

WATER QUALITY REPORT

Photo Credit: Darren Robinson Photograph





Photo Credit: Darren Robinson Photography / Shuswap Tourism

Water quality is monitored at several locations in the Shuswap watershed, at different times of year, and by different organizations for different reasons.

There are many reasons for monitoring water quality:

- To observe and record water quality, repeatedly over a period of time, to create a baseline—a set of conditions against which future measurements can be compared
- To protect public health and manage risk by ensuring water is safe for drinking and recreation
- To identify change, trends, and existing or emerging water quality problems
- To identify sources of pollution

- To ensure compliance with pollution regulations or permit requirements
- To gather information so that pollution prevention or remediation programs can be designed
- To measure how goals or targets for water quality are being met
- To understand how specific activities affect water quality.



The Shuswap Watershed Council (SWC) is **a partnership of many organizations** with a responsibility for or an interest in **monitoring and enhancing water quality**. The SWC is pleased to present a summary of water quality monitoring results and water quality protection projects in the Shuswap watershed on behalf of its partners for 2020. In this fifth annual report on water quality from the SWC, you'll find results and information about:

- Shuswap Lake, Mara Lake, Adams Lake, Mabel Lake, and Sugar Lake
- Salmon River
- Popular beaches
- Algal blooms and cyanobacteria
- Aquatic invasive species, and how to prevent their spread
- The SWC's new Water Quality Grant Program, and its work with farms in the Shuswap to protect water quality
- Shuswap watershed trivia
- Tips for how residents and home owners can reduce their impact on water quality.

The Shuswap watershed

A watershed is an area of land defined by where water flows. Watersheds receive precipitation—rain or snow —and over time, water drains through creeks, rivers, and lakes to the single lowest point in the watershed.

The Shuswap watershed is much more than the lake: it is all the land and bodies of water that drain to the outlet of Little Shuswap Lake. It includes forests, fields, hillsides, wetlands, meadows, creeks, rivers, and lakes from the Okanagan Highlands in the south, to the Monashee mountains in the north and east, to the Shuswap Highlands in the northwest. Adams River

Seymour River

Anstey Arm

Eagle River

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Shuswap River

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Sicamous

Sicamous Arm

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Shuswap River

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Seymour Arm

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Main Arm

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Salmon Arm 6

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The Shuswap watershed is within **Secwepemcul'ecw**, the traditional territory of the Secwepemc Nation; part of the watershed in the south, around the Salmon River, is within the traditional territory of the Syilx (Okanagan) Nation.

12

Chase

Scotch Creel

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11 Sorrento

The Shuswap watershed forms part of the larger Thompson and Fraser watersheds.

This is a simplified map of the Shuswap watershed. It shows the large lakes and rivers, and the water quality monitoring locations that are reported on the following pages.

Select Water Quality Sample Locations

- 1. Sugar Lake
- 2. Mabel Lake—South End
- 3. Mabel Lake—Tsuius Creek
- 4. Mara Lake—Fossette
- 5. Shuswap Lake—Tappen
- 6. Shuswap Lake—Canoe Point
- 7. Shuswap Lake—Marble Point
- 8. Shuswap Lake—Broken Point
- 9. Shuswap Lake—Encounter Point
- 10. Shuswap Lake—Armstrong Point
- **11.** Shuswap Lake—W. Sorrento
- 12. Adams Lake



Shuswap and Mara Lakes

The BC Ministry of Environment and Climate Change Strategy monitored water quality at the lakes covered in this report. Here is a snapshot of water quality monitoring results from 2020.



If you've read earlier editions of the SWC's annual water quality summary reports, you may notice that less data is being reported for 2020 than previous years. Unfortunately, the COVID-19 pandemic prevented field staff from collecting a full set of water quality data in 2020. Consequently, data for the late season (fall) is presented, but early season (spring) is missing for many of the sites.







DISSOLVED OXYGEN



Shuswap and Mara Lakes 2020

CHLOROPHYLL a



Why monitor nutrients?

Did you know that Phosphorus (P) and Nitrogen (N) are vital nutrients in an aquatic ecosystem? That's one of the reasons why they're routinely monitored. Aquatic life such as algae, invertebrates, and fish need these nutrients to grow and reproduce. Aquatic ecosystems are defined, in part, by the amount of nutrients in them. Limnologists (lake biologists) refer to this as **"trophic condition"**. In a healthy ecosystem, the give-and-take of nutrients is balanced. But, excessive nutrients in an aquatic ecosystem can upset the balance and lead to algae growth, odours, reduced water quality, and it can compromise the quality of water for drinking and recreation.

There are two types of P reported: **Reactive P** and **Total P**. Reactive P is a form of phosphorus that's immediately available (also known as "bioavailable") to plant life, such as algae and aquatic plants. Therefore, Reactive P is the form of P that has the potential to trigger an algal bloom.

True or False: A Secchi Disk is a device for measuring water quality



True! A Secchi Disk is a flat, circular device with alternating black and white wedges. It is lowered into the water on a rope until the contrasting wedges are no longer visible beneath the surface. The depth of the disk at this point is the Secchi depth measurement. It is a low-tech, relative measurement of water clarity: the higher the depth, the clearer the water.

Generally speaking, a lake's water clarity can be reduced by a number of factors such as fine silt, algae, or dissolved compounds in the water such as tannins. Shuswap and Mara Lake typically have high Secchi depth measurements in most locations. The spring measurements tend to be smaller due to the influence of spring run-off on water clarity, particularly at the Tappen site which is relatively shallow and heavily influenced by the Salmon River.

Adams, Mabel, and Sugar Lakes





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Adams, Mabel, and Sugar Lakes 2020

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Are you wondering where these sites are located? See the map on page 4 to find out.

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Natural vs. anthropogenic nutrient sources

In a watershed there can be many sources of nutrients. Some are natural, and some are anthropogenic (created by people). Of the latter, these include municipal wastewater effluent, septic drain fields, domestic and commercially used fertilizers, such as those in agriculture, horticulture and forestry, and agricultural wastes. Nutrients from these sources can enter the lakes directly through pipes and outfalls, or indirectly by seeping through soils or groundwater until they reach a river or lake.

Notice the differences in phosphorus and chlorophyll *a* between the lakes reported on this page, and Shuswap and Mara Lakes reported on the previous page. The values are lower for Mabel Lake, Sugar Lake and Adams Lake— this is indicative of the naturally very low-nutrient water quality in the upper reaches of the Shuswap watershed.

An explanation of the lakes monitoring programs

Shuswap and Mara Lakes

The BC Ministry of Environment & Climate Change Strategy (MOE) routinely monitors several locations in the Shuswap watershed twice per year—spring and late summer/fall—to identify long-term water quality trends in the lakes. In 2020, the COVID-19 pandemic prevented field staff from collecting water quality data from many of the monitoring sites in the spring; however, the lakes were monitored in the fall.

The water quality parameters reported here—nutrients, chlorophyll *a*, dissolved oxygen, and Secchi depth—all relate to lake productivity (essentially, the ability of a lake to support the growth plankton, plants, and animals). MOE's monitoring program also includes a suite of water chemistry parameters to support data interpretation and provide a comprehensive record of water quality trends over time. Some of these parameters include pH, temperature, turbidity, total suspended solids, hardness, sulphate, and alkalinity.

Which of these lakes has the deepest point?



Which of these lakes is at the highest elevation?

A. Mabel Lake B. Adams Lake C. Sugar Lake Check page 15 for trivia answers!

The importance and impacts of nutrients in a lake ecosystem

What is trophic condition?

Did you know that lakes' condition is classified according to its productivity, or ability to support plant growth? This is referred to as its 'trophic status' or 'trophic condition'. Trophic condition ranges from oligotrophic (low levels of nutrients and productivity) to mesotrophic (moderate levels of nutrients and productivity) to eutrophic (high levels of nutrients and productivity). 'Eutrophication' is the progress of a lake toward a higher trophic condition, which can naturally occur very slowly over time, and can also be sped up by anthropogenic activities (people-caused) such as settlement and agriculture.

An assessment of Shuswap Lake

—by Kym Keogh, Senior Environmental Impact Biologist, BC Ministry of Environment & Climate Change Strategy

Shuswap Lake is predominantly oligotrophic, which means it is characterized by relatively low biological productivity, clear water, and low nutrient concentrations. Water chemistry data demonstrates low primary productivity (i.e., phytoplankton growth) and dilute nature of this large, deep lake. Periodic increases in nutrient inputs in the Salmon Arm reach (see map, p. 4) of the lake have resulted in primary productivity that indicates a mesotrophic condition. Water levels in the lake between 2015–2019 were at times well below the average and at other times were much higher than the average, such as in 2017 and 2018. These water levels were a key factor driving nutrient loading and nutrient availability in the lake during growing season. This is because the large rivers in the watershed are, by far, the biggest sources of nutrients to the lake. The influence of high water was especially apparent in the Sicamous and Salmon Arm reaches which are influenced by the Shuswap River, Eagle River, and Salmon River. Nutrient loading during flood events appears to be an important factor influencing lake conditions in the Salmon Arm reach, which remains in the mesotrophic range although total phosphorus, total nitrogen, and possibly chlorophyll a are showing an increasing trend since 2005.

Despite the variability in lake levels in recent years, there has been no change in water quality in the Main arm, which generally is in the oligotrophic range. The Sicamous reach shows some variability and some increasing trends in chlorophyll *a* although it, too, remains in the oligotrophic range for water quality.

A full water quality assessment report for Shuswap Lake will be available from the BC Ministry of Environment & Climate Change Strategy later this year.

SHUSWAP TRIVIA

Which of these rivers is the longest?

- A. Shuswap River B. Salmon River
- C. Adams River

Check page 15 for trivia answers!

Coming soon... a detailed report on the Salmon River

From 2016–2018, the SWC and BC Ministry of Environment & Climate Change Strategy (MOE) worked together to conduct a thorough monitoring program on the Salmon River that involved collecting water quality samples at five sites on a monthly basis for the duration of the three-year monitoring program. This served two key purposes:

- To assess if the water quality is meeting water quality objectives that were set by the MOE for the Salmon River in 1998. This type of monitoring program is called **attainment monitoring**.
- To provide support for the nutrient research partnership with UBC-Okanagan that was carried out on the river during the same time period (see p. 14 for more information).

The results of the attainment monitoring program are being assessed by MOE staff, and an attainment report describing how well the monitoring results met water quality objectives will be available from the MOE later this year.

Where are the river data? If you've been reading the SWC's water quality summary reports since 2016 when it published its first summary report, you might have noticed that this year's summary is missing data for the Salmon River and the Shuswap River. Unfortunately, the COVID-19 pandemic prevented field staff from monitoring sites on these rivers for most of the year.

Did you know?

Photo Credit: Darren Robinson Photography

The lakes and rivers of the Shuswap watershed are important migration, spawning, and juvenile rearing habitat for four species of Pacific salmon: sockeye, chinook, coho, and pink.

Sécwepemctsin (Shuswap language) words for the Shuswap:

séwllkwe ... water setétkwe ... river

peséwllkwe ... lake sqlélten ... salmon

Find the SWC's previous water quality summary reports for 2019, 2018, 2017, and 2016 on their website.

shuswapwater.ca

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SHUSWAP watershed council 2020 Water Quality Report



Photo Credit: Victoria Haack / Shuswap Tourism

Swimming Beaches

Interior Health and First Nations Health Authority are the regulatory agencies that oversee water quality monitoring at popular swimming beaches in the Shuswap. Water samples are collected and tested throughout the summer months for *E. coli*, a type of bacteria that is an indicator of water contamination. Here are the results from their beach monitoring programs in 2020.



What is an acceptable or unacceptable result?

There are federal guidelines for water quality for swimming and recreation (these are different from guidelines for aquatic life or for drinking water). They recommend that a safe bacteria level is less than 400 *E. coli* in a 100 mL sample, or an average of less than 200 *E. coli* in five consecutive 100 mL samples collected on a weekly basis. If results are above these, a swimming advisory may be issued.

Some beaches are tested more frequently than others. Out of 196 water quality samples collected from these nine popular beaches in 2020, all but one met the federal water quality guideline for swimming and recreation.



If you've spotted an algal bloom, submit your observations via the **BC Algae Watch** website. Your submission will go directly to staff at the BC Ministry of Environment & Climate Change Strategy.

www.gov.bc.ca/algaewatch



About algae and algal blooms

Algae are a diverse group of simple plants that live in freshwater and marine environments. Algae provide important ecosystem functions, including providing food for fish and supplying oxygen into the environment.

When conditions for algae are favourable, algae reproduction and growth can be prolific resulting in a dense mass of algae called a bloom. It is difficult to predict algae growth or to pinpoint exact causes for it, but sunlight, water temperature, nutrients, and stable weather (i.e., little to no wind or wave action) can all contribute to algal blooms. Sometimes these favourable conditions occur naturally, other times they are caused by people through land use activities such as agriculture and horticulture, or by industrial or domestic waste waters.

It's not uncommon for small isolated pockets of algae to occur in Shuswap Lake or any of the smaller lakes in our region, especially in spring and early summer when a fresh supply of nutrients enters the lakes during spring run-off and there is more sunlight. That time of year there can also be organic debris in the lakes, which can make identifying algae a challenge.

You can learn more about algae and how to recognize an algal bloom from a new provincial website, Algae Watch: www.gov.bc.ca/algaewatch.

What are cyanobacteria?

Cyanobacteria, also known as blue-green algae, are microscopic bacteria that occur in lakes across BC and beyond. Similar to algae, when conditions for their growth and reproduction are favourable they can form a bloom. Cyanoblooms are of particular concern because there are some species of cyanobacteria that are capable of producing toxins harmful to humans, pets, and livestock. Not all cyanobacteria are toxic, and even toxic species do not always produce toxins.

In BC, there is a provincial protocol for monitoring and testing water quality for cyanobacteria, for both drinking and recreational purposes. The protocol describes maximum acceptable concentrations of microcystin, a toxin that can be associated with cyanobacteria. In the event of a cyanobloom, the local health authority may recommend or require a public notification. If a notification is required, the drinking water provider or beach owner/operator will post public notifications.

In the Shuswap, cyanoblooms are rare but they can happen. You can reduce your risk of becoming exposed to cyanobacteria toxins by never drinking untreated water from lakes or ponds, and never swimming or recreating in water with a visible bloom. When needed, Interior Health posts up-to-date information about cyanoblooms online: www.interiorhealth.ca/ YourEnvironment/RecreationalWater.

The Salmon Arm Bay algal bloom of 2020

Shuswap Lake experienced a large, prolonged algal bloom from June to September 2020, in the Salmon Arm Bay and Tappen Bay areas of the lake and downstream to Sunnybrae, Canoe and Herald (see map, p. 4). Understanding the cause of an algal bloom can be difficult in most circumstances, but the 2020 bloom was uniquely challenging because COVID-19 prevented the collection of early-season water quality data which, if available, would've given insight to the conditions in the lake at the time leading up to the bloom.

Even in the absence of early-season water quality data, there are several factors that likely contributed to the 2020 algal bloom. The amount of rain, water-saturated soils, and high water levels in the Salmon River, White Creek, Tappen Creek, and other nearby creeks meant that nutrients were being flushed out of soils and carried downstream to Salmon Arm Bay. Agricultural soils can be an especially rich source of nutrients, including phosphorus, which contributes to algal growth. Septic systems near the lake and the Salmon Arm wastewater treatment plant effluent also contribute nutrients to Salmon Arm Bay, although past water quality monitoring and analysis has shown that these are a much smaller source of nutrients than rivers and creeks. In addition to nutrient inputs, the depth of Salmon Arm Bay is also a factor in the algal bloom. The bay is a relatively shallow region of Shuswap Lake, and consequently it warms up more than other parts of the lake. These conditions are favourable to some species of algae. Other favourable conditions for the algal bloom in 2020 were the abundance of sunshine and stable weather throughout much of July and August.



Did you know?

Shuswap Lake has a residence time of approximately 2.1 years. That means that all the water in the lake is replaced over that period of time. The residence time varies from arm to arm—for example, the Main Arm residence time has been estimated at 2–3 months whereas the Salmon Arm has a longer residence time closer to three years. Shuswap Lake has a relatively rapid residence time, compared to other large lakes in BC, and it can be attributed to the lack of flow-control structures (i.e., dams) on the lake and the high run-off volume from the large watershed area.

Photo credit: City of Salmon Arm





A high influx of nutrients due to rain and high water levels, and relatively shallow, calm, warm water in the Salmon Arm Bay likely contributed to the algal bloom of 2020. These two photos were taken at Canoe Beach on August 30th and September 8th. Notice in the later photo that the water is more clear and colourless.

Keeping invasive Zebra and Quagga Mussels out of the Shuswap



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Did you know?

Shuswap Lake and many other lakes in our region are especially at risk of a mussel infestation because of the water quality. The temperature, pH, and calcium concentrations are well suited to mussel survival. Additionally, the high influx of watercraft that we typically see in the summer from nearby provinces and states also puts our lakes at greater risk of an invasion. Zebra and quagga mussels are two species of freshwater mussels native to Europe and Asia with tremendous destructive potential due to their ability to attach to objects in the water: boats, water supply pipes, irrigation systems, dock pilings, hydroelectric facilities, and more. They also litter beaches with their small razor-sharp shells, impact water quality and aquatic food webs, reduce biodiversity by out-competing native species for food and space, and produce foul odours.

Fortunately, **zebra and quagga mussels don't exist in the Shuswap**—or in any of BC's lakes—but they do occur in Ontario, Manitoba, and as far west as California. Since they arrived in North America in the 1980s in ship ballast water, they have spread to new water bodies by 'hitch hiking' on boats and other watercraft.

With financial support from the SWC and others, the Columbia Shuswap Invasive Species Society (CSISS) has monitored several sites throughout the Shuswap for invasive mussels for the past six years. All their test results have been negative, meaning that invasive mussels have not been detected.



ZQM Monitoring Sites in 2020

- 1. Shuswap Lake—Blind Bay
- 2. Shuswap Lake—Captain's Village Marina
- 3. Shuswap Lake—Little River Boat World
- 4. Shuswap Lake—Sandy Point
- 5. Shuswap Lake—Old Town Bay
- 6. Shuswap Lake—Cinnemousun Narrows
- 7. Mabel Lake—Kingfisher
- 8. Mara Lake—Sicamous Narrows
- 9. Mara Lake—Swansea Point
- **10.** Adams Lake—Indian Point Resort
- **11.** White Lake—White Lake Provincial Park
- 12. Gardom Lake—Community Park
- **13.** Little Shuswap Lake—Memorial Park



CSISS collected 100 samples from 13 sites on seven lakes throughout the Shuswap in 2020. Invasive mussels weren't detected at any of these locations!





Zebra Mussels and Aquariums

In early 2021, zebra mussels were found in 'moss ball' aquarium plants in several locations across BC, including homes and pet stores. Although the introduction of zebra mussels to BC via aquarium plants was unintentional, it is a very unfortunate discovery that could have disastrous consequences if contaminated aquarium contents make their way into the environment through dumping or improper disposal. Aquarium owners are requested to inspect their plants and get in touch with the BC Conservation Officer Service if zebra mussels are observed in their tanks.

Reach the BC Conservation Officer Service at 1-877-952-RAPP (7277).

Invasive freshwater clams in the Shuswap

In 2019, invasive freshwater clam shells were discovered on the shores of Shuswap Lake. In 2020, the SWC sponsored Columbia Shuswap Invasive Species Society (CSISS) to survey where the clams have established in Shuswap Lake. Living populations were confirmed at Sunnybrae and Canoe (in the Salmon Arm of Shuswap Lake). Invasive clams are very difficult to eradicate from a complex waterbody like Shuswap Lake. Therefore, we must all pitch in to prevent their spread to other areas of the Shuswap lake, or to nearby lakes:

- Clean, drain and dry watercraft when moving from one waterbody to another
- Stop for watercraft inspection when travelling
- Avoid using invasive species as fishing bait

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- Never release or dump aquarium plants or animals
 - Report sightings of invasive clams and other invasive species using the **Report Invasives BC app** >

Invasive freshwater clams have a light brown triangular shell, usually less than 2.5 cm in length with visible growth rings. They pose many of the same threats as Zebra and Quagga mussels, including the potential to clog pipes, pollute water quality, and reduce biodiversity. Surveys for invasive freshwater clams are continuing in the Shuswap in 2021 to better understand where they are distributed.

Photo credit: Columbia Shuswap Invasive Species Society

SHUSWAP TRIVIA

How many eggs can a single female zebra mussel produce in one year?



Check page 15 for trivia answers!



Protecting and improving water quality in the Shuswap

The Shuswap Watershed Council launched a Water Quality Grant Program in early 2020. Farm businesses in the Shuswap were invited to apply for grant funding to go toward on-farm nutrient management projects. Applications to the grant fund needed to demonstrate how nutrient management would be improved, thereby reducing the amount of nutrients that wash off or leach out of soils into nearby creeks, rivers, and ultimately to Shuswap or Mara Lake. Nutrient retention in soils represents a significant savings for farms, making the nutrient management projects a win-win for farms and for water quality.

The purpose of the SWC's Water Quality Grant Program is to assist agricultural producers in retaining nutrients on land and in soil, not washing off into nearby creeks and rivers through rain, snowmelt, or flooding where it could contribute to water quality degradation.

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The SWC's Water Quality Grant Program is guided by the results of a three-year research project by scientists at the University of British Columbia-Okanagan. Phase 1 of the research project showed that the highest proportions of nutrients in the watershed come from the settled valley bottoms of the Shuswap River and Salmon River, which are the areas

most impacted by agriculture, housing, and commercial development. Phase 2 of the research project showed that nutrient loading into Mara Lake has been trending upward since the 1990s. Learn more about the water quality research in this mini-report: **Understanding Nutrients and Water Quality in the Shuswap River and Salmon River.** Find it on the SWC website.



Shuswap Watershed Council

The SWC produced a short, informative video with these Salmon Valley-based farms that received grant funding from the Council in 2020. Find the video on the SWC's YouTube channel!



Hillside Dreams Goat Dairy completed a few projects including the installation of fencing between the farm and the Salmon River to keep livestock out of the river; construction of a stable berm between the river and a barn to mitigate the risk of flooding and prevent floodwaters from becoming nutrient-enriched in the nearby barnyard; and re-construction of a manure pit to improve its impermeability.



Swaan Farms installed a 'HarveStore' to safely collect and store liquid effluent from dairy manure to be applied to crops on the farm at the appropriate time.



Lakeland Farms completed a cover-crop trial project, which involved planting various species for cover and demonstrating the techniques and benefits of cover crops to other producers in the area.



Grass Roots Dairies replaced an effluent treatment storage facility, including the installation of a sump, pump and pipe.



Splatsin First Nation and the *Farmland Riparian Interface Stewardship Program* (FRISP) of the BC Cattlemen's Association are working with ranchers in the Shuswap River valley and Salmon River valley to build and replace riparian area fencing, which will keep livestock away from rivers, creeks, and creekbanks.

Help keep the Shuswap clean

Here's what you can do as a resident of the Shuswap to help maintain our water quality:

- Make sure you know where your household wastewater goes.
 Is your home connected to a septic system or to sewer? If it's septic, it's your responsibility to keep it in good repair. The Septic Smart
 Homeowner's Guide is a good place to start: csrd.bc.ca/septicsmart/
- If you have a farm or agricultural operation of any kind, get familiarized with the provincial Code of Practice for Agricultural Environmental Management. This regulation was enacted by the BC Ministry of Environment & Climate Change Strategy in February 2019. It aims to ensure agricultural practices are consistent with the protection of clean, safe drinking water. Learn more at https://bit.ly/2ToGpu2
- If you're a boat owner or have a watercraft of any kind, take the necessary steps to avoid accidentally moving invasive species from one waterbody to another. Always clean, drain, and dry your watercraft. When you travel, stop at watercraft inspection stations.
- Properly dispose of unused medications. Don't throw them out or flush them—return them to a pharmacy
- Don't ever flush personal care products such as wipes, floss, masks, gloves, swabs or hygiene products—not even if it says 'flushable' on the package!
- Don't put fats, oils or grease down the drain. Cool it, scrape it, and dispose of it in your garbage. Large quantities of liquid fats and oils should be dropped off at a hazardous waste facility (e.g., Salmon Arm landfill).

Acknowledgments

Thanks go to members of the SWC's Water Quality Monitoring Group for their contributions to this summary. The SWC wishes to acknowledge the BC Ministry of Environment & Climate Change Strategy, the CSRD, First Nations Health Authority, Interior Health, the City of Salmon Arm, and the Columbia Shuswap Invasive Species Society.

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What do you think?

Would you like share your feedback on this water quality report with us? Please contact the SWC, care of the Fraser Basin Council in Kamloops:

Erin Vieira, SWC Program Manager evieira@fraserbasin.bc.ca 250.314.9660



Trivia answers

How long is the shoreline of Shuswap Lake? B. 1,430 km

Which of these lakes has the deepest point? **C. Adams Lake**—the deepest point is 397m!

Which of these lakes is the highest elevation? C. Sugar Lake

Which of these rivers is the longest? **A. Shuswap**

What is the surface area of Shuswap Lake? B. 310 sq. km

How many eggs can a single female zebra mussel produce in one year? C. 1,000,000



Photo Credit: Erin Vieira



Who We Are

About the Shuswap Watershed Council

The SWC was established in 2014 as a watershedbased partnership to enhance water quality and safe recreation in the Shuswap. There are 18 members that represent three regional districts, two municipalities, the Secwepemc Nation, two provincial government agencies, and Shuswap communities. The SWC is a collaborative, non-regulatory group. It works alongside organizations that have regulatory roles in managing the Shuswap watershed, complementing their work and carefully avoiding duplication.

Staff

The Fraser Basin Council, a provincial nongovernment organization, provides staff services to the Shuswap Watershed Council.

Our Vision

Enhanced water quality that supports human and ecosystem health and the local economy in the Shuswap watershed.

What We Do

Our Goals

The SWC's goals are that water quality is maintained and improved in the Shuswap for the benefits of a healthy ecosystem, a thriving tourism economy and a desirable lifestyle for residents; that the SWC is the trusted, go-to source for water quality information in the Shuswap; that people in the Shuswap practice safe water-based recreation; and that the SWC is a well-governed, transparent, collaborative organization.

The Work

The SWC's work on water quality, prevention of aquatic invasive mussels, and safe water-based recreation is guided by its Strategic Plan for 2021–26.



The SWC recently published a new Strategic Plan for 2021–26. Find it on their website: shuswapwater.ca

f /ShuswapWater



🖸 @shuswap.water

