

FISH RAP

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



*Troller Wendy A
participates in the
spring Chinook fishery*

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Reserve Funds Help Keep NSRAA Afloat

Managing a multi-million dollar nonprofit in an industry known for its ups and downs requires careful planning and preparation for an uncertain future.

With that in mind, the NSRAA Board of Directors has established six reserve funds and one scholarship endowment fund.

"I think they've done a great job guiding the corporation and keeping it the financially viable and successful organization that it is today," said NSRAA general manager Pete Esquiro.

The Operating Reserve Fund was established as a hedge against short funding the corporation's annual operating budget.

"Short funding can be the result of lower than expected adult returns which could result in cost recovery shortages, unanticipated decreases in value of returning adult salmon, the occurrence of unforeseen acts of nature, accidents, as well as unexpected rises in costs, and decreases in the average weight per returning adult," Esquiro said.

The operating reserve fund's goal when established was set as the equivalent of two years' of operating budget. Although it was funded at 3.5 million dollars about four years ago, the goal has never been reached.

"The fund has decreased due to withdrawals in the past couple of years for operating budget shortfalls, and to fund the cost recovery reserves (discussed below)," Esquiro said.

The Capital Reserve Fund was established as a hedge against depreciation. NSRAA's hatcheries are over twenty years old and getting close to fully depreciated.

"In an ideal world, a company's funded depreciation account, our capital reserve fund, should equal the accumulated capital depreciation. At the time this fund was created, NSRAA's depreciation stood at something over 6 million dollars, so obviously the goal was never reached," Esquiro said.

1.5 million dollars was deposited in the capital reserve fund, and now stands at around 1.2 to 1.3 million dollars, after being tapped for capital equipment replacements.

"I should note that we are facing approximately 1 million dollars worth of major capital replacements and improvements over the next few years, and that this fund was also intended to alleviate the affects of unforeseen, catastrophic events such as pipeline failure," Esquiro said. "We have a long way to go here!"

The Board also created, but did not fund, a Contingency Reserve Fund. This fund was meant to cover "everything else."

"We have, for example, been asked for assistance with other projects within the Northern Southeast Alaska region. With no money available, we have always tried to use existing staff and equipment," Esquiro said.

Last spring the Hidden Falls Cost Recovery Reserve Fund and the Deep Inlet Cost Recovery Reserve Fund were created by transferring \$250,000 each from the Operating Reserve Fund.

"These two funds were created to help alleviate the potential effects which could result from taking more cost recovery risk," Esquiro said. NSRAA's budget committee has been given the responsibility for developing the "means of payback" to this fund.

Finally, the Long Term Investment Fund was created in 2005 as a mechanism for offsetting revenue losses which would result from the corporation taking on a "cost reimbursable construction contract" to build a new coho hatchery at the Sawmill Cove Industrial Site.

"Under a cost reimbursable contract, we have to spend our own money before we can

ask for reimbursement from the grant funds," Esquiro said.

This fund was created with surplus operating funds, which resulted from NSRAA taking out a State salmon enhancement loan for hatchery operations.

"This mechanism allows us to maintain our cash flow and investment portfolio through the new hatchery construction period. Since the principle, approximately 2.8 million dollars, will not be spent, we will be able to re-pay the loan before any interest accrues or any payments come due," Esquiro said.

NSRAA has also created a scholarship program with a \$100,000 deposit, which acts as an endowment. Each year NSRAA awards two \$2500 scholarships.

"Essentially, the \$100,000 generates enough interest to cover the scholarships," Esquiro said.

Scholarship details and eligibility requirements can be found on the NSRAA website at www.nsraa.org.

General manager Pete Esquiro welcomes questions about these funds and other matters.

"Please feel free to call me at 907-747-6850, email me at pete_esquiro@nsraa.org, or stop in to the office in Sitka," Esquiro said.

Medvejie

The major new project for Medvejie hatchery staff during the 2006 season will be the addition of a chinook zero-check program at Deep Inlet. Zero-check chinook are released into saltwater their first year instead of being over-wintered at the facility, reported hatchery manager Lon Garrison.

Nearly 1 million chinook smolts will rear in netpens in freshwater for one and a half months at Green Lake, and then be transported to Deep Inlet by boat in mid-June. The goal is to release them in mid-July.

"This mimics the zero-check program already in place at Medvejie," Garrison said. Garrison noted it will be a challenge to maintain adequate dissolved oxygen levels in the water, and to avoid smolt-killing bacterial infections such as *Vibrio*, which are common in Green Lake's warmer waters.

In addition to a chinook release at Deep Inlet, approximately 120,000 coho smolts from the Plotnikof broodstock program will also be released this spring. 10,000 of their cohorts will be reared and released at Medvejie for broodstock purposes.

These coho smolts were transported to a single net pen in Deep Inlet on April 28th.

"These are the best Plotnikof coho smolts produced to date and should be close to 17.5 grams at saltwater entry which should be a very good size. We hope to release them in late May," Garrison said.

The SeaReady (SR) chinook smolt program at Medvejie remains the same as last year, along with the "traditional" chinook program and the Green Lake chinook program.

The chum program at both Deep Inlet and Medvejie has expanded slightly this year.

"We will be releasing just over 9 million fry at Medvejie for broodstock, up from 7 million last year," Garrison said.

Deep Inlet production has increased by an additional 3 million this season for Sheldon Jackson College (a joint project) for a total release in 2006 of approximately 51 million fry. This is the most fry ever released at Deep Inlet.

Twelve million chums were reared as "Late-large" and were released in early May.

"All of the chum at Deep Inlet are doing very well so far," Garrison said, "And Matt Golden and his crew have done a super job. This is Matt's first year as the project leader."

Hatchery Reports

Facility improvements at Medvejie this year will focus mostly on water delivery to the saltwater netpen complexes and small modifications and/or repairs to some of the buildings.

"The record breaking cold snap in March did not cause any significant problems at the hatchery. However, water has been extremely scarce due to the dry, cold weather. Fortunately, we have a great crew of both full time staff and temporary employees this season," Garrison said.

Hidden Falls

The cold snap in March coincided with Hidden Falls hatchery's transfers of chum to Takatz Bay, but the transfers went well anyway.

"We completed them in seven days straight with no problems besides minor freezing issues with nets, pipes, and boats," said Hidden Falls hatchery manager Scott Wagner. "Everything just took two to three times as long to complete."

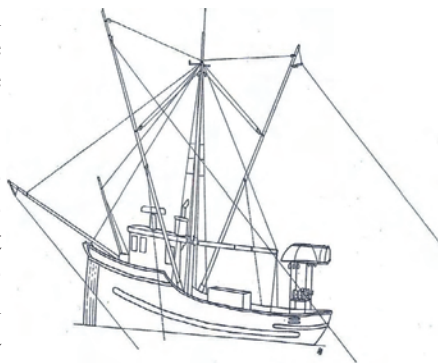
Plumbing modifications to the chum ponds helped make the ponding process for 90 million chum go more smoothly this spring at Hidden Falls. "Dog piling" during ponding, where the chum pile together and suffocate, has made this a trying time for fish and Hidden Falls staff in the past.

"Hidden Falls had winter mortality problems once again with our chinook that over-winter in saltwater," Wagner reported. "This has been an ongoing problem and may be attributed to a bacteria that is resistant to treatment." Mortality wasn't significantly higher than normal, however, which is generally about 3 to 5 percent from ponding to release.

Staff is looking at trying a different vaccine next year, and are considering over-wintering fish outside of the freshwater lens to see if this might help reduce chinook mortality by better preparing them for saltwater and reducing the transmission of pathogens from fish to fish.

Cold, dry weather in early March brought down the level of Kasnyku Lake a foot below the lowest level seen in the previous several years. The lake supplies fresh water to the hatchery.

"One benefit of this is that we were able to locate and repair an old air leak in our 30 inch main shallow supply line coming from the lake," Wagner said. "This stopped the introduction of air into our pipeline."



of the steel and aluminum structure, and when I first saw it I didn't think we'd be in operation this year."

Staff worked for three days with chainsaws to remove the logs, and then realigned the steel and aluminum and bolted it back to the concrete.

"Ten days into the repair, the crew called in to say they would likely be on schedule to receive smolt by May 1," Reifenhstahl said. "The staff did a tremendous job under difficult circumstances. They didn't have any big machinery or mechanical advantage, just strong backs and lots of determination."

Repairs were made in time to continue with Deer Lake's planned production increase. After favorable results last season, the NSRAA board of directors approved a supplemental budget to increase the number of pen reared coho fry in Deer Lake from 600,000 to 1 million.

"Much of this winter was spent gearing up to handle this increase," reports Todd Buxton, Deer Lake project manager.

An additional net pen and supplies for constructing a larger capacity work float were offloaded from the tender American Patriot in Mist Cove at the same time that a new Wavemaster net pen float complex was assembled at the same location.

Wagner said it appears that there is a smaller leak in the deep line, which staff has not yet been able to track down. They hope to pinpoint it sometime this summer.

Construction projects scheduled for completion this spring are re-covering the main hatchery building roof, and the installation of a new hydro governor which Wagner explained will improve their control and make the secondary use of water through the hydro much more efficient.

Coho Lake Rearing

Deer Lake's coho rearing program was in jeopardy this spring, when the logjam at the outlet of Deer Lake shifted during a flood event sometime during the winter and sent logs and debris downstream.

The logs over-topped the weir and did considerable damage to the weir structure, completely obliterated the smolt sorting structure, and left the weir with thousands of board feet of logs jammed against it.

"We have never seen an event like this in our twenty-six years at Deer Lake," said NSRAA operations manager Steve Reifenhstahl. "The flood ripped up and bent some

Northern Southeast Regional Aquaculture Association

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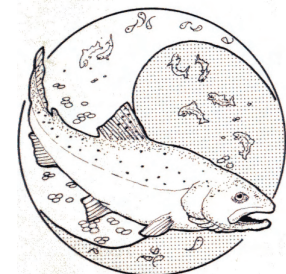
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"The new work float will allow us to offload a full season's order of fish food from the Deer Harbor II so that we can sling the food to the lake with one visit of the helicopter rather than having to split the year's feed supply in half and pay for two helicopter trips from Juneau for this work," Buxton said.

The Wavemaster complex was paid for by funds obtained through a grant from Governor Murkowski's Salmon Revitalization program. The complex will be used to hold adult coho that escape the commercial fishery and return to Mist Cove, where a contract seiner will net them into the Wavemaster's pens.

From there, coho will be brailled onto the deck of a tender and live bled to increase the quality and price of their flesh. A seine-caught, live-bled coho can fetch significantly more per pound than an unbled seine-caught coho.

Meanwhile, spring has sprung at Deer Lake, so the crew is readying equipment for catching and counting the coho smolt migration from the lake. This is the first spring that over-winter survival of pen-reared fry will be assessed. The fry were kept in pens to protect them from predation by the lake's non-native population of rainbow trout.

"Our hope is that 75 percent of pen-reared fry migrate to Mist Cove as smolt. Twenty percent of the pen reared fry perished when they attempted to migrate over Deer Lake's falls before springtime, but only 5 percent over-winter mortality can occur if we are to meet our goal. This is somewhat of a tall order to expect, but given the size and health of the fry at the time of release, our goal may still be realistic," Buxton said.

Haines

Haines biologist Todd Buxton spent this past New Year's holiday thermal marking chum fry incubating at the 17-mile chum incubation site.

The mark was proven successful by the Alaska Department of Fish and Game (ADFG) tag lab that extracted the otoliths—small bones in the fish's cranium—and viewed the mark that was placed on them.

This is the first time in the upper Lynn Canal that enhanced chum salmon have been marked for tracking through the fishery.

"In spring, we will enumerate the chum fry out-migration so that we know how many marked fry we are releasing. Once marked fish have returned, we will calculate marine survival of these fish as well as their contribution to the commercial fishery and escapement to the Chilkat River, information that has not previously been available," said Todd Buxton, Haines project manager.

The winter's progress in Haines also involved obtaining permits to double the chum incubation capacity at the 17-mile incubation site from 1.2 million to 2.4 million eggs. This increase was approved by ADFG area biologists in response to successfully marking otoliths at this site.

With this increase, the total production capacity for the Haines project will be 4.8 million chum eggs.

Progress was also made on the state legislature grant-funded spawning channel project in the Chilkat Valley, Buxton said. Permits were obtained and a contractor secured to replace spawning gravels in the 24-mile spawning channel. Groundwater monitoring pits were excavated along a possible route that a future spawning channel might take near the confluence of the Klehini and Chilkat Rivers.

Initial findings from the groundwater pits are that groundwater is plentiful in the area, but spawning gravels may need to be screened offsite and trucked in. After the spring snow melt, spawning gravel availability can be more ac-



The weir at Deer Lake prior to the record breaking high water event last fall.

curately assessed so that the length of the channel can be adjusted to stay within the \$300 thousand dollar grant funding its construction.

In his dual role as NSRAA Haines biologist and vice chair of the Takshanuk Watershed Council (TWC) in Haines, Buxton is beginning to see his efforts to improve fish access and habitat in salmon bearing streams in the Chilkat Valley pay off.

The Alaska Dept. of Transportation (DOT) took time from work to improve the highway to remedy a partial blockage of fish to 37-mile creek near the Canadian border.

"This remedy fully opens a mile of spawning and rearing habitat to coho salmon and spawning habitat to chum salmon," Buxton said.

HF and DI Cost Recovery Fund

Every year, while commercial fishermen are doing their job catching hatchery salmon, NSRAA is harvesting salmon too, in order to earn enough money to continue to produce those fish. A few close years for NSRAA's cost recovery harvests at Hidden Falls and Deep Inlet, which resulted in commercial fishermen stuck at the dock while NSRAA worked to make its cost recovery goals, have led to the development of cost recovery reserve funds for Hidden Falls and Medvejie/Deep Inlet.

In their November 2005 regular meeting, the NSRAA Board approved two reserve funds of \$250,000, with separate funds for the Hidden Falls and Deep Inlet chum programs. The funds' intent is to provide NSRAA staff some flexibility when making difficult harvest management decisions.

"It tries to give us the abil-

Buxton is also working with TWC to develop a restoration plan for chinook salmon in Big Boulder Creek at 34-mile of the Haines highway.

On the creek, debris flows that occur approximately every 16 years appear to be channeled by the highway and its bridge over the creek.

"Subsequent entrenchment of the creek into this material may occur to a greater degree now than before the highway because the debris does not spread out on the creek's fan as it did before the highway. The deeply entrenched creek then functions more like a flume than a stream, so offers little suitable habitat for chinook salmon," Buxton said.

ity to have a commercial opening where otherwise we might not have because we couldn't risk not making cost recovery," explained Steve Reifensuhl, NSRAA operations manager. "If we miss the cost recovery goal as a result of having the opening, the fund will help make up the difference."

But use of the fund is by no means "free."

Chip Blair, NSRAA's Deep Inlet cost recovery manager, noted that any cost recovery shortfall paid out of the reserve fund will have to be paid back.

"If a project were to fall short by \$100,000 this season and the fund was drawn down, that money would have to be made up, most likely by increasing the target for next season by \$100,000. Possibly it could be spread out over two seasons," Blair said.

Lower marine survival
cont. page 8



Josh Homer works to clear the Deer Lake weir after the high water event.

NSRAA Forecasts

The overall returns for NSRAA projects are expected to be higher this season, with a total of about 4 million fish compared to 3.1 million a year ago. These numbers include the Boat Harbor and Limestone Inlet projects, which are cooperatively operated with Douglas Island Pink and Chum (DIPAC).

Chum returns are expected to be 35 percent higher this year than last (3.7 million in 2006 versus 2.7 million in 2005). NSRAA staff anticipate that the commercial chum harvest will be up 85 percent from last year (2.9 million in 2006 versus 1.6 million in 2005).

"This increase is due to both the expected larger chum returns, and the fact that we will harvest fewer cost recovery fish as prices rise," said Chip Blair, NSRAA data manager.

The number of cost recovery chums required will drop by about 220,000 fish,

from 840,000 to 620,000 fish.

"If fish returns come in close to our projections, this means that about 78 percent of the return should be commercially harvested, a big increase from just 60 percent a year ago," Blair said.

The chum forecast shows an increase for all the major projects:

- 700,000 additional fish at Hidden Falls
- 100,000 additional fish at Deep Inlet
- 60,000 additional fish at Boat Harbor
- 95,000 additional fish at Limestone Inlet

Boat Harbor and Limestone Inlet forecasts are made by DIPAC.

The chinook return projection is more of a mixed bag. Hidden Falls should see a 20 percent increase this year, with 22,400 fish. But Medvejie's chinook return is expected to be down about 25 percent, with 21,000 chinook.

The two projects together expect 43,400 chinook

to return, down about 8 percent overall from the 47,000 seen at the two projects in 2005.

Blair noted several reasons for the slightly poorer chinook showing this year.

Fish that have been in the ocean for three years usually make up the biggest component of the return. This year, that group from Medvejie has two strikes against it.

"Medvejie adult chinook return numbers are down because marine survival for the three-ocean fish from brood year 2001 is currently projected to be less than 1 percent, compared to a five year average of 2.4 percent," Blair said.

Medvejie also had a drop in smolt numbers released for that same age class, due to a bear that swam out to the net pens in November of 2002 and released over 400,000 pre-smolt. The bear didn't get them, but without NSRAA's protective care and feeding, it was unlikely these youngsters would make it.

"These fish were given no chance for survival, and therefore treated as mortality," Blair said. "So that brood year's spring smolt release

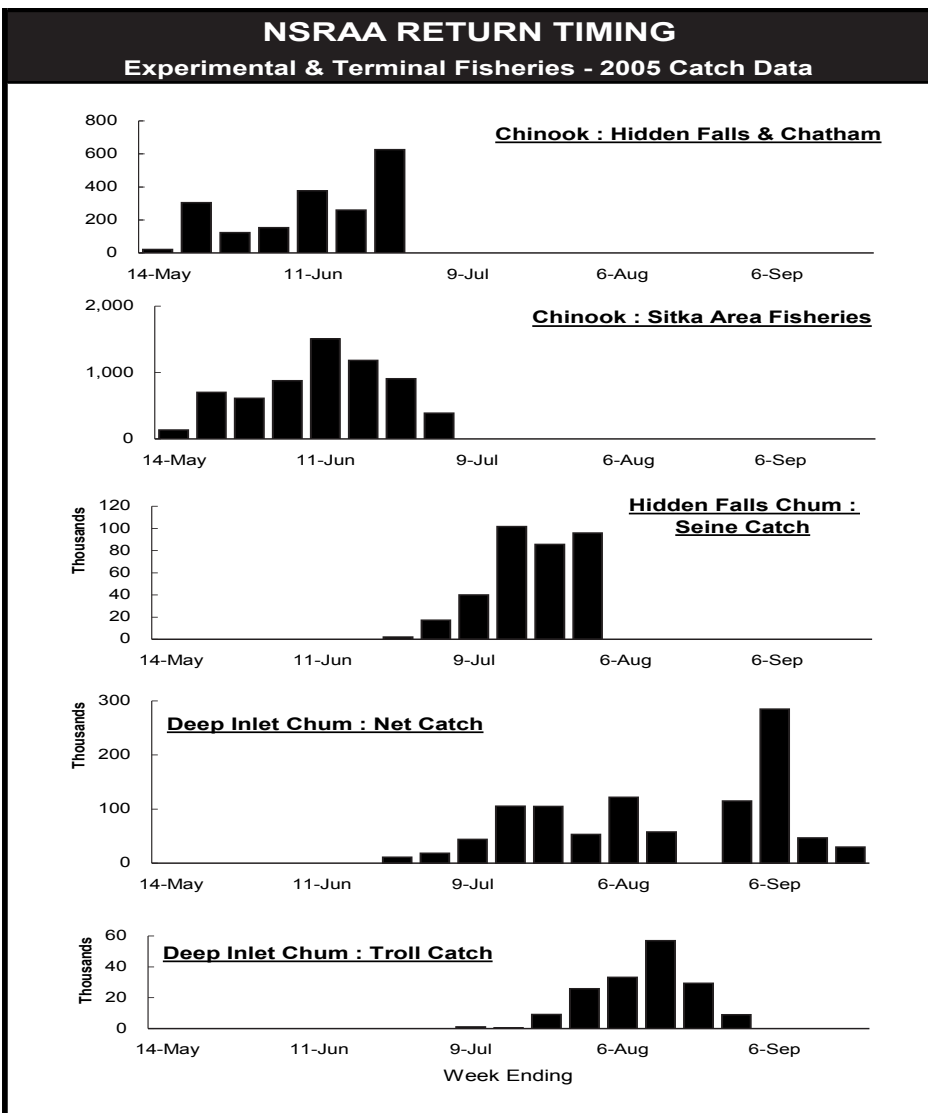
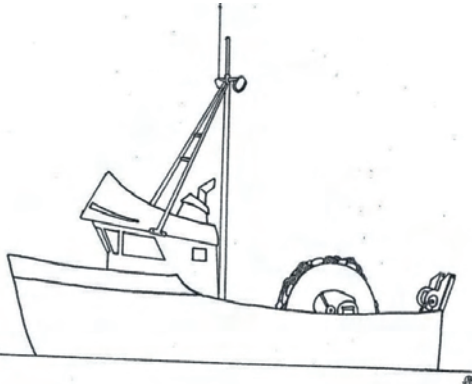
dropped from the normal 1.9 or 2 million to about 1.5 million."

Hidden Falls chinook return numbers have been down for a few years, Blair noted. The survival rates for brood years comprising the main portion of the return, 1999 through 2001, have projected survival rates that average about 1 percent lower than the previous five brood years.

Coho projections are based on a conservative 8 percent marine survival estimate, as there is no earlier age class return to use as an indicator.

"Jack' returns, coho that return at the end of their first year in saltwater, were strong at Mist Cove and Hidden Falls, so it wouldn't be surprising to see numbers 100,000 to 150,000 above the forecast shown in the table," Blair said.

The total coho forecast is 258,000 fish, down from 352,000 in 2005. Hidden Falls and Deer Lake will see decreased numbers of coho, at 176,000 and 58,000 respectively, while Shamrock Bay should see 23,000 fish, up from 20,000 in 2005. This will be the final adult return for this release site.



Projections Higher for 2006

Fish prices are expected to climb this year, Blair said. For cost recovery, that means less fish will be required to meet NSRAA's CR needs.

"We're hopeful that the combination of a lower cost recovery goal and a larger return will result in accomplishing our goal without too much of an impact on the commercial fishery," Blair said.

The CR goal at Deep Inlet this year is 340,000 chum, compared to 485,000 last year.

The overall return is expected to be larger by 100,000 fish this season, with a forecast of 1,822,000 chum. Last year, 1,725,000 chum returned.

"This means that instead of cost recovery needing 28 percent of the fish, as was the case last year, we should need only about 19 percent," Blair explained.

Blair noted that there are some changes to the harvest plan.

First, there is a change to the line closing the inner part

of Deep Inlet. Second is a CR break in the middle of the season.

"The line change comes at the request of gillnetters to make the line go across the inlet rather than following a line of latitude, which crosses the inlet at a sharp angle and makes fishing inside the mouth challenging during big tide changes," Blair said.

The marker on the left hand side will remain the same, while the marker on the right will move a bit towards the head of the inlet.

The inner bay will be closed to commercial fishing from July 2 - 22, the first three weeks of CR fishing. During this time the commercial fishery in the THA will operate on a single rotation schedule, with 1 seine, 2 gillnet, and 4 cost recovery days.

Then, CR will take a break in the THA for at least two weeks, from July 23 - Aug. 5. The schedule will go to a double rotation, and the inner bay will re-open.

"We are anticipating

little or no cost recovery harvest during this period, but will be prepared to fish if the opportunity presents itself, say if there are good numbers of fish in inner Eastern Channel or Silver Bay," Blair said.

The single rotation goes back into effect on August 6. Whether the inner bay is closed then depends on fish movement patterns at that time.

"The mid-season break is being tried this year because for the last few seasons there has been little harvest dur-

ing this period, which is between the Hidden Falls and Medvejie stock returns," Blair said. "Reopening the inner bay to commercial fishing the last week of July should also help reduce the quality issues we've seen the last two years when the inner bay was closed for longer periods of time."

The entire Deep Inlet management plan, along with a printable calendar and maps, are available on the NSRAA website, www.nsraa.org, on the Fishery Updates page.

BOF Proposal Implementation

Board of Fisheries (BOF) proposal 162, proposed by NSRAA last year, addresses early season management in Deep Inlet.

The main reason for the proposal was to allow early season access to hatchery chinook.

The proposal passed in January 2006 after some modification to remove the provision that called for a departure from the 2 : 1 ratio for gillnet : seine fishing during this early season.

"The Board of Fisheries felt there wasn't justification for a separate gillnet to seine ratio during the chinook period," Blair said.

The final proposal includes these provisions:

- Fishing in the THA will be allowed from late April to late June.

- The gillnet : seine ratio will remain at 2 : 1.

- The western boundary of the THA will be modified from May 1-21 to allow for a traditional troll drag in front of Pirate's Cove.

- NSRAA's staff and board will set the fishing schedule.

NSRAA had hoped to see the 2 : 1 ratio dropped for the early season since there is generally little seine fishing in the THA during this period anyway.

"Not being tied to the two to one ratio would free up more fishing time for trollers in the THA," Blair said. "At this point we don't see the Board's not allowing the change in the ratio as a big issue, due to the relatively low number of chinook in the THA that time of year."

Blair said that if in the future, NSRAA's zero check chinook releases prove successful and there are increased num-

bers of adult chinook returning to the THA, the scheduling and ratio issues can be revisited.

BOF proposal number 163 also passed at the BOF meeting in January.

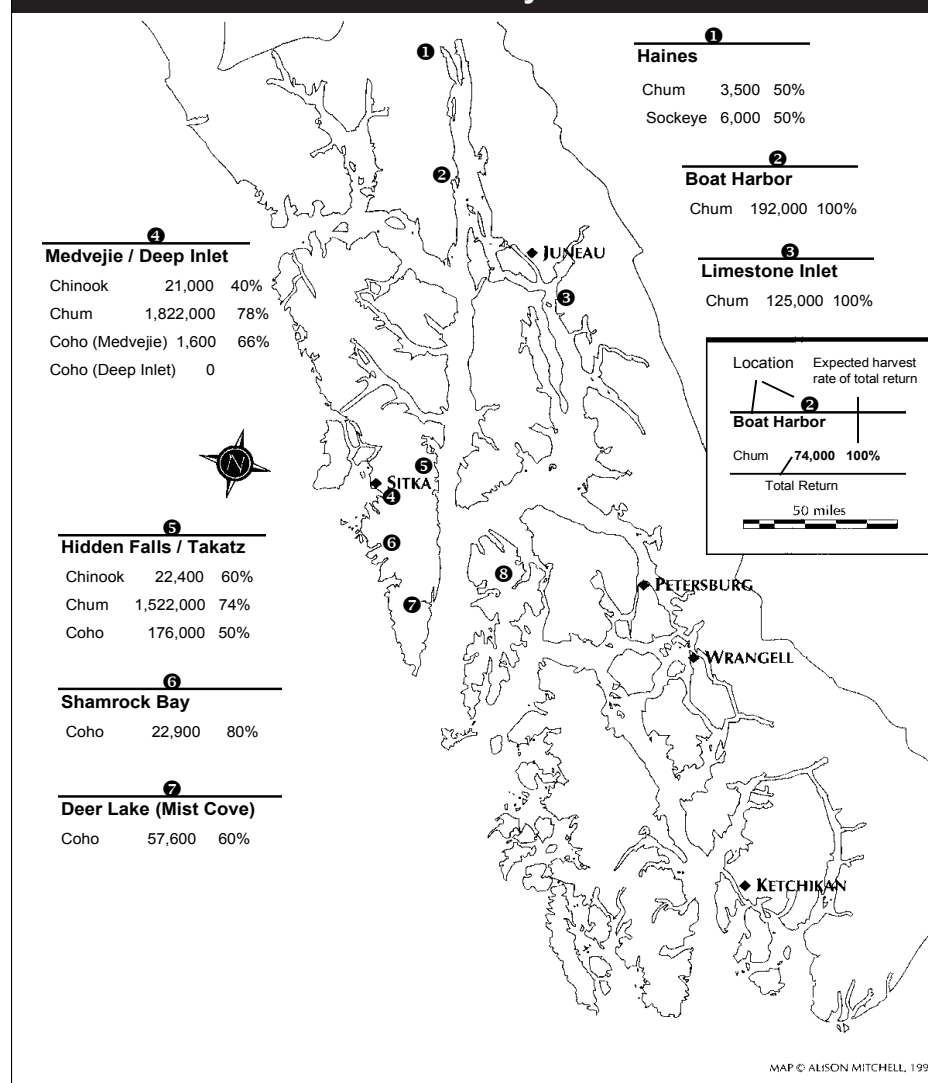
This proposal, a joint effort by NSRAA staff and the Chum Trollers Association, was developed after a collaborative effort to explore possibilities to give NSRAA more opportunity and flexibility in its cost recovery (CR) harvest, without adversely affecting the current troll fishery.

The proposal contains these changes to current CR management:

- A new CR area was created, allowing cost recovery fishing all season in the Middle Channel, Western Channel, and Makhnati Rock areas.
- The western boundary of the THA is extended for CR fishing during times when the entire THA is open for CR.

2006 Projected Returns to NSRAA Projects

Catch + Cost Recovery + Broodstock



"The dates of the troll fishery in Eastern Channel were modified to begin 2 days earlier (new date is July 22), and end one day sooner (the day before the end of the Aug. coho closure) than in the past.

Blair admits that these changes are not huge, but said that even little changes can help cost recovery harvest some years.

"The nature of the fishery, with three gear groups overlaid with cost recovery harvest and broodstock needs, creates a very complex management problem," he said. "We are always looking for ways to accomplish cost recovery in a more efficient manner, with as little impact as possible on the commercial fisheries."

NSRAA 2006 Return Projections / Expected Utilization / By Species

Site	Projected Return	Range		Commercial	Sport	Cost Recovery	Brood Stock
		Low	High				
Chum							
Hidden Falls	1,522,000	1,000,000	2,000,000	1,122,000	-	280,000	120,000
Medvejie/Deep Inlet	1,822,000	1,300,000	2,300,000	1,427,000	-	340,000	55,000
Boat Harbor*	192,000	142,000	242,000	192,000	-	-	-
Limestone Inlet*	125,000	75,000	175,000	125,000	-	-	-
Haines Projects	3,500	1,750	7,000	1,750	-	-	1,750
	3,664,500	2,518,750	4,724,000	2,867,750	-	620,000	176,750
Chinook							
Hidden Falls	22,400	17,400	27,400	13,440	500	5,460	3,000
Medvejie	21,000	16,000	26,000	8,400	1,050	7,550	4,000
	43,400	33,400	53,400	21,840	1,550	13,010	7,000
Coho							
Hidden Falls	176,000	132,000	264,000	88,000	4,000	74,000	10,000
Deer Lake	57,600	43,200	86,500	34,600	1,000	22,000	-
Medvejie	1,600	1,200	2,500	1,056	144	-	400
Shamrock Bay	22,900	17,200	34,400	19,000	2,700	1,200	-
Deep Inlet	-	-	-	-	-	-	-
	258,100	193,600	387,400	142,656	7,844	97,200	10,400
Sockeye							
Chilkat Lake Stocking	-	-	-	-	-	-	-
Chilkat Lake Incub. Boxes	6,043	-	-	3,022	-	-	3,021
	6,043	-	-	3,022	-	-	3,021

* Cooperative Project with DIPAC

Board Member Profile

The most senior member of the NSRAA board, Bob Ellis, brings a wealth of experience - with hatcheries, fish and stream biology, and the Southeast Alaska natural environment - to the table.

Ellis has held the conservation seat continuously since 1987. Ellis also serves on the board of the Sitka Conservation Society.

Ellis grew up in Michigan, attending the University of Michigan and Michigan State, but has been on the West Coast since the late 1950s, when he moved to Oregon to study its troll fisheries. In 1961 he fulfilled his dream to move to Alaska, when he followed one of his employers to the National Marine Fisheries Service Auke Bay Lab to do sockeye salmon research in Bristol Bay.

In the mid 1970s Ellis was in charge of the salmon facility in Little Port Walter, studying pink salmon. While he was at Little Port Walter he also worked with several people whose names are very familiar in NSRAA history.

"I took over for Bill McNeill, and after me came Bill Heard, who was also part of the Bristol Bay operation I worked on earlier. I was the supervisor at Little Port Walter while Dick Crone was finishing up his doctoral research, and Derek Poon was down doing graduate work when I was in charge," Ellis recalled.

Ellis moved to Sitka in the early 1980s with his wife Natasha Calvin, to escape government

work. Both were experienced divers, so they worked together on log dump studies for several years.

"Right then the state was starting to enforce regulations on log dumps in Southeast, and since I had done a little work on ones in Southeast one summer for the Auke Bay Lab, I was the 'expert,'" Ellis said. "So we did that for a few years, traveling around Southeast while someone else paid our expenses."

Ellis gave up diving a few years ago.

"I took my own advice. I used to be the diving officer and I always said, 'If you're going to dive at all, you have to dive a couple times a month. You need to get your hours in to stay proficient.' So I got rid of my equipment."

Calvin died in 2001, and Ellis has since married Joan Vanderwerp, who has lived on and off in Sitka for many years.

Speaking about his role at NSRAA, Ellis sounds as enthusiastic about the job as he must have been when he started over twenty years ago.

"I was really interested in it for many reasons. I had worked professionally with hatcheries since a project we did in 1948 for the Michigan Department of Conservation, way back when we anesthetized fish we were working on with ether that we had in a metal can in the back of a truck. The role hatcheries have played has changed so much in fifty years, for instance when I moved to Oregon the big word was 'mitiga-



Construction crews work to replace gravel at 24 mile spawning channel in Haines this spring.

tion,' mitigating the damage from the dams on the Columbia, but as we've seen from the salmon decline there that hasn't worked so well.

"I was concerned early on about protecting the integrity of the wild stocks, and as it's developed, the State of Alaska has done a good job with this. This is always an issue when NSRAA is working on a new program, but from a strictly conservation view, it's gone pretty well."

Ellis isn't shy about discussing his number one priority: protecting the basic concepts of wilderness areas in Southeast Alaska.

"I think the board members realize that this is what I'm doing and respect it. I don't keep it a secret," Ellis said. "For instance, in the West Chichagof area there is a lake, that on paper has considerable potential for a lake rearing project, and it is in an area where fishermen think we need some enhanced salmon projects. And I, personally, would like to see projects kept out of that wilderness area. If it was successful, it would bring in a large number of commercial fishermen, which would degrade the wilder-

ness experience. For those of us who aren't commercial fishermen, we can't even use some areas anymore. It hasn't come to a fight because I think people see the fight coming."

Overall, Ellis believes not being a gear group representative allows him to be more objective about board issues.

"It's fun to be there and not have the constraints of being one of the gear groups," Ellis said.

Ellis fully supports the concept of private non-profit hatcheries, and offers NSRAA as the finest example, speaking highly of their "cutting-edge" salmon culture research and their commitment to good science as well as salmon production.

"It was a good idea and they've made it work. There isn't another hatchery that even comes close. Problems come up but the fishermen, biologists, fisheries managers all give a little bit on allocation, and they hold the line on the basic biology, which is fine with me. If they protect the viability of the wild stocks they can make all sorts of mistakes in the management and the fish will still come back."

Deep Inlet Harvest Plan

The Deep Inlet terminal harvest area (THA) opened April 30 and will see fishing activity for five months, through September, said Deep Inlet harvest manager Chip Blair.

For the first nine weeks of the season through July 1, fishermen will primarily focus on chinook, and perhaps some chum in late June.

"Typically we don't see

chum in very large numbers until then," Blair said.

The commercial fishing schedule will be the same "double rotation" as in previous years, with gillnet fishing on Mon./Tues. and Fri./Sat., one seine day on Sunday and the second alternating on Wed./Thurs. from week to week. Troll fishing is allowed on the off day - the alternating Wed./Thurs. - each week.



The American Patriot and NSRAA crew work to repair the Deep Inlet net pens this spring.

Why Alaska salmon fishermen should be smiling: A global market sampler

By Laine Welch

As we head into the “official” 2006 salmon season, here is a glimpse at signs that point to a good year for Alaska’s salmon industry:

First and foremost: Demand for wild Alaska salmon continues to increase in markets at home and around the world. It has become the poster child for purity, healthfulness and earth friendly management. As an added boost for Alaska - more customers say frozen is fine!

National surveys show:

- 77 percent of restaurant diners have a positive impression of Alaska Seafood and said seeing the Alaska brand on a menu has a positive effect

- Seafood items branded “Alaska” rank second among branded food items on menus of the top 500 U.S. restaurant chains -- up from 3rd place in 2001. (Oreo is #1)

- More people around the world recognize the purity and nutritional benefits of wild salmon, and are aware of its health-packed “omega-3.” (At the same time, huge media blitzes around the world continue to bash farmed salmon for its contaminants, colorants, etc.)

- More chefs are promoting Alaska wild salmon, both for its rich flavor and the fishery’s “managed-for sustainability” image. (60 percent of all seafood is eaten at restaurants.)

Wally World Goes Wild! Alaska’s salmon industry will get a huge boost by Wal-Mart’s pledge to source all wild caught fresh and frozen fish for its North America stores from fisheries that are proven to be well managed. Alaska salmon was the first fishery in the world five years ago to merit the MSC label. Wal-Mart will begin by stocking

its shelves with fish that’s already merited an eco-label from the international Marine Stewardship Council. (The MSC program encourages consumers to “purchase with a purpose” by supporting fisheries that are well managed and friendly to the environment.) Other mega-corporations in the U.S. and Europe are following Wal-Mart’s lead.

In my view, this will be a plus for salmon prices, as it will expand markets to a far larger (and eager) buying public on a year round basis.

Kings Rule, or one fisherman’s misfortune is another one’s favor... Chinook harvests from west coast fisheries (OR, WA, CA) will be slashed by 30 percent this year, to about 400,000 fish. (Down from about one million). That shortfall means Alaska is well poised to benefit from the avid demand in niche markets for its projected harvest of 780,000 wild kings. (The total North American supply of wild chinook salmon has only been around two million fish in recent years.)

Winter troll king watch: The region-wide price average topped \$7 a pound in December, reached \$8.03 through early March and settled at \$6 by mid April. Last year’s average price for the season was a respectable \$5.80 a pound. The total winter king harvest (45,000 fish or only about half a million pounds) will easily top \$3 million at the Southeast docks.

Hi Ho, Coho! The market for coho salmon continues on an upward trend. By May, the Seafood Market Bulletin reported first wholesale price for frozen H&G (headed and gutted) coho is averaging \$1.92 a pound – compare

that to \$2.09 for sockeye salmon.

Likewise, chums are chugging upwards, showing the biggest price increase of them all – first wholesale average price was 76 cents a pound in 2005, up 38 percent from 55 cents in 2004.

Shape shifters: Alaska producers are responding to customers’ preferences for more “user friendly” and convenient salmon product forms. For the past

five years, virtually all of the growth in the U.S. salmon market has been in fresh and/or frozen fillets.

In Alaska, last year’s fillet production was 25 million pounds, nearly double the amount of fillets produced in 2003. (Despite the encouraging growth, that is only about four to five percent of the total Alaska salmon production.) After an April European trade mission, Gov. Frank Murkowski said the growing demand for Alaska coho and sockeye fillets in Europe “could lead to a supply shortage this summer.”

A projected harvest shortfall for sockeye could shift the product mix. More than half of the Bristol Bay’s sockeye catch usually ends up in cans, compared to about 20 percent from other Alaska sockeye fisheries, where the bulk of the catch is frozen. This year, a catch of 12 million sockeye from non-Bay fisheries - down from 18 million - means a shortfall of six million reds. It will be interesting to watch how that affects the product mix coming out of Bristol Bay.

A Canned Caveat: High fuel

Deep Inlet Cost Recovery 2006

The single rotation goes back into effect on August 6. Whether the inner bay is closed then depends on fish movement patterns at that time.

“The mid-season break is being tried this year because for the last few seasons there has been little harvest during this period, which is between the Hidden Falls and Medvejie stock returns,” Blair

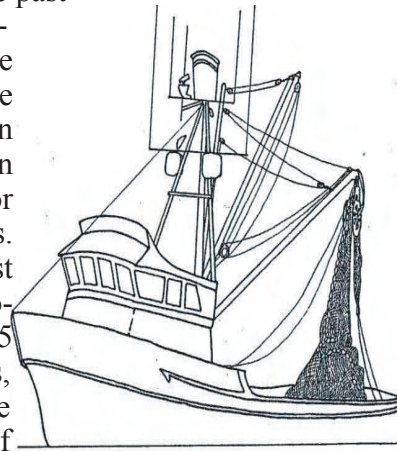
prices are likely to have an impact on the shifting emphasis to frozen production. The Seafood Bulletin said: “increasing frozen production and storage in remote areas typically means relying on electricity produced by costly diesel generators and relatively inefficient freezer vans. On the other hand, canned salmon can be stored and shipped without incurring that expense. This

cost factor will not be a primary driver of product form decisions, but may play some role in determining pack composition in remote areas of the state.”

Seafood Soars Overseas! Last year seafood again led all other Alaska exports, increasing 21 percent in value to nearly \$2 billion.

Alaska seafood now goes to 44 countries, up from 34 just three years ago. Japan remains the U.S. number one seafood customer, taking 28 percent of total exports. Europe at 25 percent ranks second, followed by Canada, Korea and China – where U.S. seafood exports increased 36 percent.

Laine Welch has been covering news of Alaska’s seafood industry for print and broadcast since 1988. Since 1991, her weekly Fish Factor newspaper column has appeared in more than a dozen outlets and websites; her daily Fish Radio programs can be heard on nearly 30 Alaska radio stations and websites. Before coming to Alaska, Laine was well known for her daily broadcasts of Boston and New Bedford fish auction prices and landings. Laine has worked for many years “behind the counter” in seafood retail and wholesale businesses.



Medvejie Maintenance Engineer Mike Poutney and manager Lon Garrison sling a tote load of Green Lake Chinook off of the Green Lake dam.



Sawmill Cove Update

The Sawmill Cove Coho Hatchery in the planning stages at NSRAA is at a strategic crossroads, after the permitting process snagged on concerns about wild salmon in Sawmill Creek.

The goal of the facility is to release 2 million coho smolts that will generate approximately 200,000 returning adult coho, to benefit the commercial fishery. Sports fishermen and subsistence fishermen would benefit as well. Initial design and permit applications were submitted to state and federal agencies in the fall of 2005.

The main difficulty is that the creek's wild coho stock has been deemed "significant" by the Alaska Department of Fish and Game (ADF&G), making it a regulatory impossibility for hatchery coho to interact with the wild coho.

Other agencies with jurisdiction, such as the Sitka Tribe of Alaska, and the U.S. Fish and Wildlife Service, have expressed concerns in meetings with NSRAA managers about the steelhead population in the creek being negatively impacted by hatchery coho as well.

NSRAA operations manager Steve Reifenstuhl was caught off guard by the designation of Sawmill Creek coho as "significant," since in the hatchery's early planning stages, ADF&G had recommended that NSRAA pursue the development of a summer-run stock like Plotnikof coho for the project rather than a fall-run from Indian River. The Sawmill Creek coho are a fall run, but even so a portion of the return would overlap with the Plotnikof summer run.

A barrier net placed across the mouth of the creek was planned to

prevent the Plotnikof coho from entering Sawmill Creek. But since the migration timing of the two stocks is not 100 percent known, and barrier nets occasionally fail, it would be impossible for NSRAA to guarantee that there wouldn't be any hatchery coho escaping upstream. The barrier net could also interfere with wild steelhead, coho, chum, and pink salmon entering the creek to spawn.

While NSRAA managers could argue their case all the way to the top, Reifenstuhl believes that an acceptable alternative is available which will satisfy NSRAA's need for a coho facility and concerns about Sawmill Creek wild stocks.

"We can still develop the Sawmill Creek site, with all the same infrastructure, except with no barrier net, fish ladder to the hatchery, or pilings," Reifenstuhl said. "We can release the Plotnikof coho smolt from Bear Cove, and then capture the adults returning to Bear Cove, and transfer them back to the Sawmill Creek facility where we can do egg-takes and incubate the eggs." Coho released from Bear Cove would return to Bear Cove, not to Sawmill Creek.

This plan avoids the conflict with steelhead and coho at Sawmill Creek, and operationally, is simpler for NSRAA. The Sawmill Creek Hatchery is designed to hold broodstock for up to 4 months until their eggs are ready for spawn, and NSRAA has lots of experience collecting and transporting live adult fish.

"Another positive aspect of this plan is that we wouldn't have to operate a weir, which is always difficult in a volatile



Coogan Construction works on replacing the roof of the incubation building at Hidden falls this spring.

Alaska stream," Reifenstuhl said.

Economically, the total costs of the project remain about the same as in the original plan. Less capital costs at Sawmill Creek due to the absence of the fish ladder, pilings, weir, and raceways, will be offset by modifications necessary at Medvejie Hatchery to catch, handle, and transport

cont. from pg. 3 Cost Recovery Fund

al rates in recent years have meant lower return numbers, Blair explained. Cost recovery in these years takes a larger share of the return and the management necessary to accommodate the commercial harvest, cost recovery harvest, and broodstock requirements becomes more complicated.

"Perhaps in these leaner years, the reserve funds will help smooth out some of these management problems – but at

adult coho back to Sawmill Creek.

NSRAA has been developing the Plotnikof coho brood program at Medvejie in anticipation of the new hatchery. This spring, 10,000 smolts will be reared and released at Medvejie, with 125,000 smolts transported to Deep Inlet for short-term rearing and release.

the cost of larger cost recovery goals in future years," Blair said.

In the Board's review of the policy this past spring, they clarified that the cost recovery reserve funds could be used mainly to allow flexibility at Hidden Falls during the early part of July when seine openings are important, and to allow flexibility at Deep Inlet in August, allowing commercial openings when the cost recovery harvest is within ten percent of its goal.



A view of the barge and net pen complex at Deep Inlet this spring.

New Board Members

Mitch Eide is the new holder of the Southeast resident seine seat. Mitch is a lifelong commercial fisherman. He lives in Petersburg, Alaska, and fishes on the F/V Rose Lee.

Dan Goodness has been appointed to the private aquaculture seat. Dan is the hatchery manager at Sheldon Jackson College Hatchery, as well as an instructor for several aquaculture classes at SJC. His first aquaculture employment was with NSRAA back in 1982, and lives with his wife Lila in Sitka.

Andrew (Andy) Ebona holds the Native organization

seat. He is from the Copper Shield House of the Kiks.adi Clan (Frog) of the Tlingit Tribe. He was born and raised in Juneau. Andy presently works for the Alaska Native Brotherhood Camp #2 as its President and as Project Manager of the Hoonah Cultural Justice Spirit Camp and Healing Center Project.

Richie Davis, of Juneau, holds the troller seat. He fishes on the F/V Sundee Lynn. Richie was born in Wisconsin, but moved to Alaska when he was five, 43 years ago. He began his commercial fishing career when he was a teenager.