



# Tahltan Fisheries



**Post Season Newsletter**  
**February, 2017**

## **Biological Contract in 2016**

The 2016 Stikine River Salmon Studies Biological Contract was awarded to the Tahltan Fisheries Program (TFP) – Iskut First Nation in the amount of \$182,000. This provided employment for approximately 12 Tahltans. A shortage in DFO field employees was identified in June and resulted in additional work available to the TFP field staff over the course of the season. Tahltan Fisheries played a significant role in the stock assessment program this year.

## **Chinook/Coho Coded Wire Tagging**

Crew members from both countries went upriver with boats from Wrangell on April 20. Kyle and Drew Inkster were the first Tahltan crew members to hit the field, assisting with getting the camp opened up preparing for the season start, before leaving for the Chinook drifting program at Kakwan. The remaining Canadian crew members (Collin Ball, Jared Dennis and Raina Louie) travelled down by boat on April 20. Shelby Marion joined the crew on April 28. The program welcomed our new camp cook and she kept the crew members well fed, camp common areas clean, and crew morale was at an all time high. I received positive feedback from the ADF&G managers and they have requested that Raina return to camp in the 2017 field season. Thanks for all your hard work Raina, you left a great impression on the field crew and managers alike. A total of 35,000 Chinook salmon smolts were captured and tagged along with 4,000 coho salmon smolts. The Chinook quota of 32k smolts was exceeded but coho catches fell well below the 10k goal. The project duration was April 19 – May 30.



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## Biological Contract - continued

### Little Tahltan Chinook Weir

This project started June 20th, with Field Supervisor Collin Ball and Field Technicians Shelby Marion and Keenan Vance (switching out with Shelby in early August). Crew and gear were flown in by Lakelse Air, from the Dease Lake base. There were 921 large Chinook salmon counted through the weir. To ensure effective passage, the weir was moved slightly upriver in a deeper location, an upstream trap was installed and lights were added for night counting. The Little Tahltan stock has seen declining returns since 2007. The optimum escapement target is 3,300, as per the Transboundary Technical Committee Management Plan. The crew was de-mobilized on August 17th.



### Commercial Sampling

This project was conducted by Kerry Carlick (field supervisor), Sheldon Dennis, Brianna Tashoots, Collin Ball, John Nole, and Jared Dennis (TFP) and a DFO representative. Samples were taken for analyses throughout the Lower Stikine commercial fishing operations. This project runs from May thru September.. The project requires a 2 man crew, staff was moved in and out to accommodate DFO staff shortages and time off.

### Lower Stikine Chinook Tagging

This project was staffed by Kyle Inkster, Drew Inkster, Jared Dennis, and Sheldon Dennis working with the US crew at Kakwan Point on the US side. 175 tags were applied to large Chinook salmon versus the 10 year average of 380. The project duration was May 3 - July 6. Tags were recovered throughout the various fisheries, and Verrett River spawning grounds, (conducted by Kerry and Kyle in early August). The crew was housed and fed at the old Bronson Mine site. Much gratitude for the provisions made by the mining company that allowed my crew to stay on site.





## Biological Contract - continued

### Tahltan Lake Sockeye Smolt Enumeration

This project started on May 5th with Michael and John Nole (TFP) flying in with Lakelse Air from Dease Lake base and DFO personnel flew gear and staff member Johnny Sembsmoen in from the first crossing on the Golden Bear Rd. The weir set in Johnny Tashoots Creek resulted in a count of 2.1 million smolts leaving the lake, well above the 10 year average of 1.4 million. Shelby Marion was brought into camp on May 14th to relieve John while he conducted the beaver work and he remained in camp providing assistance during the peak of the smolt outmigration. The crew pulled the weir and came out on June 10th. Otolith sampling showed 51% enhanced and 49% wild smolt composition. Early ice out resulted in an advanced out migration of sockeye smolts. The crew arrived to an ice free lake and smolts holding in the bay. The weir was installed and the count commenced the same day. Typically the crew experience a zero count for the first week or so, but this year it was straight to work.

### Tuya River Summary

DFO applied for and received money from the Northern Fund to document all Tuya activities from the start of the program to the discontinuation in 2014.

Cheri, Heather (Tahltan Fisheries), Jarrett Quock (TCG Wildlife Guardian) and Scott Hawkins (Tahltan Band Council) flew with Sean Collins (DFO) on a Tuya overflight on November 2nd.



### Tahltan Lake Adult Enumeration and Sampling

Field staff mobilized on July 6th to construct the adult weir in preparation of the arrival of the sockeye spawners. Michael Nole (TFP Supervisor) and Johnny Sembsmoen (DFO Field Supervisor) were the first crew members out. Michael took over the Field Supervisor position when Johnny left camp in early August and Field Technicians Sheldon Dennis, Brianna Tashoots, and Fabian Vance made up the remainder of the 2 man crew to assist with the count and sampling. The weir was pulled by the egg take crew on Sept 12th with 38,132 sockeye spawners thru the weir.

## **Aboriginal Fisheries Strategy - 2016**

### **Aerial Surveys**

The 2016 sockeye aerial survey was conducted Sept 8th with Cheri and Johnny as observers and flown with Lakelse Air. Survey conditions were good to fair, but the total count of 72 was well below the 10 year average of 469. This did not line up with the 2016 estimated escapement of the mainstem stock at 34,591 which is 41 % higher than the ten year average.

The Stikine coho aerial survey was conducted on Nov 3rd with Cheri and Johnny Sembsmoen as observers, and Tundra Helicopters was chartered for the flight. Viewing conditions were fair to good with record low water levels and relatively clear water conditions. Index sites flown included Scud, Porcupine, Katete, Verrett, Craig, Porcupine, and Verrett slough. At total of 292 coho were counted at all index sites, approximately 82% below of the recent ten-year average count of 1,660 coho. The low count was unexpected given that catch rates in the Lower River commercial fishery were only slightly below average.

### **Health & Safety – Short Term Training**

TFP Technicians Drew Inkster, Brianna Tashoots, Shelby Marion and Collin Ball participated in and received Swiftwater Rescue Certification in Smithers during the spring of 2016. Many thanks to Walter and his staff at Raven Rescue for providing the training. The remainder of our staff, (10-12) are due for re-certification in the spring of 2017 and this will be the focus of the training requirements for the upcoming field season.

### **Salmonids in the classroom**

The salmonids program was not run in the schools for the 2016 season. We are looking at revitalizing this program as there has been interest shown by the local schools to start it up again.



### **Tahltan River Landslide**

The slide was initially reported on May 21, 2014 by TFN member Dwayne Day. During the summer of 2014 a live fish salvage operation was conducted. In spring of 2015, TBC received additional funds through our AFS Agreement to pursue modifications at the slide site, which was contracted to Myles Sampson. During the summer 2015 & 2016, there was increased monitoring at the slide, recording jump attempts and successes, water staff gauge checks and recordings at the bridge, and radio telemetry work. During October 6-7, 2016 there was a site visit by DFO and their contractor. A drone was flown over the slide area and a report and recommendations for next steps is still being drafted. Tahltan representatives that participated were Heather, Shana Dennis, and Christine Creyke.

### **Stikine stock separation**

There was employment of two community members for approximately four person months to implement this stock assessment project. These positions involve of taking samples from Chinook and sockeye salmon on the Upper Stikine River. The staff varied this year, with numerous change overs, however they were able to collect 745 samples throughout the summer, achieving our target.

## **Aboriginal Fisheries Strategy - 2016**

### **Catch monitoring and reporting**

Margaret Asp returned as our Tahltan Fisheries Guardian. Her duties were to: monitor the fishery based at Tahltan from approximately June 28 to August 7; issue and check for fishery permits; collect data in cooperation with other staff; and educate the fishing community on the need for accurate and timely reporting of catch data. Tahltan Food Fishery Catch numbers were provided to DFO weekly throughout the season by e-mail from Heather Hawkins.

Chinook numbers were so low that TFP asked for all Tahltan members to refrain from fishing for Chinook on the Tahltan River until fish passage was confirmed at the slide area. Also, the sport fishery was closed to non First Nation anglers.

### **Fish passage monitoring**

TFP hired Doyle Day and Huey Carlick as the Tahltan Fish Passage Monitors. This project began on June 22. They set up a viewing station just above the rock slide area and began daily observations. Twice weekly, reports detailing observations of fish passage by the monitors were relayed to DFO. It was hard to determine if the fish were getting across the slide due to high water. They saw fish jumping but not any that were making it past the slide area. However, it was confirmed that there was fish passage and this part of the program was concluded on July 11.

### **Net mending course**

TFP held a net mending/making course led by Tahltan member Shane Pauls from July 13-16 at in Telegraph Creek. We had seven members that came and learned how to make and mend a sockeye net. This included Heather Hawkins, Jarett Quock, Kelly Quash, Sheila Quash, Adrian Carlick Doyle Day and Lyle Quock Jr. Also, two net benches were made, one stayed with the TFP and one was given away to a participant by means of a draw. The lucky winner was Adrian Carlick.

### **Shakes Creek sockeye sampling**

Sarah Brocke was contracted to carry out this project in 2016. The Shakes Creek sampling was conducted later in the year due to delayed sockeye run timing. A weir was constructed on October 3 and the project was completed on October 13, 2016.



## 2016 Tahltan Lake sockeye egg take

Tahltan Fisheries submitted our own proposal again this year and were awarded the contract. We have continued increased fishing efforts since 2010 to ensure that sufficient broodstock is captured to provide adequate sockeye eggs to the Snettisham Hatchery in Alaska. Efforts include the retention of all green females captured at the primary spawning site and the augmented fishing crew for the peak of the spawning activities which capture and deliver females to the holding pens to improve the ability to maintain and reach the egg take targets.



## Egg take results

Eggs from 2,084 females were collected and fertilized by 2,007 males respectively. Fecundity (# of eggs per female) was estimated at 2,730 which resulted in 5.3 million eggs delivered. In addition, 60 ovarian and BKD samples and 400 broodstock samples were taken and provided by field staff as per the contract requirements.

With relatively good survivals, there is currently 3.9 M fry resulting from the 2016 egg take incubating in the Port Snettisham hatchery. These fry will be flown back to Tahltan Lake in the spring of 2017 for release.

## Egg take crew

Crew members were Richard Erhardt, Cheri Frocklage, Jared Dennis, Kyle Inkster, Drew Inkster, John P Nole, Kerry Carlick, Collin Ball, Sheldon Dennis, Fabian Vance and Michael Nole. Pat McIntosh joined us as our camp cook and kept us all well fed, the home fire burning, and the camp living quarters spic and span. Thanks so much Pat for the great meals, delectable baking and awesome lunches....Meduh. Many thanks to all my crew members for their hard work and continued interest...you remain the elite bunch, responsible and reliable. I am very proud of the work that you all contribute to. Meduh.

Thanks also to Rick Woodman and alternate pilots, Dan, Dick and Mark of Tsayta Aviation for egg and grocery delivery flights and for expediting for this project. We also extend our gratitude to the Lakelse Air Dease Lake base, and Coastal Helicopters from Juneau for egg haul flights when the weather was rough. We truly appreciate all the people on the other end that make sure the fuel, propane, supplies and groceries keep coming in...couldn't do it without you.

## 2016 Tahltan Lake sockeye egg take - continued

The 2016 egg take target was reduced from 6M down to 5M to accommodate the loss of Tuya Lake as an outplant option under the TBR Enhancement arrangements. The 2016 field crew was deployed on August 26th, poor weather conditions resulted in partial mobilization on the 26th and the remaining crew flew out on the 27th. Many thanks to Noreen Vance and Tim Mclean for putting us up for the night in Telegraph Creek, we are very grateful for your hospitality. Set up took place the 27-29, and broodstock collection commenced on August 30. Under the new regulations from the Canada Food Inspection Agency we have had to change egg take field culture practices and the new protocol includes saline rinses of the eggs prior to and immediately after fertilization. This has been done to reduce the occurrence of IHN which has caused high mortality over the past few years. There were significant delays caused by poor weather and plane availability and uncertainty in bad weather conditions. The additional fishing crew was comprised of Collin Ball and John Nole who fished the alternate spawning sites, and assisted in the egg takes. The final take was completed on September 23rd, earlier than in prior years and our target was exceeded to make up for higher mortality rates experienced in the early shipments. The crew demobilized on September 26th.

### 2015 egg take

Under the Treaty arrangements, the performance of the 2015 Stikine Enhancement Production Plan (SEPP) has been evaluated and accepted by the bilateral Transboundary River Panel and has been signed off by the Co-Chairs.



### Egg take equipment upgrades

There were substantial improvements to the facilities and equipment in 2016, which helped operations run safely and efficiently. DFO built a new egg take shack prior to the project and subsequently the egg take crew added shelves and stairs. Other improvements included DFO finishing of the newest cabin at camp, and our crew building 6 new vexar pens and female broodstock rack. New equipment purchases included a portable egg take shelter, 1 small freezer, 1 lake boat, 2 outboard motors and life jackets. A new fridge was also purchased and sent into camp by DFO.



## Northern Fund projects - 2016

### Tahltan Lake sockeye access improvement

Numerous beaver dams are located within the first 4km below Tahltan Lake on Johnny Tashoots Creek. Over the years it has been observed that these dams can restrict or block fish passage, for both out-migrating sockeye smolts and in-migrating adults.

The third year of this project focused again on ensuring migrational access past this problem area by removing physical beaver dam structures and controlling the local beaver population.

Field staff for this project included Richard Erhardt, John Nole, and Sheldon Dennis. There were 2 field sessions in 2016, the first in mid-May and the second in late July. The crew backpacked and set up remote camps along the way. Only 1 dam needed to be opened up this year and the project facilitated clear passage for both sockeye fry and adults. This project will not be funded in 2017.

### 2016 NF proposals

TFP initially submitted 7 concept proposals to the Northern Fund of the Pacific Salmon Commission for 2016. Subsequently, 3 detailed proposals were submitted, 2 which were funded and are described here.



### Meetings

The Fisheries Manager continues to attend the various fisheries management meetings during the winter months including: G2G Meetings with DFO and TFN (DFO/AFS funded); Aboriginal Fisheries Strategy Agreement Negotiations (funded by AFS); Stikine River Salmon Management Committee (AFS funded); Transboundary Technical Committee and Enhancement Sub-Committee (funded by AFS); and Pacific Salmon Commission meetings inclusive of the Transboundary Rivers Panel (PSC funded); First Nations Caucus and Executive Committee (PSC-FNC funding). There are also new monthly conference calls between DFO and TFP. In addition, Cheri will be adding to her winter meeting schedule: First Nation Fisheries Council (as the Transboundary Representative) and TCG – Land Use Planning Steering Committee. Lastly, Cheri accepted an expense paid invitation by Ron Josephson to present at the 2017 Sockeye Salmon Enhancement Workshop planned for February 20-23, 2017.



## Northern Fund projects - 2016 continued

### Little Tahltan River Chinook Assessment

Historically, Little Tahltan River Chinook have been a major contributor to the overall Stikine production, but have declined in recent years, both in abundance and relative contribution to the total Stikine Chinook run. This project is a preliminary investigation into why the stock has declined. The scope of the project is focused upon evaluating environmental conditions that may possibly be affecting spawning and incubation habitats. A field survey conducted in early August by Patrick Hudson (Hydrologist), Richard Erhardt (Biologist) and John Nole (Technician) in order to assess or monitor habitat factors. A hydrometric (water) station and data loggers were installed to monitor temperatures and flows. Also, observations of habitats were conducted from the air and ground.



### 2017 Northern Fund proposals

TFP has 4 proposals for 2017 which are currently being considered by the Northern Fund of the Pacific Salmon Commission:

- Little Tahltan River Chinook Assessment - A continuation of the 2016 project to retrieve data;
- Tahltan Lake Habitat Enhancement - A continuation of the previous feasibility study to develop a detailed design, construction plan and budget for creating additional sockeye spawning habitat at the lake. Such would include a technical workshop and community meeting.
- Tahltan Watershed Sockeye Salmon Enhancement Feasibility - This is a joint project with DFO to assess a small lake (near Tahltan Lake) for enhancement potential.
- Iskut Watershed Sockeye Salmon Enhancement Feasibility - This is a joint project with DFO for initial scoping and reconnaissance to assess the feasibility of enhancement in the Iskut watershed.



## Stikine salmon escapements and run sizes - 2016

Total escapement for large Chinook was 10,343. This is below the escapement goal range of 14,000 to 28,000 and also below the 10-year average of 18,581.

The Little Tahltan weir count was 921 large Chinook which is well below the escapement target range of 2,700 to 5,300 and below the 10-year average of 1,500.

Total sockeye escapement was 81,621. The Tahltan Lake weir count was 38,631 which is well above the escapement goal range of 18,000 to 30,000.

Non-Tahltan Lake sockeye (i.e. main-stem) escapement was estimated at 34,596 which is within the escapement goal range of 20,000-40,000 and above the 10-year average. The estimated terminal Tuya sockeye was 8,394.

The total run for sockeye was approximately 253,539 which is above the 10-year average.

Currently there is no means of accurately estimating Stikine coho escapement or run size. Results of the yearly coho aerial surveys conducted early November are reported on page 4.

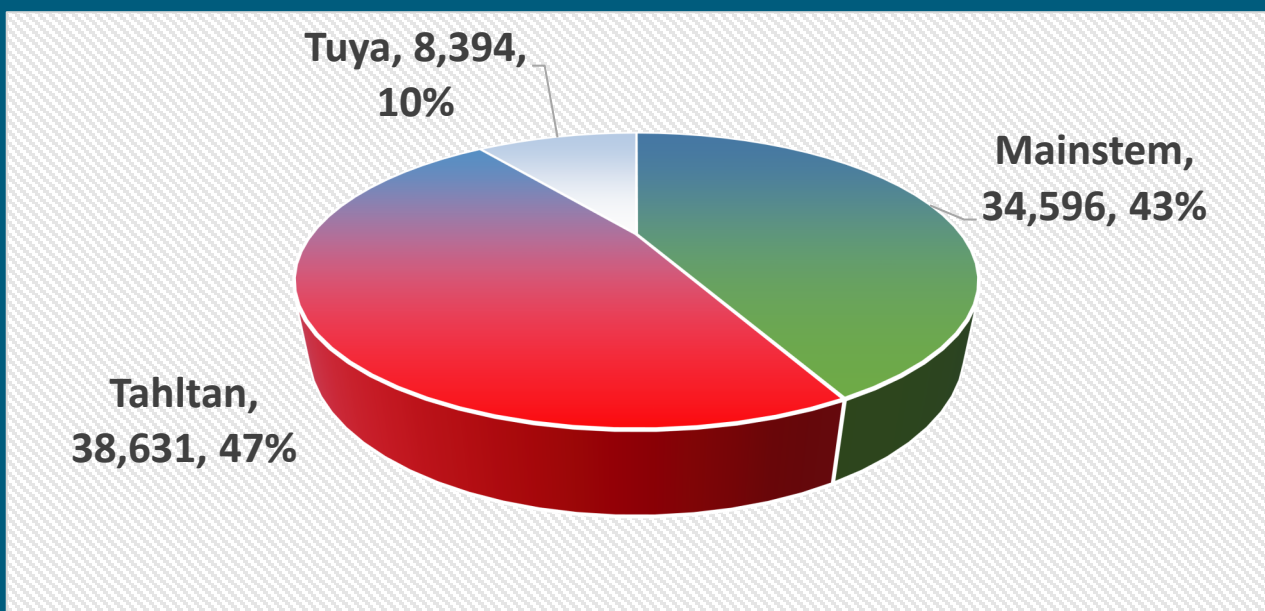
### Run outlooks for 2017:

**Chinook** - About 18,300 which well below the pre-season trigger of 28,100 to allow directed fisheries.

**Sockeye** - Projection yet to be completed, but expected to be above average.

**Coho** - Insufficient tools/methods in place to generate a forecast.

Stikine sockeye escapement (spawners) by stock grouping - 2016





## Commercial and Food Fish Harvests - 2016

Estimates for known 2016 catches of Stikine salmon are summarized in the table below:

<b>Fishery / species</b>	<b>Chinook</b>	<b>Sockeye</b>
TFN Food Fishery	615	10,644
CAN Test Fishery	21	13
CAN Directed Commercial	897	76,072
CAN Commercial By-catch	1,219	-
CAN Sport Fishery	0	-
<b>CAN Totals</b>	<b>2,752</b>	<b>86,729</b>
US Subsistence Fishery	22	2,127
US Sport Fishery	1,186	-
US Troll Fishery	694	-
US Gillnet Fisheries	3,292	81,315
<b>US Totals</b>	<b>5,194</b>	<b>83,442</b>

### 2016 Food Fishery

The 2016 TFN Food Fishery catch of 10,644 sockeye was well above the 10-year average of 6,077.



## Pacific Salmon Treaty - Negotiations

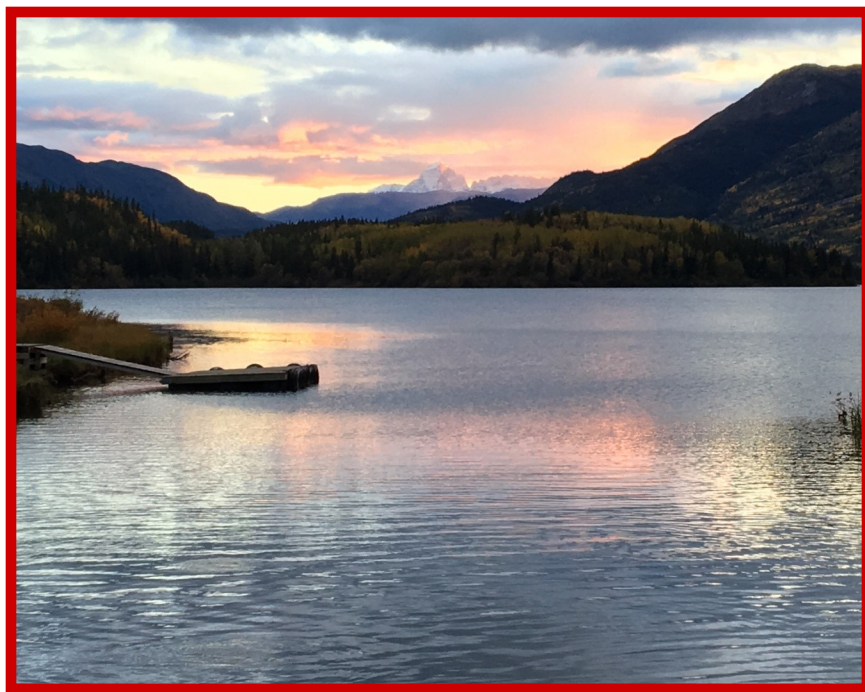
The Transboundary (TBR) chapter of the Treaty will expire at the end of 2018 and needs to be renewed. Negotiations by the bilateral Panel have been underway since February of 2015. To date 18 position papers have been exchanged between CAN and the US. The majority of focus has been time spent on the following aspects:

- Chinook and sockeye harvest shares;
- conservation objectives (priority to achieve spawning escapement);
- test fishery provisions;
- and sockeye enhancement programs.

Significant progress was achieved at the January 2017 negotiation session. The bilateral changes proposed are now pending final agreement and recommendation from Panel by February 17, 2017. A Government-to-Government meeting with DFO is planned for March 8 to discuss the Pacific Salmon Treaty (and other items of interest or concern.)

## Community based fisheries monitoring

We continue to strive towards improved catch reporting and education for Tahltan fishers and visitors. This aids in better local control of activity and monitoring of fish transported outside of Tahltan Traditional Territory. Also, last year we posted a bulletin on our Government websites to communicate concerns over the low number of expected Chinook returning. Your cooperation with Catch Monitors and Guardians is always appreciated.



### Questions?

If you have questions about the Tahltan Fisheries Program you can contact:

Cheri Frocklage

TFP Manager

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Michael Nole, one of our long term TFP field staff, will be away in Australia this season. He has been jokingly declared the Mayor of Tahltan Lake, due largely to his great knowledge of all camp operations.

Mister Moe, good luck with your adventures down under Mate.

### Radiation testing

Again in 2016, TFP sampled 10 sockeye salmon for radiation analysis. Preliminary results state: All but one of the sockeye had undetectable levels of artificial radioactive isotopes that come from human activities. In that single sample the level of  $^{137}\text{Cs}$  was 0.7 Bq/kg which is more than 1,400 times lower than food safety guidelines (1000 Bq/kg). This level of  $^{137}\text{Cs}$  is expected to be present because of  $^{137}\text{Cs}$  left over in the Pacific from nuclear bomb tests that were carried out back in the mid-20th century. The presence or absence of  $^{134}\text{Cs}$  will not change the fact that the fish from the Stikine have levels of radioisotopes that are not a significant health risk to either the fish or human consumers. This is reassuring news for our community and our food fishers.