



SPAWNING NEWS

SOUTHERN SOUTHEAST REGIONAL
AQUACULTURE ASSOCIATION

14 Borch Street
Ketchikan, AK 99901
www.ssraa.org

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GM retires after 18 years at helm

JOHN BURKE'S SERVICE CONTINUING IN PART-TIME ASSOCIATION ROLES

John Burke left the general manager's office at SSRAA in January, but the association knotted a string around him. Burke will be pulled in for seasonal help managing Neets Bay operations and for scientific expertise in a study of wild and enhanced salmon.



John Burke

After decades in Alaskan fisheries, he's cutting back—not cutting and running.

"After you've done something for literally 40 years, it's hard to walk away," Burke said in February by telephone from Palm Springs, Calif. He

wasn't there just for the sun and golf. He was attending a conference pivoting around cold storage and transportation, drawing food producers, processors, brokers and shippers—and at least one semi-retired salmon rancher. "It's a good chance for me to understand what's going on in the industry and what's coming," Burke said.

Burke handed the keys for the SSRAA general manager's office to David Landis in January. Burke had been at the desk since May 1998, presiding as the association paid down about \$17 million in debt, boosted contributions of enhanced salmon to commercial fisheries and

improved its own capabilities in cost recovery. At the end of his tenure, SSRAA took on hatcheries in Klawock and Ketchikan and planned for increased salmon production.

Now that his full-time commitment to Alaskan salmon has wound out, Burke and his wife will spend more time together at home on Marrowstone Island near Port Townsend, Wash.

His operational knowledge of Neets Bay Hatchery, the special harvest area and associated cost recovery will aid a new GM and some relatively new senior staff during the height of the season.

Another, potentially crucial project draws on Burke's scientific expertise. He represents aquaculture interests in a long-term "pedigree study" examining whether hatchery salmon affect wild stocks. PNPs and ADF&G are using genetic assays of the offspring of wild-hatchery pairs in Southeast and Prince William Sound. Comparisons of the fitness of several generations of wild salmon, hatchery salmon and "mixed" salmon may decide the question of whether hatchery-born fish harm wild stocks of chum and pink.

"Our hypothesis is that there is no damage," Burke said. "Properly managed hatcheries actually support wild populations as they add spawners to local systems."

Burke wrote the book on salmon fitness—

See 'John Burke' on 2



David Landis brings lifelong experience with salmon; local management history; and a decade of policy leadership at the board table.

Longtime director moving to SSRAA's corner office

The board of directors hired one of its own as SSRAA's general manager and each side got a known quantity.

David Landis took over operational responsibility in January when the board moved a fellow member into the corner office after his 10 years of meetings and policy-setting.

Landis was appointed to the board of directors in 2005. Over the years, he served in at-large appointments and in seats allotted to Native corporations, the chamber of commerce and municipalities. Fellow members chose him as board secretary and vice president during several three-year terms. Landis also chaired the board's tourism and board development committees.

"I think my experience as a longtime board member gives me a significant insight into operations," Landis said by telephone during a break in UFA meetings in Juneau—his first opportunity to meet as a colleague with fisheries people from

See 'David Landis' on 9

SSRAA ensures continuity for cohos on west coast by taking on POWHA sites

After years of careful deliberations, the SSRAA board decided in December 2015 that it is in the best interest of the corporation to take on hatcheries operated by Prince of Wales Hatchery Association (POWHA).

This decision ensures that annual releases of up to 4.5 million coho smolt continue without interruption.

Adult returns from the last several smolt releases are larger and more consistent than past returns, contributing significantly to common property fisheries. Under current hatchery management, total contributions to the common property fishery over the last three years are greater than the aggregate of the previous 15 years' contributions. No one wants to see that production go away!

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Unfortunately, as many in the private nonprofit salmon hatchery business know, coho are expensive to raise and do not typically pay for themselves through cost recovery efforts. This is where SSRAA comes in. Over the last few years, while the Board wrestled over details of taking over those operations, POWHA maintained and improved the coho program through supplemental funding provided by both DIPAC and SSRAA.

SSRAA and POWHA are working together to transfer permits and operations through state and municipal entities. The Klawock River Hatchery and Port St. Nick rearing facility operations and their staffs will be absorbed by SSRAA. Simultaneously, POWHA will disband. Much of this is a public process that will

See 'Klawock River cohos' on 8

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Nominees sought for four board seats

SSRAA encourages salmon fishers to turn in nominations for four gear seats on the board of directors.

One seine seat, two gillnet seats and a power troll seat come open in January 2017. Nominations for the ballot are due Oct. 14.

Nominations must be in writing and must include the permit holder's name; address; vessel name; and phone number. Include a brief statement of interest with a self-nomination. If you're nominating another fisher, provide a short summary of the nominee's background. Limited-entry permit holders nominate only people in their gear groups. Nominees must be active southern Southeast commercial salmon permit holders.

If you're interested in serving on the SSRAA board of directors or you want to nominate a fellow gear-group fisher, please mail a nomination to SSRAA, Attn: Liz Jones, 14 Borch St., Ketchikan, Alaska 99901; or send an email to lizj@ssraa.org. For more information, call the association at 907-225-9605.

John Burke CONTINUED FROM 1

a thesis, anyway. His research for a doctorate in fisheries at the University of Washington examined a virus that strikes hatchery sockeye. Early in his Alaskan career, he put theory into practice as pathologist for the Fisheries Rehabilitation, Enhancement and Development Division (FRED) sockeye hatchery at Main Bay in Prince William Sound; the goal at Main Bay was "to grow sockeye using procedures to minimize the virus."

Burke was FRED's regional supervisor when the division was absorbed into the commercial fisheries division of ADF&G. He later worked as deputy director of the sportfish division and was briefly acting director.

The state assigned Burke to the scientific squad looking out for Alaskan interests in the Pacific Salmon Treaty. He also advised Alaskans participating in the contentious aftermath of the federal court ruling that granted about half of Washington state salmon harvests to tribes—the so-called Boldt decision. Allocations to indigenous peoples had implications for Alaska-bound fish.

Burke's many roles in Alaskan fisheries put him into contact with most of the players statewide, from members of the Board of Fisheries to fisheries bureaucrats, from biologists to the managers and directors in the hatcheries system. When Don Amend retired as SSRAA's general manager in 1998, Burke was ready. He said his knowledge of the board of directors made him confident.

"Those people are the reason I came to SSRAA," he said. "They understand their roles and they made policies that moved us forward. We got out from more than \$17 million in debt, for one thing."

Burke takes a panoramic view of Alaskan fisheries and salmon enhancement as he *almost* retires—retaining one management role and one scientific project for SSRAA.

"I was very involved with fisheries science and fisheries politics across the state for decades. I have relationships with most of the people who are in there now. I want to see them succeed," he said.

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John Burke

SUN	MON	TUE	WED	THU	FRI	SAT
				3	4	5

SSRAA calendar

March 10 Board of Directors production committee / Cape Fox Lodge

March 11 Board of Directors meeting / Cape Fox Lodge

April 6 RPT / Ketchikan

Incumbent trio and one newcomer win seats on the association board

Three incumbents and one new member were seated on the SSRAA board of directors after commercial salmon fishers' ballots were counted in December.

Brad Haynes was the only new director seated during the board's organizational meeting in January; his name had been the only one put into nomination for a seine seat last year.

Incumbent gillnet representatives Chris Guggenbickler and Bob Martin reclaimed their seats in a three-person race.

Power troller Dave Otte was re-elected without opposition on the ballot.

GILLNET

[2 seats up for election]

Chris Guggenbickler	70
Bob Martin	69
Jeff McKean	27
Write-ins	1

GILLNET ballots mailed	435
Ballots returned	92
Percent turnout	21.1%

SEINE

[1 seat up for election]

Brad Haynes	22
Write-ins	3

SEINE ballots mailed	279
Ballots returned	25
Percent turnout	8.9%

POWER TROLL

[1 seat up for election]

Dave Otte	71
Write-ins	1

POWER TROLL ballots mailed	839
Ballots returned	71
Percent turnout	8.5%

SSRAA Board of Directors

SEINERS

Dan Castle	Ketchikan	F/V Little Lady
Jim Castle (sec.)	Ketchikan	F/V Miss Ada
Leif Dobszinsky	Port Townsend, Wash.	F/V Chasina
Brad Haynes	Ketchikan	F/V Sovereign Grace

GILLNETTERS

Brennon Eagle	Wrangell	F/V Danegeld
Chris Guggenbickler (v. p.)	Wrangell	F/V Maranatha
David Klepser	Ketchikan	F/V Hannah Point
Bob Martin	Petersburg	F/V Sumner

POWER TROLLERS

Tom Fisher	Ketchikan	F/V Carol W
David Otte	Ketchikan	F/V Sarah E
Charles Piercy (pres.)	Ketchikan	F/V Tuckahoe
Tom Sims	Wrangell	F.V Arctic Nomad

HAND TROLLER

Craig Ring	Ketchikan
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APPOINTEES

John Clifton (treas.)	Ketchikan	Sport Fish
Paul Cyr	Ketchikan	Processor
Mary Edenshaw	Klawock	Native Corp.
Cindy Lasiter	Ketchikan	Public at Large
Lynnette Logan	Craig	Chamber of Comm.
Mike Painter	Ketchikan	Municipality
Sandy Souter	Kent, WA	Public at Large
John Yeager	Wrangell	Subsistence

The 21-member Board of Directors includes 13 commercial fishers along with representatives of interest groups and the public.

SSRAA Staff

ADMINISTRATION AND OPERATIONS

David Landis	General Manager
Bret Hiatt	Operations Manager
Bill Gass	Production Manager
Vacant	Assistant Production Manager
Cindy Walters	Executive Administrative Assistant
Liz Jones	Administrative Assistant
Jay Johnson LLC	Accounting Services

RESEARCH & EVALUATION

John Holt	Research & Evaluation Manager
Stephanie Sanguinetti	Lab Supervisor
Alan Murray	Lead Research Technician
Whitney Walters	Lead Research Technician

WHITMAN LAKE HATCHERY

Jay Creasy	Hatchery Manager
Mark Tollfeldt	Assistant Hatchery Manager
Cody Pederson	Lead Fish Culturist
Caitlin Brady	Fish Culturist
Jesse Knock	Fish Culturist

NEETS BAY HATCHERY

Stephen Hilton	Hatchery Manager
Mike Moreno	Assistant Hatchery Manager
Henry Hastings	Lead Fish Culturist
Stan Rice	Fish Culturist
Dale Wainscott	Fish Culturist
Benji Burbank	Fish Culturist
Ryan Patten	Seasonal Fish Culturist
Vacant	Maintenance Supervisor
Richard Flagg	Seasonal Maintenance Technician

BURNETT INLET HATCHERY

Steve Reid	Hatchery Manager
Jon Thorington	Maintenance Supervisor
Tony Belback	Fish Culturist

CRYSTAL LAKE HATCHERY

Loren Thompson	Hatchery Manager
Kevin Chase	Assistant Hatchery Manager
Wesley Malcom	Lead Fish Culturist
Stephan Smith	Fish Culturist

NECK LAKE REARING AND HARVEST FACILITY

JR Parsley	Facility Manager
Dolores Loucks	Fish Culturist
William Pattison	Seasonal Fish Culturist

DEER MOUNTAIN HATCHERY

Matt Allen	Assistant Hatchery Manager
Michelle Leitz	Lead Fish Culturist

MAINTENANCE DEPARTMENT

Ted Addington	Maintenance Manager
Vacant	Lead Maintenance Technician

SSRAA Spawning News is published by the Southern Southeast Regional Aquaculture Association, a private, non-profit aquaculture corporation based in Ketchikan, Alaska.

Our web site is www.ssraa.org.

This publication is mailed free to all limited-entry salmon permit holders for purse seine, drift gillnet, power troll and hand troll in Alaska Districts 1-8. It is also mailed free to any person interested in SSRAA.

To receive Spawning News, send a request with your name, your organization's name and your address to: Spawning News / 14 Borch St. / Ketchikan, AK 99901.

For changes of address for permit holders, notify: Commercial Fisheries Entry Commission / 8800-109 Glacier Highway / Juneau, AK 99801.

The CFEC fax number is 907-789-6170.

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ssraa PEOPLE

PROXIMITY TO PEOPLE A remote hatchery is not an island of isolation

By SHONA HILTON

For the Spawning News

Only one member of the staff was left with our little family at the hatchery. The rest of the crew was either on vacation or at the SSRAA Christmas party in town.

It was cold. Ice was underfoot and the evening was clear. Everything was quiet. So very quiet. I exhaled and relaxed, enjoying the contradiction that comes with feeling cozy while surrounded by nothing but miles and miles of wilderness and space.

It might sound odd, but one of the biggest adjustments I personally had to make when moving to a remote hatchery in Alaska was being around people and a busy work environment all the time. We had lived 14 miles out of, and another 2,500 feet up from, a small town of a thousand people, with only a few immediate neighbors—each one on a property of 20 acres, minimum. The land nearby was state-owned, or national forest, or private ranches.

I could go days seeing no one but my family, hearing nothing but the yipping of a billion coyotes and the wind through Ponderosa pines. Breathing space and quiet were taken for granted.

A remote hatchery does not mean isolation. It means being part of a community drawn together for the common goal of raising healthy fish and releasing them to the ocean. We arrived in June, just before the busy summer season really kicked off, and the momentum built quickly. First the staff size swelled, then the salmon arrived, as did the bears—swiftly followed by planeloads of visitors enjoying the opportunity to view a hatchery and wildlife up close. The bay boiled with salmon, the fishermen arrived to harvest, and the sea lions barped all night and all day (If “barp” is not the scientific term for the noise sea lions make, well, it should be.)

I won't lie. I was a little overwhelmed with it all. It took time to adjust to Neets Bay Hatchery at full throttle.

And then, just like that, it was over. We said our goodbyes to the seasonal staff. With the salmon runs finished, the bears, sea lions and occasional orcas moved on, as did the tourists and the fishermen. The wheel cranked round and winter moved in.



It's not a quiet place in the summer. The cycle of seasons at Neets Bay Hatchery brings successive waves: staff, salmon, bears, tourists and commercial fishermen.

I won't lie. I was a little overwhelmed with it all. It took time to adjust to Neets Bay Hatchery at full throttle. And then, just like that, it was over.

tracks—and I feel mildly triumphant in making this happen.

Apart from a couple of commercial crabbers, the bay is empty. Big, impressive wildlife species have been replaced by the more subtle waterfowl. Eagles are few and far between. It feels as though all that remains of last year are the core of permanent staff, the ravens and the posse of seals that stalk me when I'm kayaking.

But now we're ready to turn that wheel round some more. The crew is busy moving fish into sea cages, feeding fish, tracking fish growth—basically ensuring the fish are healthy and ready to go out into the big, wide ocean. And things are looking good. Also, we've had great delight in welcoming back the seasonal workers. So far, most of those arriving worked with us last year and it's been lovely seeing them return, along with some new faces, looking refreshed and ready for what's ahead.

A strong, highly competent team is in place here to take us through the spring season and on into the summer. Like a bear waking from hibernation, the hatchery is on the move again. Eggs collected in autumn are fish now, waiting to be released in a few months. Then it will be time to get ready for the waves of salmon to return to the bay and egg-take to begin again.

After 18 years of expertly avoiding anything to do with salmon, I'm continuing my education in learning what my husband actually does for a living. He is a patient teacher—although I still think my mental picture of millions of salmon babies, all called “Alvin,” heading out to sea is much more exciting than the scientific explanation that tiny, hatched fish still attached to their egg-sacs are called alevins. As I said, he's a very patient man.

And our homeschool learning curve is straightening out. It feels as if the boys and I are settling into a school schedule that works well for us and balances learning from books with learning from the incredible environment we live in. It's taken only about, oh, 70 lessons, but I think we're getting there.

One of my friends, a longtime resident out here, told me shortly after we arrived that by the end of summer you're really ready for it to be over; but then, come spring, you're looking forward to seeing it all begin again. I've hung onto those words of wisdom and I now I understand exactly what they mean. Knowing what to expect going forward has been great for my confidence in taking everything in stride. Because of this, along with feeling my energy restored during the quieter months, I'm no longer thinking, “Brace yourself: summer is coming.” I'm looking forward to the buzz of longer days, the thrill of seine openings, long evenings cooking crab on the dock with the other residents out here, and reveling in the deep contentment that we're here, helping make it all happen once more.

It's good to be here, it's good to know what's in store going forward. It's all good.



Winter is a quiet time for recharging at Neets Bay. Occasional brilliant sunsets illuminate the contradiction of a cozy feeling in the midst of a cold, immense place.

Winter is my time to recharge. The length of days and the weather in Southeast Alaska are almost identical to my native Scotland and I don't struggle at all with the wet, cold and dark. I go with the season, loving short days when colors drain from the landscape and everything is black and white by late afternoon. It soothes and rejuvenates me. I admit that I miss the snows and sub-zero cold we enjoyed in north-central Washington state in the past few years, but I even managed to cross-country ski here, following wolf tracks rather than groomed



FINANCIALS

2014 / 2015

Southern Southeast Regional Aquaculture Association

FINANCIAL STATEMENTS

For the years ended June 30, 2015, and June 30, 2014

CASH FLOWS

	2015	2014
CASH FLOWS FROM OPERATING ACTIVITIES		
Cash received from fish marketing, tours, and other sources	\$ 8,490,064	\$ 5,529,810
Cash received from enhancement taxes, contracts and agreements	5,190,340	6,816,233
Cash paid to employees and vendors	(7,923,773)	(9,895,194)
Net cash provided by operating activities	5,756,631	2,450,849
CASH FLOWS FROM INVESTING ACTIVITIES		
Interest received	4,607	1,345
Proceeds from (purchase of) investments, net	236,742	(91,094)
Purchase of property and equipment	(2,968,331)	(2,979,353)
Net cash used for investing activities	(2,726,982)	(3,069,102)
CASH FLOWS FROM FINANCING ACTIVITIES		
Proceeds from issuance of long-term debt	386,701	247,230
Deferred interest payment	(245,590)	(245,590)
Net cash provided by financing activities	141,111	1,640
Net increase (decrease) in cash and cash equivalents	3,170,760	(616,613)
Cash and cash equivalents at beginning of year	6,924,666	7,541,279
Cash and cash equivalents at end of year	\$ 10,095,426	\$ 6,924,666
RECONCILIATION OF CHANGE IN NET ASSETS FROM OPERATIONS TO NET CASH PROVIDED BY OPERATING ACTIVITIES		
Change in net assets from operations	\$ 3,326,622	\$ (1,240,169)
Adjustments to reconcile change in net assets from operations to net cash provided by operating activities		
Depreciation and amortization	1,089,749	960,925
(Increase) decrease in:		
Accounts receivable, net	(37,341)	382,769
Income taxes receivable	-	537,449
Grants and contracts receivable	267,393	(514,056)
Inventory	43,629	88,442
Prepaid expenses	2,761	60,575
Increase in:		
Accounts payable	557,110	227,690
Payroll and payroll taxes payable	29,803	45,794
Accrued vacation payable	3,730	15,030
Accrued pension payable	3,175	2,400
Deferred revenue	470,000	1,884,000
Net cash provided by operating activities	\$ 5,756,631	\$ 2,450,849
SUPPLEMENTAL DISCLOSURES		
NONCASH INVESTING ACTIVITY		
Contribution of donated property	\$ 453,100	\$ -

Southern Southeast Regional Aquaculture Association

FINANCIAL STATEMENTS**INCOME STATEMENT**

	2015	2014
OPERATING REVENUE		
Fish harvest income	\$ 8,282,457	\$ 305,627
Direct fish marketing	-	4,612,062
Grant revenue, fisheries enhancement tax	2,425,080	2,856,085
Contract and agreement revenue, restrictions satisfied:		
Crystal Lake operations	377,300	375,300
Deferred Maintenance Grant	98,502	28,438
KPU Lake	743,546	454,070
Crystal Lake maintenance and improvements	16,387	130,439
City Creek grant	8,091	89,938
Whitman Lake Water upgrade	67,685	633,315
Deer Mountain expansion	186,356	163,077
Crystal Lake state fire insurance	-	62,178
DIPAC cost recovery income	530,000	116,000
Tours	205,868	183,602
Other	39,080	45,750
Total operating revenue	12,980,352	10,055,881
OPERATING EXPENSES		
HATCHERY OPERATIONS		
Hatcheries and rearing facilities	4,194,773	4,386,511
Prince of Wales Hatchery Association	846,116	116,000
Rearing, release, and transport	822,108	850,362
Neck Lake Harvest	654,469	110,274
Brood Management	353,425	-
Tagging and otolith laboratory	312,301	265,648
Maintenance and improvements	282,473	283,338
Research and planning	191,303	180,383
Marketing	61,327	3,068,783
Total hatchery operations	7,718,295	9,261,299
GENERAL AND ADMINISTRATIVE EXPENSES	1,935,435	1,858,991
FEDERAL INCOME TAXES	-	175,760
Total operating expenses	9,653,730	11,296,050
Change in net assets from operations	3,326,622	(1,240,169)
OTHER REVENUE		
Donated property	453,100	-
Investment and interest income	4,607	1,345
Change in net assets	3,784,329	(1,238,824)
Net assets, beginning of year	12,798,394	14,037,218
Net assets, end of year	\$ 16,582,723	\$ 12,798,394

These statements represent only a part of the audited financial statements of SSRAA as of and for the year ended June 30, 2014, which can be obtained by contacting the SSRAA offices.

Southern Southeast Regional Aquaculture Association

FINANCIAL STATEMENTS**BALANCE SHEET**

	2015	2014
ASSETS		
CURRENT ASSETS		
Cash and cash equivalents	\$ 10,095,426	\$ 6,924,666
Investments	237,108	253,033
Accounts receivable	185,422	148,081
Income taxes receivable	377,880	377,880
Grants and contracts receivable	681,450	948,843
Inventory	37,379	81,008
Prepaid expenses	34,682	37,443
Total current assets	11,649,347	8,770,954
PROPERTY AND EQUIPMENT, NET	12,067,812	9,745,080
OTHER ASSETS		
Restricted investments - State of Alaska performance bonds	256,048	476,865
Loan fees, net of amortization	15,518	6,568
Total assets	<u>\$ 23,988,725</u>	<u>\$ 18,999,467</u>
LIABILITIES AND NET ASSETS		
CURRENT LIABILITIES		
Accounts payable	\$ 1,031,325	\$ 474,215
Payroll and payroll taxes payable	127,665	97,862
Accrued vacation payable	157,601	153,871
Accrued pension payable	41,171	37,996
Deferred interest payable, current	245,590	245,590
Deferred revenue	2,354,000	1,884,000
Total current liabilities	3,957,352	2,893,534
LONG-TERM LIABILITIES		
Deferred interest payable	2,210,134	2,455,724
Long-term debt	1,238,516	851,815
Total long-term liabilities	3,448,650	3,307,539
Total liabilities	<u>7,406,002</u>	<u>6,201,073</u>
NET ASSETS		
Unrestricted:		
Invested in property and equipment net of related debt	8,619,162	6,437,541
Designated by the Board	6,452,613	5,278,507
Undesignated	1,510,948	1,082,346
Total net assets	16,582,723	12,798,394
Total liabilities and net assets	<u>\$ 23,988,725</u>	<u>\$ 18,999,467</u>

These statements represent only a part of the audited financial statements of SSRAA as of and for the year ended June 30, 2014, which can be obtained by contacting the SSRAA offices.

Neets Bay SHA management plan issued in preliminary form

As was the case at this time last year, we have yet to decide precisely what will happen in the Neets Bay special harvest area this summer. Open questions include: which boat or boats to license for cost recovery; the chum troll target for 2016; whether the return in 2016 will allow for common property rotational fisheries; and what those rotations will look like if they occur.

There are, however, *some* things we can say about 2016.

COST RECOVERY

Cost recovery is primarily directed at the summer chum return. A processor, or several processors, will be licensed to harvest the poundage required to meet SSRAA's revenue target of about \$8 million. We will mail requests for proposals in March, with responses due in early April. There will be a smaller fall chum and coho cost recovery harvest in September during fall chum brood collection. It isn't possible to predict what will be harvested while managing the area around the barrier as we collect fall chum brood. Our expectation in 2015 was that this would be primarily coho removed from fall chum broodstock. It turned out to be excess fall chum taken during brood collection, with very few coho. This depends in large part on whether chums return before coho and the relative strength of the two returns.

Finally, as was the case in 2015, we are interested in developing a long-term relationship with a processor in the utilization of egg-take carcasses. We don't expect this will generate much revenue—or maybe no revenue, at least initially. Simply breaking even may work. The near-term goal would be to develop a program to utilize this protein as opposed to simply disposing of it. Requests for proposals for these three separate opportunities will go out in early March. The short of it is that cost recovery in Neets Bay will occur much as it did in 2015, though we will have a larger revenue target.

Why a larger revenue target?

There are three large differences between the 2015 and 2016 seasons in terms of anticipated SSRAA revenues and expenditures. In 2015, we had a grant of \$1.5 million from DIPAC to apply as cost recovery revenue. This year, we have a grant of \$500,000 from DIPAC to use in the same way. Our 3 percent enhancement tax return was about \$1 million greater in 2015 than what we will receive in 2016. In addition, SSRAA's program has grown in several increments this past year, the largest being the assumption of Klawock Hatchery (about \$750,000 annually). These three changes require about \$3 million more in cost recovery revenue in 2016 than was needed in 2015.

COMMON PROPERTY OPPORTUNITY

The forecast for summer and fall chum returns to the Neets Bay SHA is similar to the actual returns in 2015. Our actual return for summer chum in 2015 was about 143 percent of what was forecast and there were more than



twice as many fall chum as the preseason forecast suggested. If this year's forecast proves correct, there should be some mid-summer common property opportunity for the net fleets ... though not nearly the opportunity we experienced in 2015. No one is renowned for an ability to precisely predict chum returns—and that includes SSRAA. We will provide opportunity, as directed by the SSRAA board in March, around the historic factors of broodstock and cost recovery needs. As noted above, we can't predict whether or when that will occur, and how we might design the openings in time and area so that common property harvest can take place while protecting some fish for broodstock needs.

Regardless, there are always four distinct possible common property opportunities in Neets Bay: 1) chum troll; 2) early-season gear rotations prior to cost recovery, historically before July 2; 3) mid-summer gear rotations as cost recovery and broodstock goals are met sometime in August; and 4) late-season rotations after fall chum brood and eggs are in hand, typically in mid-September.

CHUM TROLL

A chum troll target will be established by the SSRAA board in March. We can't assure everyone that the target will match harvest, but a larger target does mean greater opportunity. We anticipate opening the outer SHA to the Bug Island Line through the entire summer run. Last year, with a run similar to what is forecast for this season, about 150,000 chum were harvested by trollers. There is also late season (September) fall coho opportunity concurrent with the fall chum harvest.

EARLY-SEASON ROTATIONS

Neets Bay opens to all fishers on May 1. Though there are few fish available in May, some chinook may be present. Historically, actual rotational fisheries begin on June 10. Though we don't yet know what the rotation will look like, it has been much the same for a number of years. It is possible these rotations will be slightly modified to avoid back Behm chinook, as they were in 2015. The SSRAA board will establish the rotational schedule and dates of the last rotation

at its meeting on March 11. In every year but two since 1998, this was pretty much an exclusive chinook fishery. There was a significant harvest of summer chum in 2012 and the last rotation in 2015 had summer chum in the harvest, but those were the only times since 1998 that this occurred.

MID-SUMMER ROTATIONS

This fishery will occur when and if the cost recovery goal (revenue goal) is met and summer chum broodstock is secure. The first time SSRAA scheduled a mid-summer rotation before the season was in 2014. The return in 2014 was only about 70 percent of what was forecast and the mid-summer rotations were not initiated until mid-August.

There are usually few summer chum around in mid-August, and there was not much harvest that year. Because of the size of the return in 2015, and the relatively small need for revenue, there were several net rotations in early August. If the run exceeds forecast in 2016, there could be substance to this opportunity; if the run fall short, there won't be. Of the four opportunities, this is the most uncertain. There was a single unanticipated mid-summer

net rotation with a substantial chum harvest in 2012. This was conducted because the return far exceeded forecast and it was necessary to reduce the abundance in the inner SHA to a controllable level. This was an anomaly. The opening in 2015 was due in part because of the DIPAC grant, but even more because the run was nearly half again as large as fore-

cast. This was not anticipated in 2015 and it is not anticipated now. If this fishery occurs, it will end as the first fall chum enter the SHA—generally around Aug. 25.

LATE-SEASON ROTATIONS

For some years, we have opened the SHA to net rotations as soon as fall chum broodstock was secure and egg-take goals were assured. More than half the time late season storms kill a portion of our fall chum broodstock. Because this is a recurring issue, we are reluctant to open the SHA until the last of the broodstock has moved from saltwater into the hatchery raceways. This occurs on about Sept. 25 every year. This is in part why the fall chum broodstock are being moved to Burnett Inlet Hatchery, but it will be another one or two years before that move is completed. Generally there are two or three rotations harvesting relatively large numbers of fall coho and chum. Last fall the run was both early and strong. Brood was easily collected and egg-taking started earlier than usual. We were able to open the SHA by mid-September. This was about 10 days earlier than usual. Fall coho return well into October, but processors have not wanted these fish after the first several days in October. The fall coho return in 2014 was the largest we have ever experienced, while the return in 2015 was one of the smallest. While we are uncertain about the coho, we anticipate a decent fall chum return in 2016.

The SSRAA board will establish the rotational schedule and date of the last rotation at its meeting on March 11

TAGGING 101 Clipped fins and wired snouts yield crucial data

Marking methods may seem subtle, but they're priceless for aquaculture

By JOHN HOLT

SSRAA Research & Evaluation Manager

You may know that SSRAA's hatchery-raised chinook and coho salmon are tagged with coded wire tags and are fin-clipped. You may have then asked: "With all of chinook and coho salmon I've caught between Mountain Point and Whitman Lake Hatchery, or in other areas of Southeast Alaska, why have I never caught a tagged or fin-clipped fish?"

The answer is simple. Only a small percentage of SSRAA's fish are tagged with coded wire tags and fin-clipped—and the tags are not visible.

Approximately 10 percent of chinook and 5 percent of coho raised by SSRAA are fin-clipped and tagged. These percentages provide enough tagged fish to perform statistically reliable evaluations of survival of all hatchery fish ... and for overall evaluation of SSRAA's chinook and coho programs.



Tag team—Caitlin Brady, right, clips the adipose fin from a young chinook salmon as Stephanie Sanguinetti, left, hands a clipped fish to Whitney Walters at the tagging machine.

A CODED WIRE TAG LIKE THOSE WE INJECT INTO COHO AND CHINOOK SALMON IS BARELY VISIBLE LYING ON A PENNY. THIS TINY MARKER, TAKEN LATER FROM A HARVESTED ADULT SALMON AND READ BY LABORATORY STAFF AT ADF&G, YIELDS INVALUABLE DATA.

Each fall, between early October and mid-December, SSRAA's four- to six-person tagging crew travels to several hatcheries. This year the crew tagged at the Neck Lake, Crystal Lake, Neets Bay, Whitman Lake and Deer Mountain hatcheries. (Burnett Inlet Hatchery staff do their own tagging.) By the time this itinerant team finished the tagging season, they clipped the adipose fins from, and inserted tag into the snouts of, approximately 620,000 fish: 310,000 each of chinook and coho. The crew usually tags about 15,000 fish per day, but when all factors are favorable they can tag up to 19,000 in a single day.

Tags are provided in stainless steel wire spools of 10,000 or 15,000 1.1mm-long segments; each segment is marked with a series of numbers unique to that spool. Thus, all fish tagged from the same spool carry a specific number sequence. Using tag numbers unique to particular groups of fish (tagging groups) allows for identification of fish that are raised in the same hatchery, but released from different sites, with each site having its own number series on the tags. Approximately 10 percent of chinook and 5 percent of coho raised by SSRAA are adipose fin-clipped and tagged. These percentages provide enough tagged fish to perform statistically reliable evaluations of survival of all hatchery fish (tagged and untagged) for a particular release site or tagging group, and for overall evaluation of SSRAA's chinook and coho programs.

Attrition of tagged fish—whether from illness, predation or any of the numerous events that fish encounter in their lifespans—occurs at the same

rate as it does for untagged fish at any given time. The ratio of tagged to untagged fish is the same for smolts in the hatchery and for adults swimming in the open ocean. Subsequently, tagged and untagged fish will be caught at the same rate as well.

Upon harvest, fish that lost their adipose fins to hatchery clipping are isolated from those with intact adipose fins. The heads of these fish are sent to the State of Alaska Tag Laboratory, where the tags are extracted and recorded. Since the ratio of tagged to untagged fish is known, a simple calculation yields an estimate of the number of fish caught from a specific tagging group. For example, if 200 tags of a specific code are recovered in the fisheries, and 10 percent of that tagging group was tagged, an estimated 2,000 fish would be expected to have been caught from that tagging group.

We can extend the principle a little further. If fish from several tagging groups are caught in a fishery during a defined period and the tagging ratios of the hatchery and wild groups are known, as well as the total number of fish caught, simple calculations yield the composition of the catch with regard to hatchery release sites and wild fish. This not only allows SSRAA to evaluate our programs, but leads to better management of wild stocks.

Because SSRAA tags only 5 percent of coho and 10 percent of chinook, the probabilities of finding tagged fish in your harvest are relatively small. Statistically, one could catch 90-95 fish before catching a tagged fish. But a more realistic number would be that for every 20 coho caught, one would be tagged, and for every 10 chinook caught, one would be tagged.

We hope this discussion of tagging methods and rationale answers your question of why you may have never noticed one of these fish in your catch.

New survival craft regulations will affect vessels inside and outside the 3-mile line

U.S. Coast Guard Sector Juneau issued a marine safety bulletin on Jan. 4 noting changes in survival craft requirements for commercial fishing vessels. There are two critical dates launching the new requirements.

By Feb. 26, 2016, all commercial fishing vessels that operate more than three nautical miles from shore are required to carry a survival craft capable of holding all aboard and preventing immersion of any part of any individual.

By Nov. 1, 2016, commercial fishing vessels 36 feet or greater or vessels operating with four or more people on board inside of three nautical miles must also comply with the new survival craft regulations.

Many who are presently exempt—including those with letters of exemption for onboard skiffs—may not be aware that the new regulations void those exemptions.

For more information on the new regulations, contact the nearest commercial fishing vessel examiner.

Klawock River cohos CONTINUED FROM 1

take place this spring. After the Alaska Department of Fish and Game completes internal reviews, the first of many steps is review and recommendation from the Regional Planning Team (RPT). Assuming a positive nod from the RPT, a public hearing will be coordinated in Klawock to allow for more participation. Ultimately, final approval will be on the desk of the commissioner of Fish and Game. This is the most critical part of a larger process that also calls for coordination by several municipal and state agencies in what we hope becomes a seamless transition.

If all goes according to plan, the process will be complete before the state's fiscal year starts on July 1.

If it takes longer ... well, it just takes longer. Either way, you can be assured that the goal is to keep those coho in the water and returning to benefit all user groups for years to come.

NEW HUNTS WILL RETURN TO OLD HAUNTS

Bolstered chinook program will resume releases in Carroll Inlet

By **BILL GASS**

SSRAA Production Manager

Old things become new again. This simple statement has been applied to virtually every circumstance and situation imaginable throughout history, and with SSRAA's return to Carroll Inlet it is now true for chinook salmon release sites as well. From 1984 through 1993 SSRAA released 8.5 million fish from netpens at the head of Carroll Inlet, producing 84,000 returning adults. That translates to an overall ocean survival of just under 1 percent, which is certainly nothing to be too excited about—but chinook survivals at that time were depressed at every site. The decision to shut down the program was based more on the need to bolster Whitman Lake releases to provide adequate broodstock than on a failure at Carroll Inlet.

The decision to return to the inlet was based on several factors. First was the acquisition of the Deer Mountain Hatchery and our ability to produce 500,000 more chinook smolts. Over the past 10 years, SSRAA has seen consistently strong ocean survivals from chinook and particularly from netpen releases at Neets Bay and Anita Bay; those programs have averaged more than 3 percent. It is reasonable to expect that Carroll Inlet will perform as well.

The other persuasive factor in returning to Carroll Inlet is the accessibility of returning adults to the troll fleet. When the site was originally conceived, the value of terminal troll fish was quite low and the methodology to effectively harvest terminal chinook was poorly understood. Despite those factors, the exploitation rate by trollers was still quite high, with nearly 40 percent of returning adults being harvested. Considering the likelihood of continuing restrictions relative to stocks of concern, there is every reason to believe that Carroll Inlet will provide an area that can be open to harvest where only hatchery-produced fish will be present. Markets have changed and there will be more incentive to develop strategies for effective harvest; interception rates will probably go much higher. Carroll Inlet is a long, narrow inlet offering approximately 20 miles of potentially fishable area outside traditional corridors in protected waters close to Ketchikan.

The first release at Carroll Inlet will occur this May, which means that there will be some four-year-old fish present in 2018 and a full component will return in 2019.

The release is currently slated for 400,000 fish, which compares to 700,000 at Neets Bay, 450,000 at Anita Bay, 100,000 at Deer Mountain and 550,000 at Whitman Lake. In the Petersburg area, chinook releases are 600,000 at Crystal Lake and 100,000 at City Creek, for a total king salmon release of 2.9 million fish.

SSRAA also provides eggs for releases at Port St. Nicholas and Coffman Cove on Prince of Wales Island, pushing the total for the region to more than 3 million.

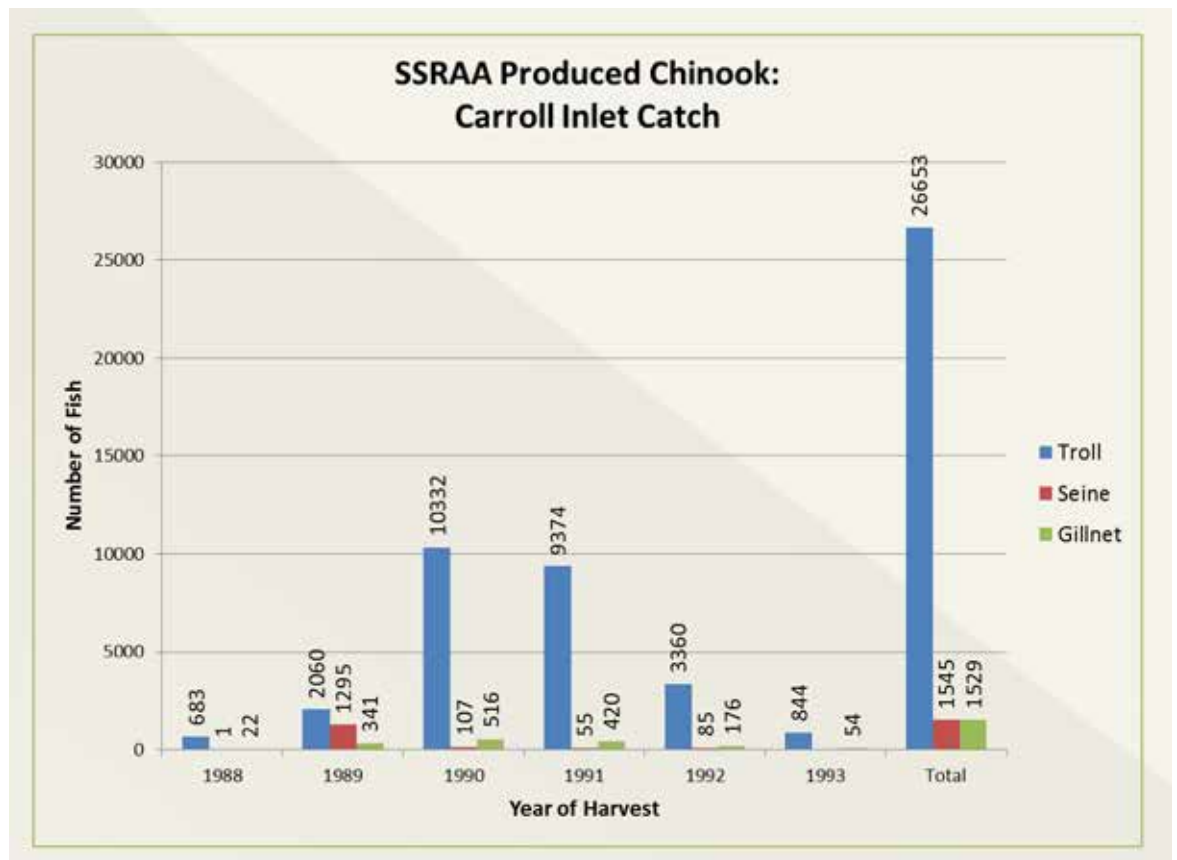
Commercial fishers may want to check a study on harvesting terminal chinook authored in 1992 by Lonnie Haughton and Mike Round. They conducted their research in Carroll Inlet. It's on our web site at ssraa.org/home/education/. (Round later worked for SSRAA as assistant GM.)

How long has it been since SSRAA released chinook in Carroll Inlet northeast of Ketchikan? Bill and April Gass were a couple of eager young Alaskan king salmon ranchers in 1987, at the program's founding. Now Bill Gass, as SSRAA production boss, coordinates the 'new' chinook release program at the inlet.



PHOTO: COURTESY OF BILL GASS

Catches of SSRAA chinook in Carroll Inlet 1988-1993



The initial release program at Carroll Inlet put about 30,000 chinook in the holds of commercial fishers in six years.

David Landis CONTINUED FROM 1

across the state. "I've been involved in a number of operational aspects of the company. That experience helps us make sure we don't get off track."

At nearly 40 years old, the hatchery association is what Landis calls "a mature organization, in every way. Over time, we may make small, incremental improvements to our processes and respond to challenges. But as we sit today, it's a very well-functioning company."

He said departing GM John Burke did outstanding work for SSRAA and left "very qualified people in management positions. They've proven themselves for many years. I have great faith in this team."

During Landis' time on the SSRAA board, his day jobs included management roles at Ketchikan Indian Community and more than eight years as group CEO of the Alaska-based operations of Cape Fox Corp. With this background in executive leadership, Landis is well-qualified to switch roles as an employee of the board. "I have successfully worked for boards in the past, and understand the dynamic. I have great respect for the SSRAA board and will make sure they have what they need for effective decision-making," Landis said.

He found time for local politics, serving two elected terms on the Ketchikan Gateway Borough Assembly. And now he's in his second year as mayor of the borough.

Landis is the son of teachers who moved to Ketchikan when he was young. His fisheries experience goes back to his teens, when he crewed on his father's hand troller and on a commercial gillnetter. He ran charter boats during his college years. Somewhat ironically, considering how much of his life has been involved with fishing and hatcheries, his degree from Oregon State University is in earth sciences. "I never worked a day in the field," he said. But the master's degree in management he earned later has been more directly applicable to his executive experience.

Landis believes that filling a couple of vacant staff positions will put SSRAA in a good position to fold the prospective Klawock River Hatchery and Deer Mountain Hatchery into operations. Having Deer Mountain in the mix has allowed SSRAA to maximize chinook rearing space; acquisition of Klawock River in 2016 will preserve the large run of enhanced coho on the west coast.

Landis is most interested in keeping SSRAA "at the forefront of best practices." Increasing the survival rate of all SSRAA-produced species is one of his priorities. Keeping pace with new technologies, particularly in research and evaluation, are other ways that Landis says that SSRAA can become more effective in the years to come.

But like the board member he'd been for a decade, he mentioned another feature that is prominent in the minds of SSRAA's constituency.

"We'll also keep our eyes on overhead and production costs," he said.