



THE GUMBOOT GAZETTE



Volume 9, Number 1

The Lakelse Watershed Newsletter

Winter/Spring 2018

Sled for Sale!
**tune up required*



Pictures courtesy of Dave Jephson *Big thanks to Rob for coordinating!!! – and Chris for the muscle!*

On February 9th a local sports fisherman discovered a charred snowmobile frozen into the ice on Lakelse Lake. Local LWSS members attempted to remove it, however, it was far too entrenched in the ice and snow and they did not have the appropriate equipment.

Thank-you to the Terrace Search and Rescue team! Volunteers Dave Jephson and Colby Jephson used a side by side with tracks to remove it before the ice melted and the sled found a forever home at the bottom of Lakelse Lake!

NWCC Goes Ice Fishing

After determining ice thickness was acceptable, NWCC students and instructors ventured out above the deepest point on Lakelse Lake to obtain water quality data, sediment samples, and plankton samples. A YSI ProDSS meter was used for water quality while an Ekman dredge was used for sediment sampling and a Wisconsin plankton net for plankton sampling. [Results will be in next newsletter!](#)



Photo courtesy of Skeena Media

The snow is melting... which means water quality sampling for both the Lakelse Lake and the Lakelse Watershed circuit will be starting up again in the spring! **Contact Olivia Gray** at olivia.hrem@gmail.com or **604 366 5552** **if you would like to join in and volunteer!** Lake sampling takes approximately 1-2 hours on the lake with a boat and the watershed circuit takes approximately 7 hours driving to each creek. We will supply transportation & lunch!

Scully Creek Underwater Camera



In 2017, the Scully Creek camera was left in after the Sockeye run finished to also count Coho that used the stream for spawning. The fence and camera were re-arranged to accommodate high lake levels.

Success! In total, **112 Coho** were viewed between October 10th - November 10th !

(Amount of Sockeye viewed are still being counted and will be available in the next newsletter!)



Upcoming Project

In collaboration with the Ministry of Forests, Lands and Natural Resource Operations Recreation Sites and Trails B.C. unit and the Pacific Salmon Foundation we plan to install signage along the Clearwater Lakes hiking trails. Students from Northwest Community College are also involved and are currently designing the features for the signage.



Topics covered on the signage will include riparian habitat, the use of the area by salmonids, birds, and other wildlife, the importance of water quality, conservation of old growth stands, and other ecosystem functions.



Volunteers will be needed to install the signage along the trails later in the year!!

Freshwater Mussels

Pop Quiz!

Q: What does "Lakelse" originally mean?

A: "Place of the fresh water mussels," from the Tsimshian First Nations

Freshwater mussels are bivalve mollusks which means that they have two shells surrounding the soft body. They typically live in streams and lakes on the sand and gravel.

Lakelse Lake contains the following three species of freshwater mussels:

Anodonta kennerlyi
Western Floater



<https://xerces.org/western-floater/>

Primarily located in Lakelse Lake

Anodonta californiensis
California Floater



https://en.wikipedia.org/wiki/California_floater

Primarily located in Lakelse Lake

Margaritifera falcata
Western Pearlshell



<https://xerces.org/western-pearlshell/>

Primarily located in Lakelse River

Mussels are excellent bioindicators, meaning they are useful in monitoring the overall health of the aquatic environment (either through population, function, or status), due to being sensitive to pollutants. Mussels continually filter and decompose, thus any particulate matter within a waterbody will be concentrated within them.

Water is life, and clean water means health - Audrey Hepburn

Continuing Project: Bat Boxes

Last summer two bat boxes were constructed (a brooding and a roosting box) and were situated within the Lakelse Watershed. There are opportunities for more boxes to be constructed and installed!



Bats are integral to ecosystems for controlling insect population as well as pollinating some plants. Bats in North America have been declining rapidly (by the millions!) due to the fungal disease White Nose Syndrome. Help save the bats (and reduce mosquitos)!

SAVE THE

BATS

Please contact Olivia Gray if you are interested in building or installing a bat box! Either email olivia.hrem@gmail.com or call **604 366 5552** to get more information!

You've heard of the Big Dipper and the Little Dipper.... How about the American Dipper?

Cinclus mexicanus

ORDER: Passeriformes

FAMILY: Cinclidae

American Dippers are stocky, small, robin sized birds that live primarily along the West Coast and Mid-West in North America. They are the only true North American aquatic songbird!

American Dippers gather food by diving (from air or water) and may move rocks on the bottom to find food as well!

This particular bird does not migrate south! Instead they move to water bodies that do not freeze during the winter!

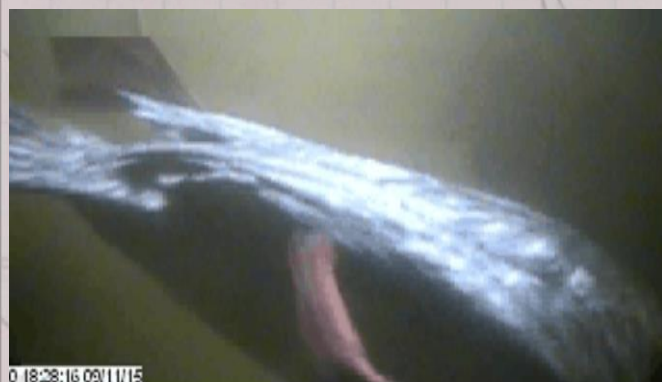


Photo credit:
https://www.allaboutbirds.org/guide/American_Dipper/id

Dippers primarily live along streams, particularly unpolluted ones (good indicators of water quality!), anywhere from mountain ranges to deserts! As long as there is rushing water, they can be found!

Nests are built anywhere that overhangs or is near fast moving water – male and females may work together on this!

A person (that will remain anonymous) once mistook an American Dipper for a turtle while watching the underwater Scully Creek footage (pictured left)!



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Mark Your Calendars!

Grand Opening of a new Visitor Centre at Lakelse Lake!

**On June 2nd, 2018 from 1:00pm – 4:30pm at
the Furlong Bay Campground**



https://www.youtube.com/watch?v=RP_oMbXmodc

- Ceremony
- Short speeches
- Ribbon cutting
- Lots of family friendly activities
- And cupcakes!



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The GUMBOOT GAZETTE



Summer 2018

The Lakelse Watershed Newsletter

Scully Creek Success!



After 90 hours of camera footage the results are out! A total of 1808 Sockeye Salmon were counted travelling upstream, with 1106 being male and 702 being female!

A beaver and three otters were also caught on camera! If you want to check out the footage follow the link below to our youtube page!

Link:

https://www.youtube.com/channel/UC5HH8fce-8ox8aUnUYEUdRg?view_as=subscriber

If interested come out and see the camera! Look at footage and partake in the fun of sockeye counting! The camera will return to the water in August!



The otters weren't too keen to stop for a photo!

Furlong Bay Interpretive Walks



Meet @
Amphitheatre

Come walk along the Twin
Spruce Trail and learn about
fish species, local **vegetation**,
bats, and **invertebrates**!

-All Ages Welcome-

June 9th @ 3 pm

June 23rd @ 3 pm

July 7th @ 3 pm

July 21st @ 3 pm

Aug 11th @ 3 pm

Aug 25th @ 3 pm



Lakelse Visitor Centre Grand Opening Celebration!



The event theme was “Generations of Memories:
Explore, Play, Discover the Skeena”

June 2nd, saw the grand opening of the newly built Lakelse Visitor Centre! LWSS members and the Lakelse Initiatives Program were invited to participate due to their involvement with interpretive walks within the park and other activities in the Lakelse Watershed.



DFO partnered with LWSS for the event and set up a fish printing station to the delight of people of all ages.



A fish viewing tank was available for the public to learn how to identify juvenile salmonids and other fish species.

Other groups with booths at the event included the Lakelse Dragon Boat Society, BC Parks, the Northern Amphibians Naturalists Society, and the Metlakatla First Nations.

Thank-you to LWSS members Wayne and Bev Epp for participating in the event. The booth you created was awesome! The kids were certainly hooked to the “fish pond!”



Come and Join the Fun!

-Volunteer Opportunities-

Come and get a hands on experience in Sockeye surveys!

Seining on Williams Creek

August will mark the beginning of seining and gill netting adult sockeye salmon on Williams Creek to collect information for adult sockeye surveys. Sponsored by the DFO, volunteers are encouraged to come and participate in the fun!

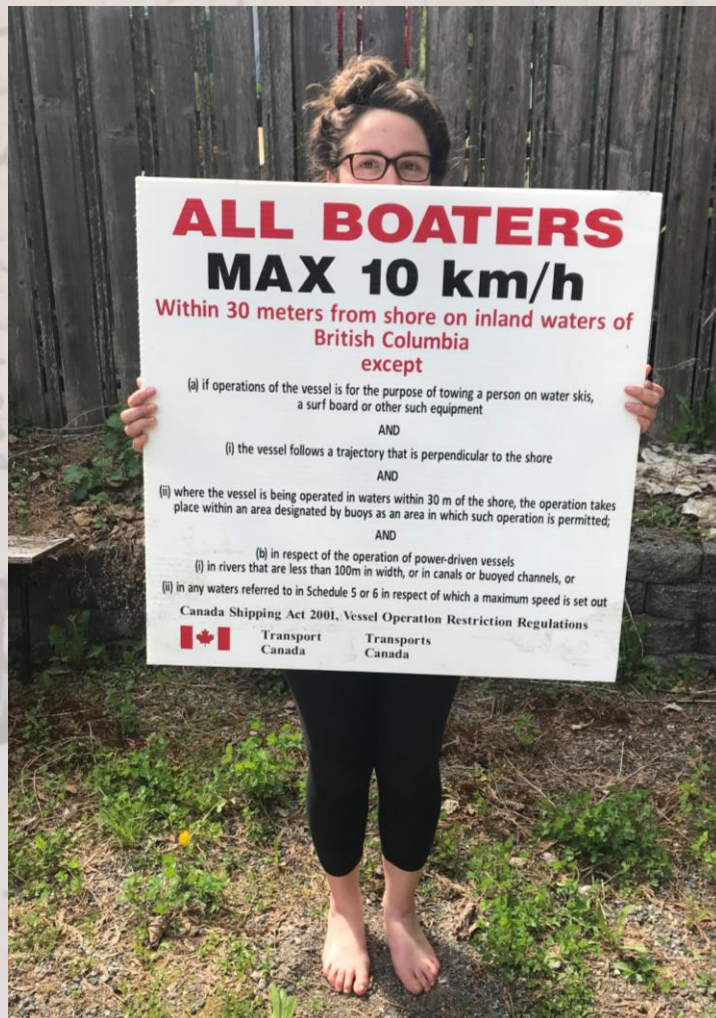


Scully Creek Camera

The Scully Creek underwater camera will also be reinstalled this summer. This will allow us to monitor Sockeye Salmon stocks in the creek. Volunteers can help count Sockeye in the video clips from the comfort of their own homes, or come out to help maintain the camera!

Contact Olivia Gray at olivia.hrem@gmail.com or (604) 366-5552.

Wanted!



*Human not included

LWSS is seeking people willing to display signs advertising the safety of boaters! You can place this sign on your dock, or in an area visible to boaters on the water!

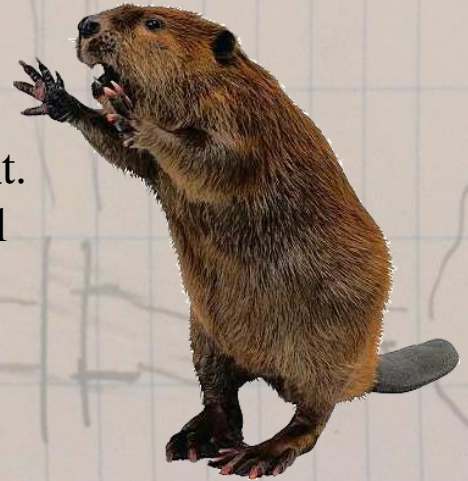
If you want to help LWSS but you don't have the time this is the opportunity for you!

Contact Olivia Gray at olivia.hrem@gmail.com or (604) 366-5552.

Lions and Tigers and Beavers!

Oh my!

The beaver is the world's second-largest rodent. Beavers have webbed feet and a flat broad tail that helps them glide through the water. They also have an extra set of eyelids which are transparent and close over their eyes allowing them to see clearly while underwater.



As we know beavers have very large teeth! But did you know that a beaver's teeth are self-sharpening. The outer surface of the teeth are coated in enamel and the inner surface is coated in dentine. The dentine is softer than the enamel and erodes faster resulting in a sharp edged tooth that helps the beaver gnaw through wood.

Did you know beavers aren't only hunted for their pelts, but for their glands as well! Their glands are used to make perfume and medicine!



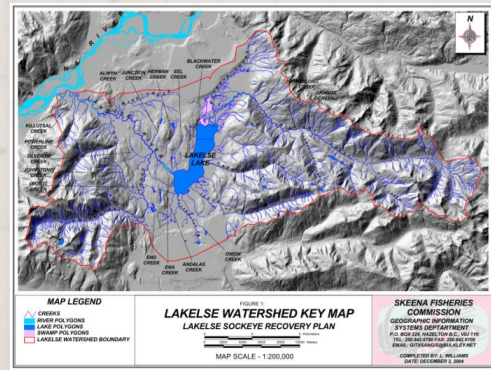
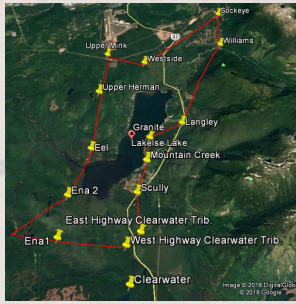
Beavers are Canada's national animal!

Evidence of a Beaver

- Fresh cuts trees and wood chips
- Fresh mud and feces surrounding a pond, or dam
- Paths leading from the trees to the water, with evidence of dragging trees



Watershed Circuit Volunteers



Come on out and help us test the water quality at your favorite lake! Help us gather data to ensure that Lakelse Lake is healthy and happy, not only for us but for the animals who live there too!

Duck sounds

Bengali: **gack-gack**

Danish: **rap**

Dutch: **kwak kwak**

English: **quack quack**

Finnish: **kvaak kvaak**

French: **coin coin**

German: **quack, quack**

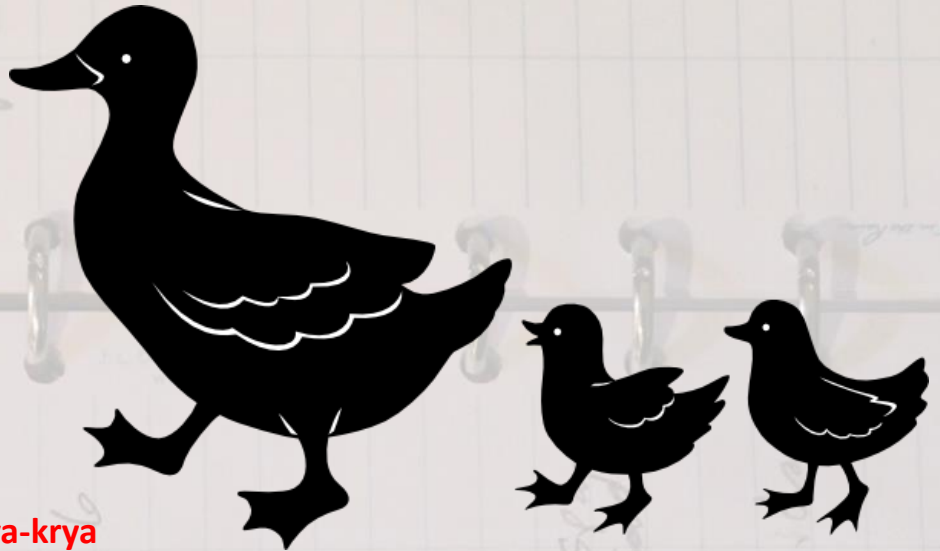
Hebrew: **ga ga ga**

Italian: **qua qua**

Norwegian: **kvakk-kvakk**

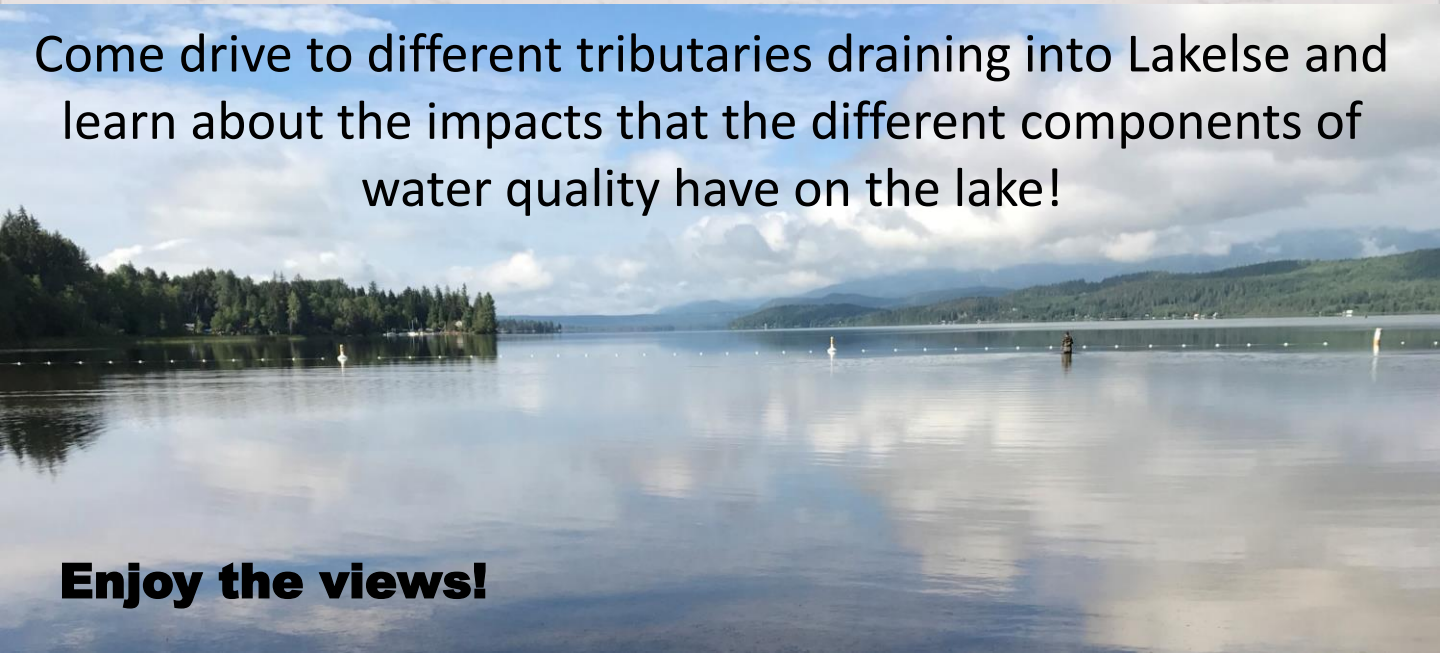
Russian and Ukrainian: **krya-krya**

Swedish: **kvack**



Come drive to different tributaries draining into Lakelse and learn about the impacts that the different components of water quality have on the lake!

Enjoy the views!



Interpretive Signage at the Clearwater Lake Trails

Interpretive signs are to be installed along the Clearwater Lakes trail!

The signs will feature educational and fun facts regarding the local flora and fauna!

Exciting facts about salmon, aquatic plants, and birds will be just a few of the topics covered!



Students from Northwest Community College participating in the Coast Mountain Ecology Field School are working with LWSS to install interpretive signs!



Volume 9, Number 3

The GUMBOOT GAZETTE



Fall 2018

The Lakelse Watershed Newsletter

Scully Creek

The underwater camera has been set up on Scully Creek again and has been snapping shots of spawning sockeye. It will remain in place this fall to help us count Coho as well.

Check out the live stream!

<http://www.biotactic.com/bravo/index12.htm>



The
New
Scully
Shed





**Important
Announcement**

**Lakelse Watershed Stewards Society
*Annual General Meeting***

Sunday November 18th @ 10:30am

Terrace Sportsplex

– Rich McDaniel Conference Room –



If you would like to become a member contact
Olivia at 604-366-5552 or olivia.hrem@gmail.com

*“Some people talk to animals. Not many listen though. That's
the problem.”*

— A.A. Milne, Winnie-the-Pooh



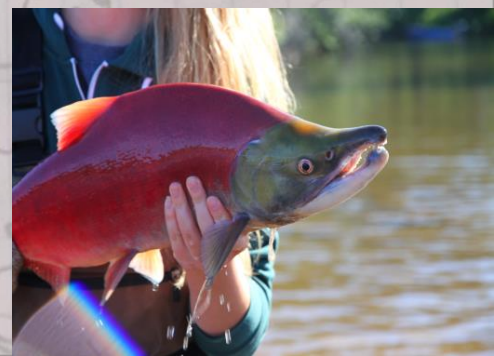
Seining on Williams Creek

September marked the last days for seining and gillnetting on Williams Creek, wrapping up the fry outplant program. Sponsored by the DFO, the information was collected for a survey for adult sockeye and to look at the effectiveness of the Lakelse Sockeye Recovery Program. Seining took place at the mouth of the creek, and gillnetting was done near the Williams Creek Bridge. The number of unmarked vs marked Sockeye (hatchery fish are without an adipose fin) was used to determine the enhanced part of the population and the recaptures of hole-punched fish farther upstream was used for a population estimate. A formula was used to determine the rates of return for the fish.

RESULTS: Population estimate was 4228 sockeye and 1.79% of the total population was hatchery returns.



Big thanks to all the volunteers!
New In-Seine T-shirts coming soon.



Fall Clean-up!

Fall is in the air and its time to start putting the water toys away. Its also a good time to be reminded of the importance to Clean, Drain and Dry your watercrafts and equipment. This helps to reduce the spread of invasive plants and animals such as Eurasian watermilfoil and zebra and quagga mussels.



CLEAN off all plants, animals and mud from your boat and equipment (e.g. boots, waders, fishing gear). Use available power washing stations.



DRAIN onto land all water from bait buckets, live-wells, pumps, motor, bilges, and remove drain plugs.



DRY all items completely before launching the watercraft into another body of water.

We installed 4 signs this summer at boat launches around Lakelse Lake to remind everyone to Clean, Drain, and Dry their equipment and watercrafts!

Happy Halloween!

Spooky things to watch for are the

Eurasian Watermillfoil Zombie Plant!

Its nicknamed the Zombie Plant because parts of it can detach, be transported and then come back to life somewhere else. Tiny fragments can take root and spread, eventually choking out native vegetation and impacting water quality and fish.

The Zebra mussel Chainsaw Massacre!

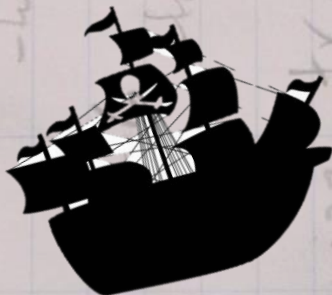
Razor sharp zebra mussels are on the loose slicing innocent swimmers feet and destroying pipes and property.

But don't worry these haven't reached this area.... YET...

Clean Drain and Dry to prevent the spread of these terrifying invasive species!

What do sea monsters eat?

Fish and ships



Furlong Bay Interpretive Walks



Meet @
Amphitheatre

Come walk along the Twin
Spruce Trail and learn about
fish species, local vegetation,
bats, and invertebrates!

-All Ages Welcome

June 9th @ 3

June 23rd @

July 7th @

July 21st @

Aug 11th @

Aug 25th @ 5

It was another
successful season of
Interpretive walks
at Furlong Bay.
3rd year in row!

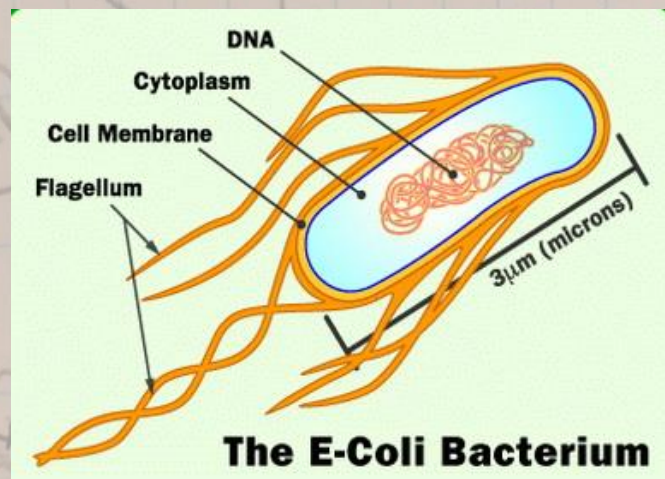


Closed for the Season



E-Coli Results

Water samples were collected this summer from Furlong Bay, Gruchy's Beach and the Picnic Site and given to Northern Health for testing.

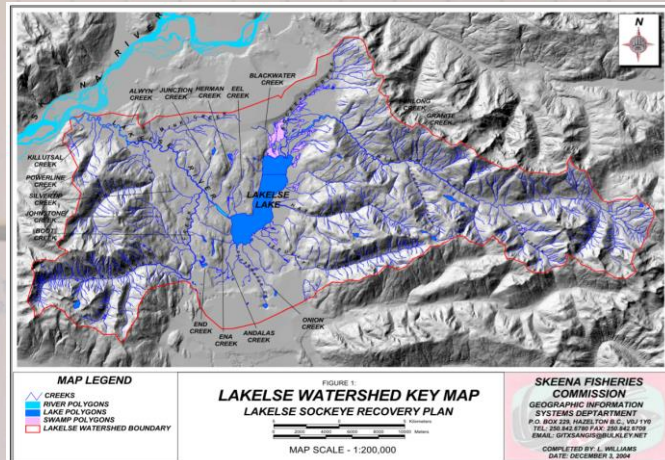


All samples came back as less than 2 per 100mL sample. This is far below the guidelines for Canadian Recreation Water Quality (GCRWQ) which says that swimming/bathing water must not exceed 200 per 100mL sample.

Water Quality Testing Lakelse Watershed

Volunteers Welcome!

Come drive to different tributaries draining into Lakelse and help us test the water quality and learn about the impacts that the different components of water quality have on the lake!



*Who cleans the bottom of the ocean?
A Mer-Maid !*

Interpretive Signs at the Clearwater Lake Trails

Salmon

The Five Species of Pacific Salmon

There are five species of Pacific salmon. Chinook, coho, chum, pink, and sockeye are all present in the Lakelse Lake watershed. Of the five species, sockeye, pink, and coho are most abundant in the lake and its tributaries.

That's Life

Most salmon hatch in freshwater rivers and streams. Factors such as availability of food may determine if species such as coho and sockeye will spend one or two years in freshwater, while species such as chinook and chum migrate to the ocean upon emergence. Their diet consists of aquatic insects and other organisms that are big enough to survive their journey to the ocean. Salmon spend the next 2-3 years living in the ocean before returning to freshwater to spawn. Amazingly, most salmon will return to the very same river or stream in which they hatched.

Preferred Habitat

Like all animals, salmon have preferred habitat conditions. They like to live in clean water that contains large amounts of dissolved oxygen. Average seasonal water temperatures below 15°C is optimal for most fish. Tree canopies over creeks and streams provide shady spots for salmon to hide and keep cool. Salmon need a lot of food to build up their body weight before swimming to the ocean, so a stream full of aquatic insects is a great place for them to grow. Once they reach the ocean they will continue to eat, even adding smaller fish to their diets!

Lakelse Sockeye

Known for their distinct green head and vivid red body the sockeye salmon is an important part of the Lakelse Lake system. The sockeye are a main source of food for the surrounding wildlife, such as the grizzly bear and eagle. They also act as a source of nutrients for the surrounding vegetation. As June approaches sockeye adults migrate back to Lakelse Lake from the ocean. At the beginning of August the sockeye will leave the lake and head upstream to spawn in the very same place they were hatched.

Signs for the interpretive walk at the Clearwater lake trails are well underway and are being installed this fall.



If you would like to help with the installation call or email Chera at 604-388-9779 or chera.hrem@gmail.com.



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The GUMBOOT GAZETTE



Winter 2019

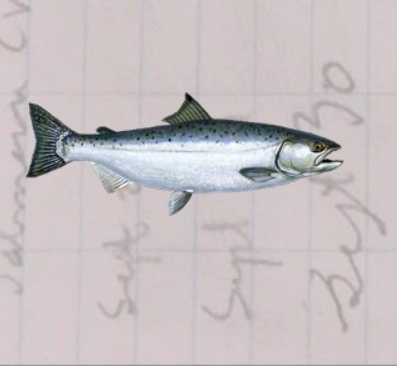
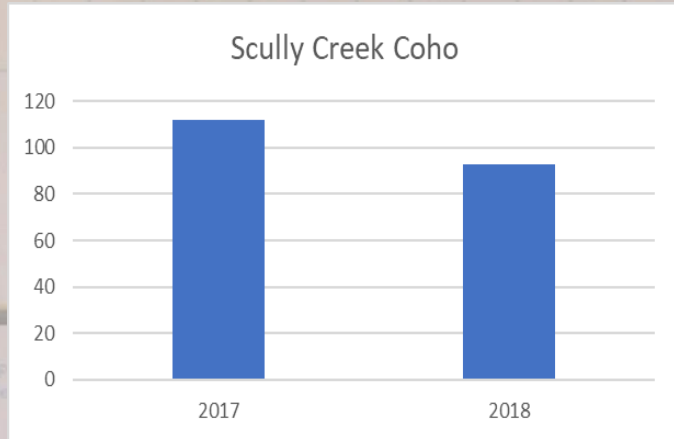
The Lakelse Watershed Newsletter

New Years Edition



Scully Creek

We counted 93 Coho with the underwater camera on Scully Creek. There was a slight decrease from last years numbers. Beavers, ducks and trout also passed through the fence to get their photo taken. The Scully shed also got reinforced and is ready for winter!



Sockeye at Scully Creek



The camera was in place for the Sockeye run from August through September. After reviewing the footage we counted **396** Sockeye travelling up Scully Creek.



Year	1 st Sockeye	Highest Run Day	Last Sockeye	Total
2015	August 14 th	September 7 th	September 16 th	440
2016	August 15 th	August 23 rd	September 22 nd	1404
2017	August 14 th	August 21 st	September 28 th	1808
2018	August 20 th	September 11 th	September 29 th	396





This Latecomer was particularly Festive!



CoHo Ho Ho



LAKELSE WATERSHED WATER QUALITY TESTING AND FISH INVENTORY



In November we set minnow traps while doing our water quality circuit of the Lakelse Watershed. We collected the traps the following day. We recorded the species and measured the length and weight of each fish. There were fish present in 12 out of the 15 streams. Volunteers are welcome to come and help us test water quality on the different tributaries draining into Lakelse Lake. Contact us for more info!

Stream	Coho	Cutthroat	Dolly Varden	Sculpin	Stickelback	Rainbow Trout
Sockeye	7	2	1	1		
Williams				1		
Langley	7	1				
Granite	7			5		1
Mountain	11			1		
Scully	23	5	5			
East Highway						1
West Highway		1	3			
Ena 1			1		2	
Ena 2						
Clearwater	1	6	2			
Westside						
Eel	7	1			27	1
Upper Herman	1	13				
Upper Mink						

Craft

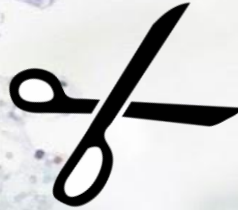
Corner



This inexpensive craft project is sure to delight!

You will need:

- **1 Sock** (we recommend a dirty one for a more realistic feel and smell)
- **1 Button** (for the eye)
- **Glue gun**
- **Board for background**



Instructions:

Scrunch dirty sock into a fish shape and glue onto board. Glue the button on for the eye.

And just like that you have a Sockeye!



Williams Creek Sockeye



INSEINE

2018



The Population estimate for Williams Creek was 4228 Sockeye and 1.79% of the total population was hatchery returns.

The 2018 INSEINE T-shirts are in!

Volunteers come and get your t-shirt!



Lakelse Sockeye

Interpretive Signs at the Clearwater Lake Trail

Lichens are NOT plants!!

Lichens are green and perform photosynthesis... but they are not plants!

Instead, lichen are an intimate symbiosis between usually separate organisms: a fungus (think mushroom), and a photosynthetic algae or cyanobacteria (symbiont). The symbiont lives inside a host fungus and provides the fungus with energy from the sun. In turn, the fungus provides the symbiont with water, nutrients like calcium, and a safe place to live.

Pioneer Species

Lichen is a pioneer organism, meaning that it is among the first organisms to grow on bare rock. Using tiny hairs called hyphae, they can anchor themselves to the rock, releasing weak acids to break it down and obtain minerals and nutrients. These organisms play an important role in the development of soil, building up layers of organic matter as they grow and decompose. This stage is called primary succession and leaves behind enough soil for other plants to begin growing.

Importance to the Ecosystem

Cyanobacteria in lichen are able to take atmospheric nitrogen and turn it into ammonia, which other plants absorb and use as a nutrient.

Fast fact: Lichen are extremely sensitive to atmospheric pollution and can be used as an indicator of pollution levels.

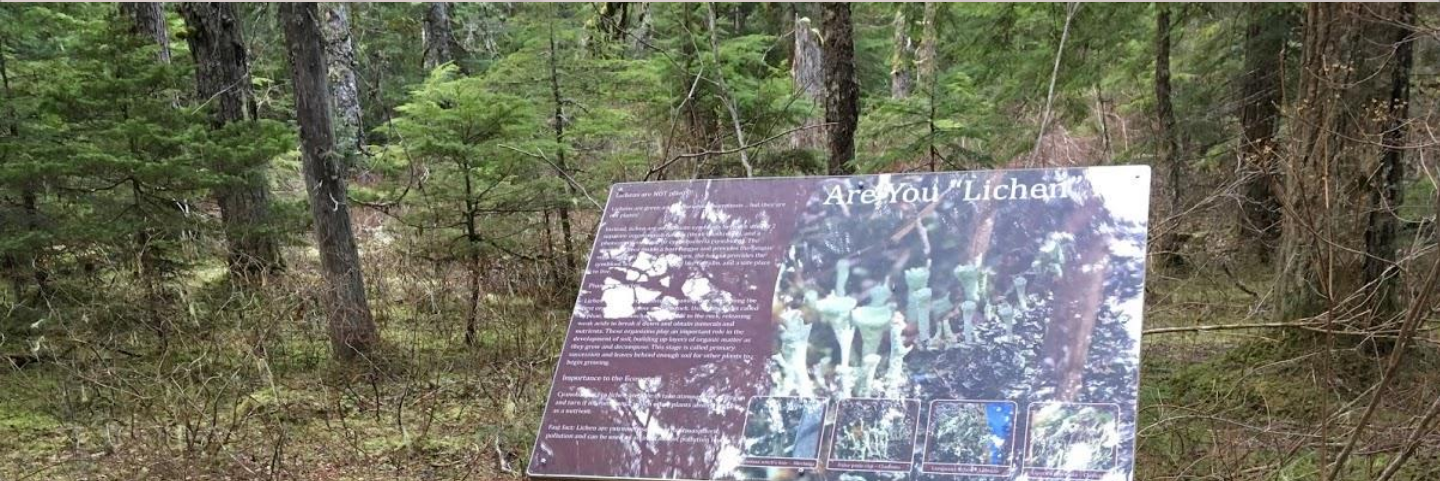


Are You "Lichen" It?



Common witch's hair - Alectoria Felted pine cup - Cladonia Lungwort lichen - Lobaria Lipstick Cladonia - Cladonia

A couple signs were put up along the Clearwater trail. The remaining signs will be put up in the spring. We are also working on building a few benches to be installed along the trail.



AGM

Annual General Meeting

The LWSS Annual General Meeting was held on November 18th, 2018. We looked over past, present and future plans.

Thanks for coming out!

Those who didn't come missed out on donuts and muffins.

What is THAT?

Mink, Weasel or Marten?

They can be pretty hard to differentiate, especially if you only get quick glance from far way. Here's a few tips to help you identify them.

Mink are usually found near water. They are great swimmers and tree climbers. Their coat is usually a solid dark brown colour. They are usually larger than weasels. Minks fur does not change colour.



The Weasels long slinky body is brown with white or light coloured fur on their chest and underside. Northern weasels, such as ermines, turn white during the winter months. They prefer to live in fields and woodlands.



Martens are very similar to Minks in terms of size and colour. However the Martens tail is almost black compared to the rest of their body. Marten's also have bigger and more pointed ears. They also prefer to live in the forest.

