

FISH RAP

Change Service Requested

Vol 40 No. 1
May 2022

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



An aerial view of Hidden Falls Hatchery

Inside

Hatchery Reports	2
General Manager Notes	2
New Board Members	4
Budget & Supply Challenges	5
Board of Fish Recap	6
LPW Update	7
NSRAA FY23 Budget	7
Staff Profile	8

Strong Salmon Prices Help Cost Recovery

Despite a budget that totals more than \$10 million – and a corresponding historic cost recovery goal of almost \$7.5 million – it should take less fish and likely less time for NSRAA to complete its cost recovery operations this year than last year, thanks to strong salmon prices.

“I am very pleased with our cost recovery bids,” says NSRAA General Manager, Scott Wagner. “Across the board, they are one of – if not the – highest ever, across all species of salmon.”

That processors submitted bids at a higher price per pound this year not only promises a strong season for salmon fleets, but also means it will take less fish to meet NSRAA’s goal than it would have otherwise.

“Our cost recovery goal this year is more than last season, but we’ll have to harvest less fish than we did last year to meet our goal because of the higher value per pound,” Scott explains.

Similar to last year, the bulk of NSRAA’s cost recovery operations will be taken at the start of the run at Crawfish Inlet. It is the same plan the organization has used since 2018. Once the cost recovery goal is met, Crawfish Inlet will open to the seine fleet.

NSRAA will also perform smaller chum cost recovery efforts at Hidden Falls and Medvejie.

At Hidden Falls, where chum broodstock returns have declined substantially in the past decade, there hasn’t been an opportunity for common property fishing recently. NSRAA will conduct a weekly cost recovery effort to monitor returns and ensure that enough broodstock return to meet the hatchery’s eggtake goals to continue its programs. Hidden Falls chum broodstock returns provides more than 100 million eggs, which are used for summer chum broodstock for remote releases at Deep Inlet, Thomas Bay, Southeast Cove and Gunnuk Creek. The cap for the Hidden Falls cost recovery efforts is only \$500,000, but it remains to be seen if that goal will be reached in time for the terminal harvest area there to open to commercial fleets.

“We won’t plan on any common property openings at Hidden Falls, until we’re assured we have sufficient broodstock,” says Scott. In 2020, there were not enough broodstock that returned to Hidden Falls for

the hatchery to meet its eggtake goals. Last year, the hatchery was able to collect enough broodstock to meet its eggtake goals, but NSRAA was not able to open for the fisheries. “We have not really had a fishery at Hidden Falls in the past four or five years.”

“The fish at Hidden Falls have been coming in later and they haven’t been building up like they did in the past, making it harder to gauge the numbers,” explains NSRAA’s Research & Evaluation Manager, Ben Adams. “They’ve been coming in deeper and more scattered. That’s one of the reasons we started doing this test fishing.”

Last year, NSRAA also performed weekly test fishing at Gunnuk Creek to measure returns and ensure it would collect enough broodstock, however, this season’s forecasts for Gunnuk Creek are not strong and NSRAA officials do not anticipate a surplus after they meet broodstock needs.

There will also be a small cost recovery effort, of \$1 million, at Silver Bay, near NSRAA’s Medvejie Hatchery. Bear Cove is the release site of salmon intended for broodstock only. The remainder of the salmon reared at Medvejie are released from nearby Deep Inlet or one of NSRAA’s other projects, like Crawfish Inlet.

Last year, a record number of three-year-old chum from Medvejie’s fall stock returned to Bear Cove. Those chum returned with a marine survival twice that of those that returned to Deep Inlet. Typically, a large return of three-year-olds would indicate an even larger return of four-year-olds the following year.

“It appears we’ll have a relatively large return again at Bear Cove this year,” Ben explains.

Historically, the strength of the three-year-old return would indicate a large return of four-year-olds the following year, often five times (and as much as ten times) the number of three-year-olds. But the ratio between age classes has shifted in recent years and forecasts have become less dependable as a result.

“With that in mind, we decided to manage that specific portion of the broodstock, knowing we only need so many and we don’t want too

cont. on back page

Medvejie: Food Trials

At NSRAA, choosing food for salmon fry is usually a balance between quality ingredients and affordability. The fish themselves have never had a say in the matter – until now.

The staff at NSRAA's Medvejie Hatchery typically start the rearing season by using up any food remaining from the previous season before transitioning the salmon to newly purchased food. The Chinook and coho at Medvejie are fed the premium line from EWOS, one of the leading fish feed suppliers for the aquaculture industry. (The smaller numbers of these species allow the hatchery more flexibility to purchase a higher quality food, whereas the large number of chum make it cost prohibitive. Chum can tolerate a more diverse and generally lower-quality diet, as exhibited in the wild.)

But last year, about two weeks after the Chinook were transitioned to the new food, fish culturists noticed uneaten food beginning to collect at the bottom of the Chinook raceways. It's not unusual for salmon fry to let the food drop at the second feeding of the day, but to do so at the first feeding is not normal.

"Usually they're hungry right away in the morning," explains Medvejie Hatchery Manager, Cain DePriest. The fish were losing weight,

General Manager's Notes



After two years of uncertainty in how the summer season would play out, I was hopeful this year we could return to more normal times. Unfortunately, for reasons outside of our control, we once again have issues that will affect how successful the season will be. From the ongoing conflict in Ukraine, inflation driving prices up on everything, a tanking stock market, and supply chain issues, this season and coming year will be challenging.

As noted in the Cost Recovery article, this is NSRAA's first year with a budget over \$10 million and the highest Cost Recovery goal in our organization's history. During the annual budget process in January, NSRAA was looking at an increase of about 10% overall in our budget, driven by inflation and the rising cost of everyday goods, from fish food to fuel to building materials; shipping costs; and attracting and retaining employees. It is likely we have underestimated the true impact of inflation to our Fiscal Year 23 budget, which begins July 1.

I don't need to tell most of you the impact these rising costs are having on operations, if you have recently fueled up your boat, or loaded up on groceries for the start of the season. I have ongoing concerns about how high fish feed prices will rise by the end of the year, as we may see a year-to-year increase of over 30%, due to worldwide costs, and availability of agriculture commodities. Fish food makes up more than a third of our annual budget.

Offsetting these concerns of rising costs is a favorable response to all of our Cost Recovery RFP's. There continues to be strong demand for Alaska salmon, across all species. A portion of this demand is due to the poor returns recently: to Alaska in 2020, in general, and also the poor chum return to the state in 2021. There just is not a lot of product on the shelves or in cold storage. For whatever reason, our fall chum returns bucked this trend in 2021 with NSRAA returns making up 50% of the total chum catch in SE Alaska (wild and enhanced), and 29% of the entire chum catch for all of Alaska. I am optimistic that we will have another strong chum return this fall.

If we are fortunate enough to have a strong fall chum return and the prices stay above last season's, it could be a great year for our organization, and most importantly, you, the commercial salmon fishermen of Southeast Alaska. Best of luck this season.

Scott Wagner

and their mortality rate began to climb. Upon closer examination, "we could see the fish eat the food and then actually see them spit it out."

Medvejie was not the only aquaculture facility experiencing this problem with this line of EWOS food. When Cain read an article about other hatcheries with similar issues, the staff quickly moved the Chinook off the EWOS food to avoid risking further health issues and additional loss. The Chinook recovered quickly once off the EWOS line. EWOS reportedly tested the food after the reports, but didn't find any problems with it. Presuming it was merely a palatability issue, the company added squid flavoring to this year's version.

While the problems prompted other organizations to move away from the EWOS line, Cain wanted to give the company the benefit of the doubt. Still, he wasn't ready to use the food without caution, so his staff set up a trial run – half the Chinook in one rearing group were fed Bio-Oregon feed (a higher quality line from the brand used for NSRAA's chum food) and the other half were fed the squid-flavored EWOS line. At first, the Chinook seemed to feed normally, but it wasn't long before their weight declined and mortality began to climb.

"We were trying to do the trial for as long as possible," explains Cain, "but for two weeks, they didn't grow at all, then they were getting emaciated, and by the fifth week, I had to take them off the food."

Cain would prefer to give the Chinook and coho the same diet to simplify feeding, but while the coho seem to be fine on the EWOS line, it clearly isn't an option for the Chinook.

"Even with the squid flavoring, the Chinook didn't seem to like it," he says. "We're going to see what happens with the coho, but we'll probably move most of our production – at least in the short-term – to Bio-Oregon."

You might say the Chinook had the final word on the matter.

Northern Southeast Regional Aquaculture Association

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Cole Wilburn	Gillnet
Max Worhatch	Gillnet
Karl Wolfe	Interested Person
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Seasonal technicians ponding at Medvejie Hatchery

Gunnuk Creek: A Difficult Incubation Season

A pump failure at an inopportune time led to a water quality issue and a fungal growth throughout the incubation system at NSRAA's Gunnuk Creek Hatchery that killed more than 8 million immature chum this winter.

"It's a great disappointment to have to discover the flaws in our system at such a cost, but we knew there would be growing pains when we planned and developed this system," says Hatchery Manager, Ryan Schuman.

NSRAA has been renovating and upgrading the Gunnuk Creek Hatchery since its purchase five years ago. The work included the installation of a complex water system with a recirculation system to prevent extreme temperature changes and a UV treatment to kill any bacteria, fungi or protozoa. Unfortunately, the UV system was not sufficient to control the fungal spread, which was exacerbated by the recirculation system.

As is standard procedure at NSRAA, the incubating chum were divided into two groups: one (known as the 4.0 group) that would be raised to and released at 4 grams, and the second, (the 2.0 group) which would be raised to and released at half that weight. It's a program NSRAA began about five years ago. To date, the 4.0 group has experienced better marine survival than the 2.0 group. The staff at NSRAA believe the larger fry are able to avoid near shore predation by moving offshore quicker than the smaller fry, but space and cost prohibit the hatchery from raising all chum to 4 grams.

The eggs for the 4.0 group are collected first and begin the incubation process about two weeks before the 2.0 group. When the eggs hatch, they release enzymes into the water. The pump failure coincided with the 4.0 hatch, and those enzymes caused the degradation of the shell envelope on the eggs of the 2.0 group, which lead to the mortality of those younger eggs and a fungal growth that spread throughout the incubation system.

"There is a lack of knowledge around the subject, in general," Ryan explains. "Up to this point, we were under the impression that exposure to these enzymes could be potentially problematic in that it might cause premature emergence, but we didn't anticipate large scale loss."

Despite the staff's efforts to curtail the fungus by disassembling, cleaning and disinfecting the incubators, it was unable to stop the spread before approximately 8.1 million immature chum were lost. It was a discouraging event after so much thought and care went into building a water system designed specifically to avoid problems.

The equipment failure prompted the board of directors to approve a one-time \$500,000 budget increase for Gunnuk Creek to make further improvements to its water system to avoid any similar events in the future. Ryan also updated the facility's emergency response and operational procedures, and provided additional training to staff to ensure the hatchery is prepared in the event of a future system failure.

"I feel confident that our facility and staff are going to be better prepared than ever to have a highly efficient and incident-free spawning and incubation season," Ryan says.

Sawmill Creek: Chinook Struggles

After two discouraging years since NSRAA began rearing zero-check Chinook at its Sawmill Creek Hatchery, NSRAA may move to a traditional rearing program, instead.

While the salmon raised at NSRAA's Medvejie and Hidden Falls hatcheries have included Chinook salmon, until recently, Sawmill Creek only incubated and raised coho and chum salmon. NSRAA received funding from the Pacific Salmon Treaty Mitigation program to expand its Chinook production at Sawmill Creek Hatchery. The program is scheduled to increase to 2 million Chinook annually once the hatchery expansion is complete.

Rather than waiting for the expansion to be completed before beginning its new Chinook program, two years ago, NSRAA utilized the remaining available rearing space at the existing facility to begin raising about 700,000 zero-check Chinook at a time.

Zero-check Chinook are raised for six months before being released to saltwater, whereas yearling Chinook are traditionally raised for 16 months before release. The shortened timespan for rearing could translate to substantial savings for hatchery-reared salmon – but only if the marine survivals of the zero-check Chinook more than offset the cost to produce them.

The staff at Sawmill Creek received its first generation of Chinook eggs in the fall of 2020. About 80 percent of those salmon died, most of them after they were transferred to saltwater. Hatchery Manager, Rebecca Olson, believes the high mortality of the broodyear 2020 Chinook was likely the result of a problem with the Chinook's food, leading to poor fish health and an inability to tolerate the marine environment. The Chinook at Medvejie also suffered higher than normal mortality due to an issue with their feed (see related story), but those fish were on the food for a shorter period and were able to recover. By the time the staff realized the connection between the food and the declining health and rising mortality of the fish, the Chinook at Sawmill Creek had already been transferred to saltwater.

It was a disheartening way to start the new program but, with the food issue resolved, Rebecca felt optimistic as her staff began rearing their second generation of Chinook last fall.

This time, however, cold water temperatures slowed the growth of the fish. (Because zero-check Chinook are released at only six months, it is imperative they get as big as possible before their release date. Cold water can inhibit growth.) The fish were healthier than last year, but still growing slowly. As the time for their transfer to saltwater approached, the staff transferred very small groups of fish at a time, to see how they would adapt to saltwater. Those fish experienced high mortality after only a short time in their new environment, indicating it was still too soon to transfer the group to saltwater.

Normally, hatchery staff has some flexibility with the timing of the saltwater transfer, but expansion work at Sawmill Creek is still ongoing, and the water to the hatchery was scheduled to be shut down May 9th. The Chinook had to be transferred before that date, but since they were not yet ready for saltwater, NSRAA was able to work quickly to get approval from Alaska Department of Fish and Game to move the fish to Medvejie instead.

The staff at Medvejie gradually began to mix saltwater into the freshwater to help the Chinook prepare for the transition to saltwater. "Surprisingly, they actually thrived during that time, so hopefully they'll do well in saltwater" Rebecca says.

The Chinook were moved to net pens at Crawfish Inlet a few weeks later. The salmon seemed to transition well. They were kept in net pens for a few weeks, and will be released in early June.

It's certainly a better outcome than last year, but the lack of success thus far puts the zero-check program at Sawmill Creek Hatchery under question.

"I'm not sure if we'll resume the zero-check program at Sawmill Creek until the expansion is complete," Rebecca explains. "We are evaluating whether to shift to the yearling program for the interim. With our colder winter temperatures, Sawmill Creek may not offer the right conditions for the zero-check Chinook."

Hidden Falls: Snow Collapse

There's an old adage "one step forward two steps back," that's maybe feeling all too familiar to the staff at Hidden Falls. Only a few years after the facility completed a rebuild of its spawn shed and raceways, unprecedented snowfall led the structure's roof to collapse.

"Luckily, no one was injured and no fish were lost," says Jon Pearce, Hatchery Manager. "Buildings can be replaced. If it had happened a month later, it could have been a totally different story."

Originally built in 1978, the spawning shed was renovated in 2018 to better accommodate the hatchery's increased production. The renovation included adding a roof above the raceways, both to help protect the staff as they work in inclement weather, and to help prevent bears from accessing the salmon fry as a food source.

Much of Southeast Alaska experienced near record snowfall in December 2021. While the amount of snow so early in the winter was, in itself, unusual, it came without the typical breaks of warmer weather between storms, which led the snow depth to build with each storm. Since only some of the buildings at Hidden Falls include a snowmelt system, the staff worked to remove the snow by hand to avoid reaching each building's snow load maximum.

Unfortunately, those efforts weren't enough to prepare them for the storm that dropped 34 inches in less than two days, which put the newly renovated spawning shed over its snow load capacity. The building's roof, which also extends over four raceways, collapsed under the weight of the snow.

Fortunately, perhaps, Jon and his crew are used to setbacks. They responded by immediately removing the snow off all intact buildings and clearing the rubble from the collapse. The spawn shed is a two story building with storage upstairs, so, despite the damage, the work area was mostly intact. A contractor was hired to put a temporary roof over the lower level to protect the work area, but the raceways remain without a roof, until it can be replaced again.

"The blessing out of all of this is the infrastructure downstairs for the eggtake operations is essentially okay," says Jon. "We will be able to get up and running in time for our first eggtake in July."

There were no fish in the raceways at the time of the collapse. The staff was able to clear the raceways in time to move the fish there for freshwater rearing in March.

Although the snow was unprecedented, Jon says the accident was a good reminder for the facility to review and update its safety procedures to avoid similar accidents again in the future. Several other buildings in Southeast Alaska also collapsed from the snow loads during the storm cycle.



Ward Air Flying into Hidden Falls During a Chum Transfer

NSRAA Welcomes Three New Board Members

NSRAA welcomed three newcomers to its board this year: Jackson Combs, Don Spigelmyre and Cole Wilburn.

Originally from Corvallis, Oregon, Jackson Combs started fishing outside Newport and gradually made his way to Alaska in search of salmon. He worked on a variety of boats, but was eventually drawn to trolling. "Trolling added another aspect, where you really need to learn how to get the fish to bite those hooks," he says.

Jackson lives in Hoonah with a community of trollers. It's part of the reason he ran for the NSRAA seat this year. "I wanted to add a voice that represents trollers up this way," he says. But Jackson is also eager to learn more about NSRAA and other perspectives. "I enjoy talking to people and hearing different opinions and learning from everybody," he says. "I'd like to make myself approachable and hear what people think."

Don Spigelmyre, of Petersburg, was appointed as the board's Processor representative. Don has been interested in joining NSRAA's board for some time now, but as a newcomer to the fishing industry, he wanted to get some experience under his belt first. Don joined OBI Seafoods as the Southeast fleet manager nine years ago, after 23 years with the Coast Guard, and several years as a Sheriff Deputy. "Being part of the fishing industry is extremely exciting," Don says.

As OBI fleet manager, Don helps fishermen with whatever they need to earn their livelihoods on the ocean. Now part of the board, Don helps NSRAA make decisions to enhance salmon production for the fleets, so he's part of the process from the eggtake all the way to the catch. "The board process is fun, because everybody has a different point of view," he says. "It's interesting to hear everyone's point of view and making it all work."

Cole Wilburn was appointed by the board to the vacant gillnet seat. A resident of Juneau, Cole serves on the board for the Pacific Salmon Commission transboundary panel. Originally from Ft. Collins, Colorado, Cole road-tripped to Juneau with a friend after they graduated high school. Neither left. "I filled up my resume with commercial fishing deckhand jobs," he says. "I've done pretty much every fishery."

About 10 years ago, Cole bought his own gillnet boat. "I had a lot of friends in the fishery, and having DIPAC and NSRAA really close also played a role in that choice. It seemed like a fishery that wasn't going to fail, even though the jokes on me," he says, laughing. As board member, Cole wants to help ensure that "everyone gets their fair shake at the NSRAA fish. I want to help make sure everyone gets the rotation they're hoping for and their fair share of the fish and that NSRAA continues its work into the indefinite future."



One area of the Hidden Falls roof collapse that happened early this year

2022 Brings Record Budget & Continued Supply Challenges

The NSRAA’s Board of Directors approved the organization’s largest budget ever this year – more than \$10 million – a reflection of both the scope of NSRAA’s operations and rising costs.

“Breaking that \$10 million mark was a pretty big milestone,” says NSRAA Operations Manager, Adam Olson, who spent much of the winter preparing the budget for the spring board meeting. Adam presented a preliminary budget to the board at its fall meeting, estimating a 5 percent increase from the 2021 budget. The final budget came to a 11 percent increase, pushing the total over the \$10 million mark. The unexpected increase is largely a reflection of surging inflation.

“Inflation is insane right now,” Adam says. “Fish food is a big part of it, roughly half the budget, but everything went up this year, fuels, exceptionally so, and every incidental, utilities, you name it, everything went up.”

This year’s budget includes nearly \$1 million in capital projects, and a 5 percent cost of living increase for NSRAA’s staff of just under 50 full-time and seasonal employees. Despite the unexpected total, the board showed no signs of sticker shock and approved the budget as presented.

“There was definitely an understanding that costs have been rising since the pandemic,” Adam says. “The board has a very good sense of awareness of the costs to operate our programs.”

Despite the historic total, Adam feels confident NSRAA will be able to meet its budgetary needs through its cost recovery operations this season, without additional closures. “We were able to meet our cost recovery goals last year, so we didn’t start this year with a deficit,” he says. “NSRAA is in a good position. Any increase in budget means more pounds (of salmon) have to come out of the water to fund our programs, but with strong markets now, the prices should be good. The strong salmon prices will help us out with a giant budget and a very large corresponding cost recovery.”

Cost recovery operations provide NSRAA with the monies necessary for its operations. For the past several years, the organization has successfully conducted its cost recovery operations at Crawfish Inlet, and plans to do the same this summer.

While inflation continues to push up prices, supply backlogs have made it extremely challenging to get the materials required for the NSRAA’s Sawmill Creek expansion, as well as regular maintenance projects, in a timely manner.

“It’s been very challenging,” says Kenny Gray, NSRAA Maintenance Manager. “Every day, run-of-the-mill items are eight months to a year lead time right now, so it’s hard for us to complete projects within the fiscal year. A lot of these budget items are getting rolled into the next year.”

For example, Kenny was shopping for a new side-by-side to transport eggs between hatcheries and project sites and had hoped to purchase a Kubota, but despite calls to dealers down the west coast and all the way to the Midwest, there was not one to be found. “You can’t get them,” he says. “There’s not a new one in stock.”

In that case, Kenny was able to purchase a different brand instead, but supply issues for other items are often not as easily resolved. The generator he ordered in March of 2020 for Gunnuk Creek? It was finally delivered this spring.

According to NSRAA’s suppliers, the lack of inventory is a result of a combination of shipping bottlenecks and manufacturing delays. It’s added a new – and next to impossible challenge – to Kenny’s position as he works to ensure that each project site is running smoothly, repairs are fixed in a timely manner, and that contractors for the Sawmill expansion have the materials they need on schedule.

“Everything is being extended,” he says. “I’m really pushing my suppliers to do whatever they can to get us materials. I spend a lot of time on the phone, checking with vendors to make sure there aren’t more delays.”

Fortunately, Kenny has learned to be flexible in his time at NSRAA and is quick to adapt as needed.

“It’s challenging, but you just have to roll with the punches,” he says.

THA Schedules - 2022



The American Patriot steaming to Deep Inlet with a load of fish food

Deep Inlet	Sun	Mon	Tue	Wed	Thu	Fri	Sat
	Seine	Gillnet	Gillnet	Gillnet	Seine	Seine	Troll
Begin: Wed, June 1 Last: Tues, Sept 20 2022 chum forecast - 58,000 early run, 1,756,000 late run (both Deep Inlet and Bear Cove) Chum broodstock needed at Medveje = 22,500 summer chum and 90,000 - 110,000 fall chum (sex ratio dependant) Cost Recovery: No Cost Recovery scheduled in Deep Inlet THA Experimental Cost Recovery will occur in Silver Bay to monitor and manage Bear Cove component of the run prior to brood collection Cost Recovery in Silver Bay will be capped at \$1,000,000							
Crawfish Inlet	Sun	Mon	Tue	Wed	Thu	Fri	Sat
	Seine				Seine		
2022 chum forecast - 1,145,000 Begin: Late July with cost recovery; will open to seine upon completion of cost recovery. Troll: Trolling is open in West Crawfish Inlet throughout the return. Trolling may be closed in Crawfish Inlet when cost recovery boats are present and will be open on non-seine days after cost recovery is complete. Cost Recovery: Cost recovery will occur primarily at the back half of the bay unless more aggressive harvest is necessary to maintain quality. Some cost recovery may take place in West Crawfish if there is a build-up of fish at the head of the bay. West Crawfish cost recovery would occur at the direction of ADF&G.							
Hidden Falls	Sun	Mon	Tue	Wed	Thu	Fri	Sat
	Seine				Seine		
2022 chum forecast - 304,000 **Closed in 2022 unless adequate run strength is determined Experimental Cost Recovery prior to brood collection to monitor run strength No 2022 Hidden Falls Assessment Tax 150,000 chum broodstock needed							
Southeast Cove	Sun	Mon	Tue	Wed	Thu	Fri	Sat
	Seine	Troll	Gillnet	Gillnet	Seine	Troll	Troll
2022 chum forecast - 174,000 (Southeast Cove), 17,000 (Gunnuk Creek) Begin: Sunday, June 19, 2022 - Southeast Cove only End: Monday, August 1, 2022 - ADF&G may extend if chum salmon area still present in the area 20,000 chum broodstock needed at Gunnuk Creek Surplus will be harvested as cost recovery							
Thomas Bay	Sun	Mon	Tue	Wed	Thu	Fri	Sat
	Seine				Seine		
2022 chum forecast - 68,000 Begin: Sunday, June 19, 2022 End: Saturday, August 6, 2022							

See NSRAA’s website for THA maps, return timing, and further details.

Board of Fisheries Update

More than four years after its last Southeast Alaska meeting, the Board of Fisheries (BOF) finally reconvened, in March, to review 153 management proposals that were submitted for the Southeast region’s fisheries – five of which could directly affect or threaten NSRAA’s operations.

The BOF typically meets every three years to review proposals submitted by the public, but the last two meetings for the Southeast region (January 2021 and January 2022) were postponed due to COVID-19 outbreaks.

“The best thing about the Board of Fish process is anybody can submit a proposal,” says NSRAA General Manager, Scott Wagner. “But, also, the worst thing about the process is that anyone can submit a proposal. There’s no criteria. Most cycles there are proposals that, one way or another, would affect our production.”

The BOF has regulation authority over NSRAA’s special and terminal harvest areas, so NSRAA would need approval from the board for any additions or changes to a special or terminal harvest area. Though NSRAA did not have any change requests for the BOF at this year’s meeting, various individuals and organizations submitted a total of five proposals (proposals 99 - 103) which, if approved, would directly impact the production or management of NSRAA’s fisheries. None of those proposals were approved as submitted.

Proposals 101 and 103, were submitted by the same individual, in an attempt to decrease hatchery production if there were evidence of salmon straying to other systems above an undetermined stray rate.

“It is generally accepted that all species of salmon stray to varying degrees,” Scott explains. “Straying exists within the genetic makeup of salmon, so, basically, a proposal like this would mean that hatchery production in Alaska would be eventually phased out, entirely.”

The proposals specifically targeted two NSRAA sites, similar to proposals submitted to the Cordova BOF meeting, in December 2021, targeting hatchery production in Prince William Sound. The individual who authored these proposals has submitted similar anti-hatchery proposals to the BOF in the past.

Scott attended the meeting in order to give NSRAA’s objection to those proposals.

Two more proposals, submitted by two different gear groups, attempted to restrict gillnet participation in NSRAA’s Southeast Cove terminal harvest area. Proposal 99, submitted by Southeast Alaska Seiners Association (SEAS), proposed a gear group rotation that would give seiners access on Sundays and Thursdays, and the troll fleet access on all remaining days.

“If this was implemented, it would mean that the NSRAA board could never allow a gillnet day at that location,” Scott says.

The Alaska Native Intertribal Association of Seiners (ANITA) submitted proposal 100, which also would have removed the gillnet fleet from the rotation at Southeast Cove. Neither proposal was approved by the BOF.

SEAS submitted a second proposal that proposed a change in gear group rotation at NSRAA’s Deep Inlet terminal harvest area. If approved, proposal 102 would have set a rotation of two seine days for every one gillnet day. If approved, NSRAA would not be able to change that rotation without BOF approval. The BOF modified that proposal to a rotation of 1:1.

“Moving forward, the ratio between gillnet and seine days will be 1:1,” Scott says.

While this ratio does not change the recent rotation between the two gear groups at Deep Inlet, it is a change from the ratio set at the prior BOF meeting, in 2018. At that time, the BOF approved a proposal to set a 2:1 ratio between seiners and gillnetters for one year, and then move to a 1:1 ratio after the first year. That proposal included a sunset clause, which would have returned the ratio to 2:1 gillnet to seine, without action from the BOF. The current BOF action does not include a sunset clause, so the 1:1 ratio will hold, as is, until future action from the BOF.

“The outcomes from allocative BOF actions can be contentious, and not everyone will be pleased with the one set for Deep Inlet, but it was nice to finally have a meeting to address these proposals that have been hanging over our collective heads for several years,” Scott says.

NSRAA 2022 Return Projections									
Site	Projected Return	Range		Commercial	Sport	Cost Recovery	Brood Stock	2021 Return	2021 Forecast
		Low	High						
Chum									
Hidden Falls	304,000	140,000	806,000	104,000	-	50,000	150,000	222,052	286,000
Medvejie/Deep Inlet*	1,814,000	728,000	3,480,000	1,588,936	-	102,564	122,500	2,050,263	1,608,000
Crawfish Inlet	1,145,000	427,000	2,507,000	405,000	-	740,000	-	1,260,023	1,920,000
Southeast Cove	174,000	44,000	698,000	174,000	-	-	-	54,206	158,000
Gunnuk Creek	17,000	10,000	27,000	-	-	-	17,000	33,457	77,000
Thomas Bay	68,000	34,000	102,000	68,000	-	-	-	81,509	132,000
Haines Projects	-	-	-	-	-	-	-	-	-
	3,522,000	1,383,000	7,620,000	2,339,936	-	892,564	289,500	3,701,510	4,181,000
Chinook									
Hidden Falls	500	200	2,700	100	-	-	400	281	710
Gunnuk Creek	400	200	900	300	100	-	-	387	312
Medvejie	20,000	10,000	29,900	11,200	1,200	3,000	4,600	16,975	17,600
Crawfish Inlet	620	310	930	490	37	93	-	210	700
Halibut Point	-	-	-	-	-	-	-	1,510	2,400
Crescent Bay	2,700	1,300	4,000	2,133	162	405	-	171	2,400
	24,220	12,010	38,430	14,223	1,499	3,498	5,000	19,534	24,122
0-ck Chinook									
Medvejie	200	100	300	158	12	30	-	84	120
Crawfish Inlet	120	60	200	95	7	18	-	355	309
	320	160	500	253	19	48	-	439	429
Coho									
Hidden Falls	41,000	20,400	81,500	14,350	1,230	15,420	10,000	33,363	34,000
Deer Lake	56,000	28,200	112,800	22,400	3,500	30,100	-	42,045	59,000
Lake Stocking	-	-	-	-	-	-	-	326	1,000
Medvejie	15,000	7,300	29,100	10,800	1,200	-	3,000	12,818	15,000
Deep Inlet	82,000	40,800	163,300	75,440	6,560	-	-	14,562	80,000
	194,000	96,700	386,700	122,990	12,490	45,520	13,000	103,115	189,000
ALL SPECIES TOTALS:	3,740,540	1,491,870	8,045,630	2,477,401	14,008	941,630	307,500	3,824,598	4,394,551

* Cooperative Project with SJH: Projections for Medvejie/Deep Inlet are for total returns (NSRAA + SJH fish)
 Fish numbers needed for cost recovery in 2022 are estimates based off of average weight and price
 -NO COST RECOVERY IS SCHEDULED WITHIN THE DEEP INLET THA but is expected to occur in Silver Bay

NOAA Reinstates Salmon Research in Alaska

Public outcry in response to an unexpected announcement last fall by the National Oceanic and Atmospheric Administration (NOAA) that it would no longer fund salmon research or production at Alaska’s Little Port Walter Research Station, has prompted the federal government to reinstate the program – for the short-term, at least.

The decision was a relief for officials at NSRAA, one of a number of entities that has benefitted from salmon research at Little Port Walter over the years.

“NOAA has been trying to get out of salmon research at Little Port Walter for the last ten years,” explains NSRAA General Manager, Scott Wagner. “But every time they try to end salmon research there, they get public pressure to keep it going. The biggest win here is for commercial fishing fleets, and the continued development of the Keta River Chinook salmon broodstock, and all the related research – that all those initial efforts, the time, monies and efforts toward developing this broodstock, will not be lost.”

Little Port Walter is the oldest year-round biological research station in Alaska and the primary field research facility of Auke Bay Laboratory, which operates under NOAA’s National Marine Fisheries Service (NMFS), based in Seattle. The station conducts a number of fisheries-related research projects, but the NMFS, in Alaska, has focused increasingly on fish species other than salmon.

Knowing that decreased funding could jeopardize the future of salmon research and Chinook broodstock development, officials at NSRAA have been working for several years toward a cooperative agreement with NOAA to ensure that the program at Little Port Walter continues, so it was a significant disappointment when NOAA announced last fall it would discontinue salmon research.

Most recently, Little Port Walter has been researching the development of a Chinook broodstock, from the Keta River, that naturally produces a component of zero-check smolt. The broodstock has intriguing potential for NSRAA; zero-check chinook are raised for six months before being released to saltwater – a full 12 months less than the traditional rearing time for hatchery-raised chinook.

Chinook comprise the smallest component of hatchery production because the traditional 16-months of rearing time makes them the most expensive species to raise. “If we could have a successful zero-check Chinook program, we could quadruple our current release for a lower cost,” Scott explains. “That’s a huge potential long-term benefit for fishermen.”

If the NMFS were to discontinue salmon research, not only would the monies and research work toward Keta stock be lost, but there would be no salmon research in the future.

Upon hearing NOAA’s decision last summer to immediately shutter salmon research at Little Port Walter, NSRAA worked with NOAA to collect the two stocks of Chinook salmon, Unuk and Keta, being reared at the facility. The Sitka Sound Science Center agreed to rear Unuk broodstock for the winter, to be released from Deep Inlet this spring. NSRAA took the Keta broodstock to Hidden Falls with the hope to release them from Little Port Walter or Kasnyku (pending funding) this spring, but then the NMFS announced it would not allow the salmon to be released there.

That decision put the future of the Keta broodstock in jeopardy. If NSRAA released the fish from one of its hatcheries, the Keta release numbers are still too small, and a large portion of the returning broodstock would be intercepted by commercial fleets when they returned. The potential for the broodstock would be lost.

“My biggest concern was that if NOAA didn’t agree to cooperate with us, the Keta broodstock wouldn’t be an option for hatchery production,” Scott says. “That would be a huge financial loss to the State of Alaska, and NOAA, and the Pacific Salmon Commission Treaty monies. NOAA spent a lot of money to begin developing this broodstock and, basically, pulled the plug halfway through.”

At this point, NOAA currently has funding to continue salmon research at Little Port Walter through September of 2023, though NSRAA

has received a verbal agreement that NOAA will continue its salmon work there at least through 2027.

“We’re still trying to push NOAA to expand their salmon research beyond the minimal work they’re doing now,” Scott says. “There are so many partnership potentials that could help fund salmon research and underwrite the cost of the facility.”

For now, NSRAA was given permission to transfer the Keta broodstock back to Little Port Walter this spring so NOAA could release them there. NSRAA plans to partner with the staff at Little Port Walter to collect eggs when the broodstock return, transfer the eggs to Hidden Falls, each fall, for incubation and rearing, and release them from Little Port Walter each spring.

“There’s a lot of uncertainty about our involvement there,” says Adam Olson, NSRAA Operations Manager. “There’s still a lot to iron out, but our hope is that this will be a cooperative project with NOAA to develop this broodstock. For the last year or more, it’s felt very combative. We want to do this, the industry wants it, but NOAA did not. It’s our hope to work cooperatively with NOAA.”

Meanwhile, NSRAA is moving forward with test fishing at nearby Big Port. This will be the second year of test fishing to see if the bay could be a viable release site for NSRAA, to help fund cooperative salmon research at Little Port Walter.

“We’re still in the building phase of the Keta broodstock, but we want it,” Scott says. “It will probably be another five years before they have sufficient returns for there to be enough of a surplus for us to start a program at NSRAA.”

NSRAA tagged and NOAA released 60,000 Keta chinook from Little Port Walter this spring. The program will need to reach at least 250,000-300,000 broodstock before there would be enough of a surplus for NSRAA to begin raising the chinook for commercial production.

NSRAA FY23 Budget

Projected Income - FY23		
Year	Income Source	Amount
2021	Enhancement tax	\$1,616,139
Revenue - Fish sales / Assessment tax:		
2022	- Amount required from Chum	\$3,475,466
Cost Recovery		
2021	- Chum	\$3,500,000
2021	- Chinook	\$62,865
2021	- Coho	\$145,362
2021	- Incidental species	\$11,871
2021	- Roe	\$16,635
2021	- Carcass	\$104,012
Other Revenue / Funds from Reserves		
2021	Rental Income	\$28,020
2021	Investment Earnings (net of fees)	\$1,313,045
2021	From unrestricted Reserves	\$250,000
	Total	\$10,523,415
Projected Expenses - FY23		
Expense Source	Amount	
Operational Budget	\$9,361,915	
Capital Budget	\$911,500	
Gunnuk Creek Improvements	\$250,000	
	Total	\$10,523,415

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many fish to build up in front of the hatchery,” Ben says. “Once we reach \$1 million, we’ll open to the seine fleet, if needed.”

The changing trends and resulting uncertainty of forecasts has made it more difficult for organizations like NSRAA to manage salmon returns recently. The age class ratios began shifting about ten years ago. Where once three-year-olds would comprise less than 5 percent of a broodyear’s return, now three-year-olds might represent near 30 percent of the returning broodstock. At what point do forecasters scrap historic trends and use the new ones for their forecasts?

“You kind of have to look at everything – the historic and recent trends,” explains Ben, who took over forecasting for NSRAA when Chip Blair retired. “It’s kind of a mystery. No one’s got it figured out. It’s more an art than a science.”

Unfortunately, it means forecasters, like Ben, are less confident in their predictions.

“We’ve been over forecasting for Hidden Falls rather consistently,” he admits. Which means that the old policy of opening to commercial

fleets as the salmon return and assuming there will be enough salmon leftover for broodstock and cost recovery later just isn’t an option there anymore. “As return numbers get smaller and smaller, it becomes too risky to open to everybody at the front end.”

That is what led to a shortage of broodstock at Hidden Falls in 2018. NSRAA officials want to prevent that from occurring again. This year’s cost recovery operations at Hidden Falls were designed minimize that potential.

Since there may be an unusually large return again to Bear Cove this year, the cost recovery operations at Silver Bay will be used as a tool to harvest any surplus broodstock, prevent the buildup and possible straying of the stock into nearby Sawmill Creek, and to gather data on the return size.

“It’s not like we’re out to make a profit,” says Ben. “We would rather open it to commercial fishermen, but we just want to make good management decisions.”

NSRAA Staff Profile: Matt Golden

Even though Matt Golden graduated with a fisheries degree from Sheldon Jackson College, his first job with NSRAA was shoveling snow.

Matt and his wife, Stacy, had just gotten married and were looking for work. It was still winter and it was a big snow year in Sitka. “They asked me if I wanted to shovel snow at Hidden Falls,” Matt says. “We were broke and the pay was good. I said ‘Heck yeah, I want to shovel snow.’”

That job led to a seasonal position at Medvejie’s Deep Inlet and, eventually, to a lifelong career at NSRAA. Matt’s been with the organization for more than 20 years now. Though he spent his first year with NSRAA traveling to and working at its various remote sites and projects, Matt has spent the bulk of that time working at the Medvejie Hatchery, so he and Stacy could live in Sitka, where she works as a science teacher for the local school district.

Matt grew up in Salt Lake City, Utah. His father was a geologist and his family often spent time together exploring the surrounding desert and mountains. By the time he was a teenager, Matt was hooked on sport fishing. He drove a little car with a canoe strapped to the top, ready to disappear to the nearest river or reservoir whenever possible.

“I was up for anything I could catch,” Matt says. “It’s kind of funny, because the fish I was happy catching in Utah are the size of what we use for bait up here.”

The summer after Matt graduated from high school, his family travelled to Southeast Alaska for a fishing trip together. Matt jokes that it was also his father’s secret plan to get him to college. They visited Sitka and once Matt saw Sheldon Jackson College, he was ready to enroll. “We were there in late July and I was back in August for the first day of school,” he says, laughing.

Matt had always been interested in fisheries, but hadn’t been sure he wanted to go to college until the day he saw Sheldon Jackson. Even now, Matt can’t say exactly what made him change his mind and enroll so suddenly. He’s not even sure he got an official tour of the campus. But the college had a fisheries program and Matt was awed by what he’d seen on their trip to Alaska that summer – the size and the number of fish. “It made me realize that fisheries was really something I could do,” he says.

Matt and Stacy met at Sheldon Jackson, where Stacy was studying marine biology. They now have a 12-year-old son, Scotty. Matt laughs as he remembers the moment he and Stacy came up with the name. “We were going over names and names and names... as most parents know, it takes forever to pick a name you both like. And then one day, we were fishing and we looked at our downrigger and turned to each other and said, ‘Why not Scotty?’”

The family of three enjoys spending their free time fishing, beach-combing, whale watching and exploring together. “We try not to take things too seriously,” Matt says.



Matt Golden with his wife, Stacy, and son, Scotty

Over the years, Matt has worked his way up the ranks at NSRAA, from various seasonal positions to full-time fish culturist and, eventually, to his current position as project leader. These days, Matt oversees fish transfers between NSRAA’s Medvejie, Hidden Falls and Gunnuk Creek hatcheries and various remote sites, including Crawfish Inlet, and is in charge of the set up for new projects, like Thomas Bay. The often time sensitive work can be challenging, especially fish transfers, where “things can go bad in a hurry.”

When Matt looks back on the past two decades with NSRAA, he is often surprised at how much the organization has grown in that time. “I’ve learned that to work at NSRAA, you better be willing to adapt because things are changing quite a bit,” he says. “But it’s good to know where you came from, so you can appreciate where you are.”

Sometimes, the hurdles involved with hatchery production can seem insurmountable, especially recently, with declining salmon returns and smaller fish size. “But there are a lot of little wins over the course of a season that make it really gratifying.”

As much as Matt enjoys his work with the fish, he’s come to love working with the people, too. “I think my favorite part of the job now is the relationships I’ve built,” he says. “I have a lot of relationships with commercial fishermen and the boats we work with. I really appreciate those relationships, because I think I understand where they’re coming from more, now that I work with them on a daily basis, than I ever did before.”