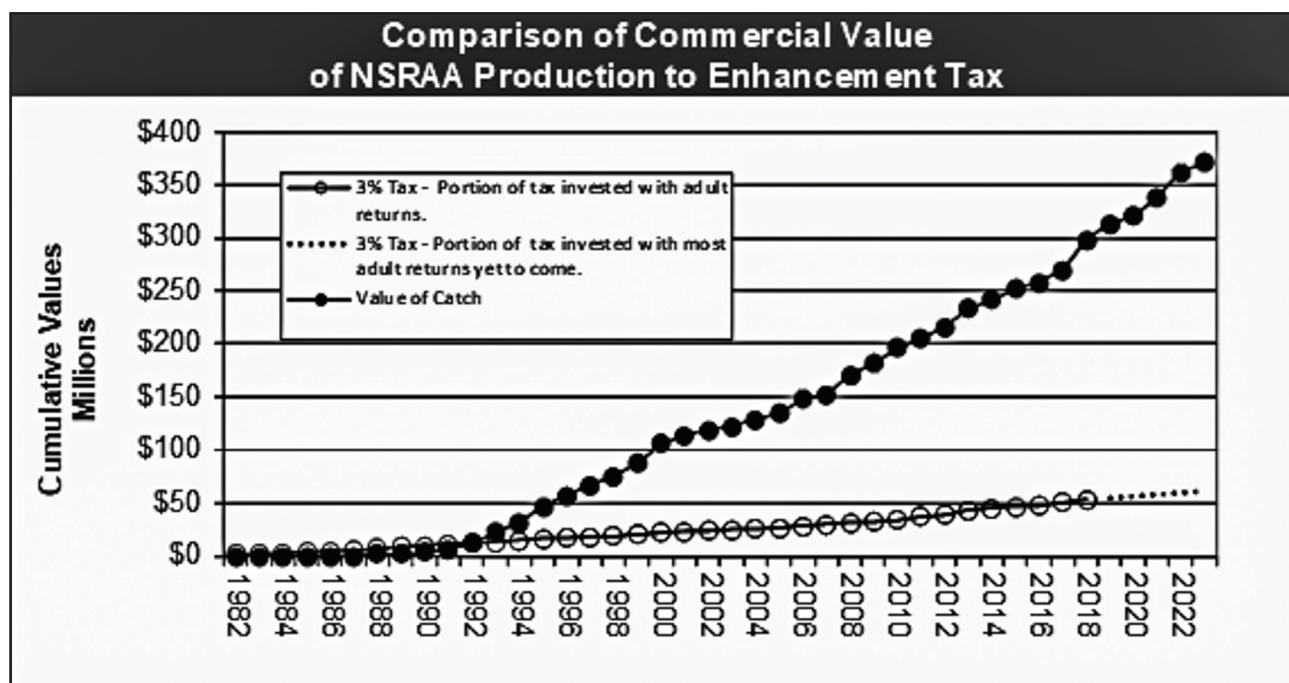
"The board is in a financial position to weather a year," Scott says. "I think they're hoping for a rebound next year. Hopefully, the volume (of salmon) will make up for prices. We'll reassess where we are at the end of next season. For now, we'll do a blend of the tax assessment and cost recovery and hope for the best."

It's too early to have any idea of what next year will bring, of course. Scott is hopeful the tax assessment, combined with a strong return and improved salmon prices, will be enough to get NSRAA on stable footing again.

"Russian chum returns this year were not great," he says. "Japan's chum returns were not great. The forecast next year for pinks is not great. So our forecast for next season looks "better" but not rosy."



Hidden Falls seine opener



Board Member Profile: Chris Ystad



Chris Ystad with wife Lisa and sons, Tanner and Trygve

The 2023 salmon season will be forever seared in Chris Ystad's memory. It was bad enough that he lost his boat. Then the salmon market crashed.

"It has not been a very pleasant year at all," says Chris, laughing at the understatement.

The stress and the uncertainty, the physical and financial risks – these are all things Chris' paternal grandparents experienced when his grandfather worked as a commercial troller out of Oregon. It's why his grandmother didn't want their son following in his father's footsteps.

"Grandma would not allow my dad to go into commercial fishing, so he became a logger," Chris explains. "But then my dad wouldn't allow me to become a logger, so I went into commercial fishing."

That wasn't his original plan, though.

Originally from Astoria, Oregon, Chris went to college to become a certified public accountant (CPA). He worked summers on a charter boat; the first summer, out of Oregon, but then his boss got a job working a boat in Sitka and convinced Chris to join him there. Once he arrived in Sitka, Chris felt the pull of the commercial fishing lifestyle. He changed his major, graduated a year early, moved to Sitka and hasn't looked back.

"It's hard to imagine me working in an office as a CPA," he says. It's the opposite of everything Chris loves about commercial fishing: the freedom, the physical labor and working outdoors. "Even as a deckhand, when

I worked for someone else, there was still a freedom about fishing. Now that I'm my own boss, it's even more so. It would be hard to give up."

Chris has tried all the gear groups, but finds the most joy seining.

After his boat, the Ocean Cape, got knocked over by an unusually strong gust of wind this spring in Sitka Harbor, Chris and his wife, Lisa, leased a boat from a friend and forged forward. Chris was closing in on the end of his season when the market crashed. He describes it as a gut punch. The season was one gut punch after another – to the point the couple seriously considered giving up commercial fishing.

But even after a season more difficult than anything he could have imagined, Chris can't see himself doing anything else. "It's a lifestyle I love, even though it absolutely stresses me out at times, this year, especially."

So Chris perseveres – always with a sense of humor.

"People were blown away after my boat rolled because I was laughing," he says. "But if I ain't laughing, I'm crying. You've got to find the humor... so the depressing stuff doesn't take over."

While he can't point to a silver lining in this summer's misfortunes, Chris was still able to list that for which he is grateful: that no one was seriously injured in the rollover, the support of the Sitka community after the accident, his friend who let Chris lease his boat for the season, the increased goodwill among the NSRAA board, and NSRAA's strong chum returns included.

"We've been hoping for years that Hidden Falls' chum numbers would improve," Chris says. "And then last season: a sputter of hope. This year, it finally happened; they really came back and they came back strong. It was a huge success. I think we're all really excited and optimistic for Hidden Falls' future."

Chris began his foray into fish politics and community service after he heard the phrase: "If you're not willing to step up to try to make a difference, don't complain."

"That really hit home with me," Chris says. "Shortly afterwards, I started applying for all these boards."

Chris joined the NSRAA board in 2020. He also serves on the board for Douglas Island Pink and Chum, Southeast Alaska Seiners Association, the Sitka Port and Harbors Commission and Sitka's city council.

"I keep saying that I hate (local and fish politics), but I keep coming back for more," he laughs. "I want to try to make a difference."

Chris particularly enjoys his work on the NSRAA board. "I like working with our board members and we have a great staff who does a great job of producing fish. That's what we're going to keep trying to do."

While he isn't necessarily optimistic that the market will turn around next season, Chris is hopeful the industry will improve soon.

"I think next year's going to be another year of holding on, but you never know," he says. "Things could change rapidly. The world market stuff is pretty wild."

New Hires and Promotions

NSRAA welcomed four to its full-time staff this year:

- Jon Arredondo, Hidden Falls Culturist
- Sam Roelke, Medvejie Culturist/Tagging Coordinator
- Cody West, Maintenance Engineer
- Cade Cottar, Deer Lake Assistant Project Leader

Congratulations to the following staff members for their promotions:

- Kevin Connell, to Hidden Falls Manager
- Sean Allen, to Hidden Falls Assistant Manager
- Madison Vitale, to Hidden Falls Lead Culturist
- Taylor Scott, to Research Coordinator
- Sarah Valetta, to Medvejie Assistant Manager

Keta Chinook Program Shows Promise

This summer marked the tenth anniversary of Little Port Walter's Keta Chinook program and a big jump toward the potential for NSRAA to produce the stock for the fleets.

"This was a banner year," says Taylor Scott, NSRAA Research Coordinator.

The Keta Chinook program began in 2013, when staff from Little Port Walter Research Station began collecting eggs from a wild stock of Chinook from the Keta River, near Ketchikan. Little Port Walter is Alaska's oldest year-round biological research station, which operates under NOAA's National Marine Fisheries Service and is located on southern Baranof Island. Research has focused on the Keta stock's natural propensity to be zero-check.

In a hatchery, Chinook are traditionally reared for 18-24 months before being released. Zero-check programs attempt to reduce the cost of the rearing space and food required by shortening the rearing time and releasing the fish between 9-12 months old. This strategy can offer substantial savings, but only if the marine survival isn't substantially compromised in the process.

Historically, the survival of NSRAA's zero-check Chinook have been mediocre, at best, which is why the Keta Chinook stock holds so much interest.

In 2021, the Keta Chinook research program was nearly discontinued due to funding issues. NSRAA began working cooperatively with the research facility to ensure the continuation of the program. Currently, the fish are captured and eggs are collected at Little Port Walter and then transferred to NSRAA's Hidden Falls Hatchery for incubation and rearing. The fish are then transferred back to Little Port Walter for release.

Little Port Walter Research Station's research permit is limited to raising broodstock, so NSRAA has begun the process toward obtaining a hatchery permit for the Keta at Little Port Walter.

"Under a research hatchery permit, you are not allowed to do any cost recovery on those returning fish," explains Scott Wagner, NSRAA General Manager. "You can't harvest them and you can't donate them. You basically have to kill and dispose of them."

If approved, NSRAA's permit would allow for any surplus fish to be harvested, either for NSRAA's cost recovery operations or, eventually, by the fleets. Taylor is hopeful the permit will be approved by before next season's eggtake.

"(2023) was the largest eggtake for the Keta project, to date," she explains. NSRAA staff, including Taylor and staff from Hidden Falls and NSRAA's Deer Lake project, worked together with staff from the research station to collect eggs for broodstock. Over a three week period, the group captured 590 fish (248 females), for a total of one million eyed-eggs.

"It was a great example of everyone working together," Taylor said.

This season's large eggtake exceeded this year's broodstock goals, allowing NSRAA room to experiment. All the eggs were transferred to Hidden Falls, where 800,000 fish will be reared using the traditional methods, to be released the spring of 2025. The remaining 200,000 were divided into two groups of 100,000. Each group will be raised under the zero-check program, but one, which was "fast-tracked" through incubation with heated water, will be released in the spring of 2024, and the second, which will not be exposed to any temperature manipulations, will be released that fall.

"There is scientific literature that indicates smolts will outmigrate both in the spring and in the fall," Taylor explains. "So this will help us see if these fish prefer one or the other."

Forecasts indicate another strong return for LPW's Keta next year, which could be a turning point in the program.

"We're ten years into this and we're at a point where we're finally getting enough eggs that we can make some progress getting into the development of this broodstock now," she says. "We won't need all the fish for broodstock development. Now we can begin to use the extra fish toward cost recovery and increasing opportunity for the fleets."



Little Port Walter Research Station

2024 Preliminary Chum Forecast

Early Runs		Late Runs	
Hidden Falls	1,996,000	Deep Inlet (Medveje stock)	1,026,000
Southeast Cove	259,000	Crawfish Inlet	1,246,000
Gunnuk Creek	211,000		
Thomas Bay	381,000		
Deep Inlet (Hidden Falls stock)	1,428,000		
Early Run Total	4,275,000	Late Run Total	2,272,000
Grand Total			
6,547,000			

2023 Market Crash (continued from page 1)

broodstock collection, the extra fish were processed through the raceways and sold at carcass price, resulting in an estimated loss of \$400,000.

"It cost us an additional \$100,000 to catch fish to give away," says Scott. Between Deep Inlet and Crawfish Inlet, NSRAA harvested approximately 500,000 pounds of surplus chum remaining at the end of the season, which it then donated to processors.

As much as the market crash compromised NSRAA's operations this year, it was worse for the fleets.

"It really affected the fishermen and the processors," Scott explains. "As soon as Trident's letter came out, all the processors dropped their prices and it was an industry panic. It was the most stressful season I've experienced in the 30 years I've been with NSRAA."

It may be hard to get back on one's feet after a season like this, but Scott and his staff at NSRAA are hopeful, if not necessarily optimistic, that the market and salmon prices will turn around soon. While there's no knowing what next season's prices will be, NSRAA's salmon forecasts promise a healthy harvest.

In Remembrance of:



Shirley Womack

Shirley Womack, a longtime NSRAA employee whose kind, caring and compassionate nature gained her a reputation as NSRAA's "den mother," passed away in November at 81.

Shirley and her husband, Jimmy, moved to Sitka in 1963, after Jimmy got a job with the Alaska Lumber & Pulp Mill. The couple raised four children and cared for countless foster children over the years.

At the age of 50, after 30 years of staying home to care for children, Shirley decided it was time to work in the company of adults. Even after three decades in Sitka, she had never heard of NSRAA before she responded to an ad for an administrative position there.

As Office Facilitator, Shirley's duties included administrative work and customer service at the organization's main office, as well as errands to purchase, transport and load supplies on the float plane for NSRAA's remote sites. But Shirley's work didn't stop with her job description.

"She was willing to help you with anything," says Ilona Mayo, NSRAA Office Manager.

Shirley came to work early and stayed late, but wouldn't put the extra hours on her timecard. She brought cards and presents for employees' and their families' birthdays, weddings, graduations, and baby showers. She made pillows for the office couch, she made tablecloths, she helped employees alter their clothes. Shirley would even bring employees to stay at her home when there wasn't room at NSRAA's apartment.

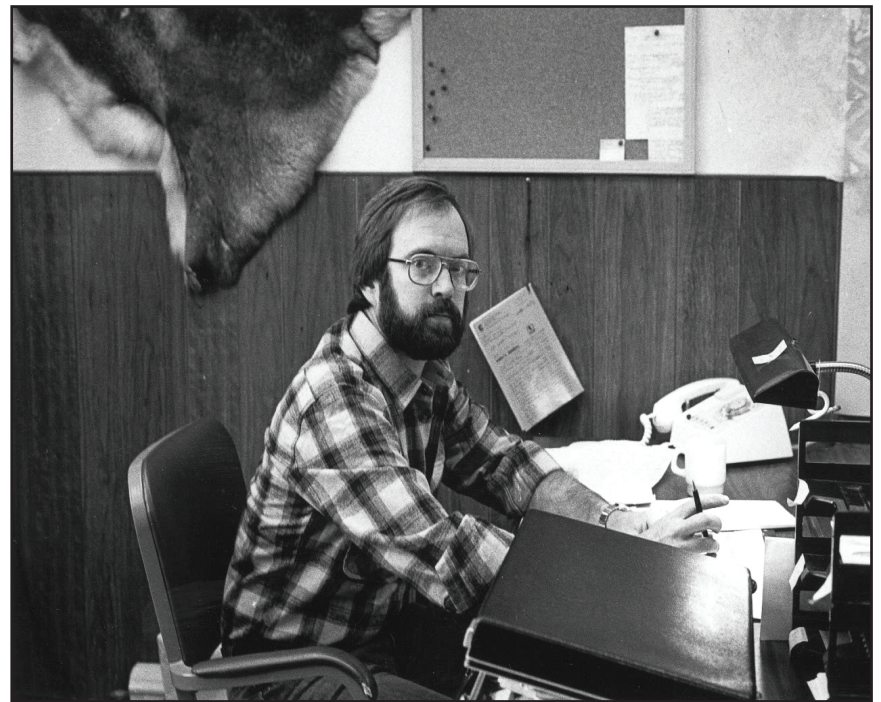
"She was like a mom to everybody," Ilona says. "(Another employee) once said: Shirley is the heart of NSRAA. And she was. She was so sweet and kind. She would do anything for you."

By the time Shirley was 75, one of her children had already retired, but Shirley still wasn't ready to for retirement herself. That December, Shirley fell down the stairs at her home and became paralyzed below her neck.

The couple moved to Arizona to be closer to their children. Jimmy died in March, and Shirley followed in August. She is remembered for her sweet spirit, compassion, generosity and grace. She never complained, Ilona says, even after her accident.

Shirley left a hole in her wake when she left NSRAA and, again, with her passing.

"I felt like I lost my best friend," Ilona says.



Dr. Richard (Dick) Crone

Dr. Richard (Dick) Crone – one of NSRAA's earliest and most influential employees – died in November at his home in Friend, Oregon. He was 80.

Born in 1943 in Portland, Oregon, Dick earned a Master's degree in Science from Oregon State University and then a PhD in Fisheries Biology from the University of Michigan. While working on his PhD, Dick divided his time between thesis work in Ann Arbor and field work at NOAA's Little Port Walter Research Station in Southeast Alaska.

His research work was supported by the National Marine Fisheries Service and provided the foundation for lake fertilization and rearing of coho – an innovative approach to salmon rearing at that time that NSRAA later adopted for its Deer Lake project.

Dick began working for NSRAA after he and his wife, Elaine, moved to Sitka in 1980. He worked there for the remainder of his career.

Most new NSRAA employees, including NSRAA General Manager, Scott Wagner, began their NSRAA training at Deer Lake under Dick's tutelage.

"He was a wealth of information for me and all new employees," Scott says.

Dick visited many lakes on Baranof and Chichigof Islands to explore their potential for lake rearing. NSRAA implemented his concept of lake fertilization (direct fertilization of the lake to increase the phytoplankton and zooplankton on which the fish feed, allowing the fish to feed naturally without supplemental food) at Deer Lake, but later discontinued it when the lake's rainbow trout began feeding on the coho. The U.S. Forest Service continues to use the method at Lake Redoubt, near Sitka, to increase sockeye salmon returns.

Dick worked for NSRAA for more than 30 years. He was dedicated to the organization, its programs, the fisheries and salmon enhancement.

"He put in more hours than anyone I've ever known," Scott says. "His attention to detail and his meticulous collection of data are still part of NSRAA's work ethic today."

Dick was a mentor to many over the years and will be remembered for all he contributed to NSRAA and, ultimately, to the fleets.