

APRIL
2021
—
MARCH
2022

ANNUAL HIGHLIGHTS REPORT

Photo Credit: Darren Robinson Photography

shuswapwater.ca

In this Annual Report you'll find the highlights of the SWC's work on water quality monitoring and reporting, water quality improvement and protection, aquatic invasive mussel prevention, safe boating and recreation, communications and advocacy, administration, and a summary of expenditures.

The SWC humbly acknowledges that its work takes place in Secwepemc'ulecw, the traditional unceded territories of the Secwepemc Peoples.

-  Water quality monitoring
-  Water quality reporting
-  Water quality protection and improvement
-  Aquatic invasive species prevention
-  Safe boating and swimming
-  Communications and advocacy
-  Council administration and governance
-  Expenditures

Message from the Chair

JAY SIMPSON

Chair, Shuswap Watershed Council
Director, Columbia Shuswap Regional District Area F
—North Shuswap



As the new Chair of the Shuswap Watershed Council, I want to thank past Chair Paul Demenok and the past and present members of the Council, as well as our staff from Fraser Basin Council, for their efforts towards the health of Shuswap Lake and surrounding waters. Together we have brought the diversity of provincial agencies, First Nations, local and regional governments, and responsible individuals together to maintain and enhance the quality of these waters.

We are so lucky to have this abundance of fresh, clean water. Yet, clean as it is, there are challenges we face. We know there are sources of pollution that contribute to lake problems such as algal blooms. There are existential threats posed by invasive Zebra and Quagga mussels that have devastated many lakes from Manitoba eastward. Climate change is contributing to shrinking high mountain glaciers, and exacerbating forest fires and floods. Lakes and streams have been monitored for several years to create a baseline to measure our efforts against. Our goal and our challenge from here is to work with our local, provincial and federal partners to raise awareness of these threats, and take action to reduce or remove them.

Since joining the SWC in 2018 I have watched and learned from Paul, the SWC, our committees and partners. I encourage you to read this report, find out what we're doing, and join us as we continue to learn about and steward the Shuswap watershed.

Water Quality Monitoring

The Shuswap Watershed Council serves as a facilitator for the **Shuswap Water Quality Monitoring Group**, which has members from several organizations with responsibilities for monitoring. Regular meetings of the Monitoring Group enable dialogue, data and information sharing, and planning water quality monitoring across the watershed—large lakes, small lakes, and rivers. The Monitoring Group also implements the Shuswap Regional Algal Bloom Response Plan, when the need for it arises.

14

different organizations representing municipal, regional, indigenous, and provincial bodies participate in the Monitoring Group

850+

water samples collected and analyzed by these groups in 2021

Shuswap Regional Algal Bloom Response Plan

The SWC developed the Shuswap Regional Algal Bloom Response Plan in 2021, after a persistent algal bloom in Salmon Arm Bay (Shuswap Lake) in 2020. Large algal blooms should be monitored to ensure public safety because they sometimes make the water unfit for drinking or for swimming. Additionally, the results of algal bloom monitoring should be communicated to the public so they are aware of the

risks. Various organizations have responsibilities for water quality monitoring and reporting, and algal bloom response is not done by a single agency or authority. The Response Plan describes how several organizations in the Shuswap have agreed to help with monitoring algal blooms, and how to help keep the public informed in addition to responsibilities held by Interior Health and First Nations Health Authority.

When conditions for algae are favourable, algae reproduction and growth can be prolific resulting in a dense mass of algae called a bloom. Algal blooms can be unsightly and make the lake less desirable for swimming and recreation; in a worst-case scenario, some types of blooms can produce toxins harmful to people, pets and livestock.

Water Quality Grant Program

2021 was the second year the SWC offered its **Water Quality Grant Program**. The purpose of the grant program is to provide financial support to farms and stewardship groups in the Shuswap watershed for projects that improve on-farm nutrient management or restore wetlands and riparian areas, thereby protecting water quality in nearby creeks, rivers, and downstream to Shuswap Lake. Four grants were awarded in 2021, worth a total of \$78,763. The grant funding leveraged an additional \$93,740 cash and \$63,825 in-kind contributions from the grant recipients for a total investment of \$236,328 in new water quality protection projects.

4

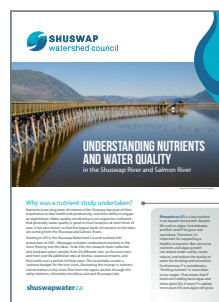
grants awarded

\$78,763

SWC funds toward better nutrient management and watershed restoration

\$157,565

other funds and resources leveraged for better nutrient management and watershed restoration



Understanding Nutrients and Water Quality in the Shuswap River and Salmon River.

The grant program was developed by the SWC in response to the findings of a three-year research project done in partnership with UBC-Okanagan. Research results showed that the greatest proportion of nutrients in Shuswap and Mara Lakes originate from the settled valley bottoms of the Salmon and Shuswap Rivers, where there are farms and homes. These are the areas where new nutrient management strategies will have the most impact in improving water quality.

Standing next to the Shuswap River, Ralph Van Dalfsen (right) of Trinity Dairies in Enderby discusses his project with SWC committee members and staff. Trinity Dairies received grant funding for drainage and flood mitigation works.





18



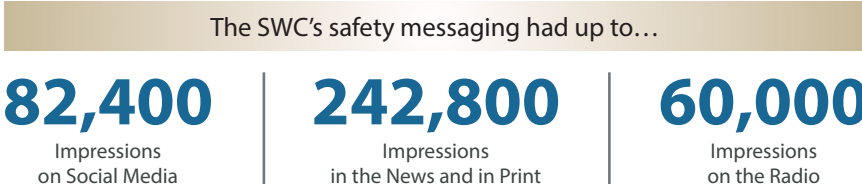
Rack cards and posters describing 7 top tips for safety were distributed to nearly 60 locations throughout the Shuswap.

Safe Boating and Recreation

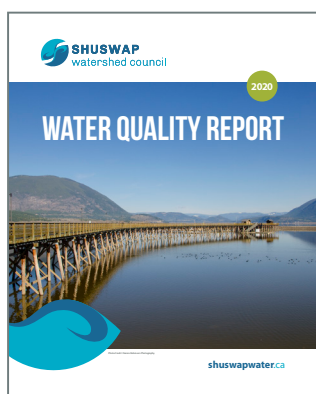
The SWC wants everyone in the Shuswap to be safe on and near the water whether boating, paddling, or beach-going. In 2021, the SWC raised awareness for unsafe behaviours and promoted safe practices such as wearing a lifejacket, boating sober, and drowning prevention. The SWC promoted “7 top tips” through a combination of editorials, social media, and advertising. The SWC also promotes national campaigns including Lifejacket Day, Water Safety Week, and Drowning Prevention Week. Additionally, the SWC partners with the Royal Canadian Marine Search & Rescue, Station 106 Shuswap (based in Sicamous) to raise awareness of the availability of lifejacket loaner kiosks for children at several locations throughout the Shuswap.

Lifejackets in various kids’ sizes can be borrowed from this kiosk at Sunnybrae Park, and from 17 other locations.

Did you know there are **18 lifejacket loaner kiosks** around the Shuswap, equipped with child-sized lifejackets to borrow for free on the honour system? The kiosks are provided by the Royal Canadian Marine Search and Rescue, Station 106 Shuswap, with support from several community sponsors. The SWC has proudly sponsored the installation of three kiosks.



Communications and Advocacy



Throughout the year, the SWC publishes various communiqués about its operations, decisions, expenditures, and achievements. It also strives to engage Shuswap residents and visitors in important issues and announcements relevant to the Shuswap watershed. These communiqués include:

- Completion and distribution of the SWC’s fifth annual water quality report, the **2020 Shuswap Water Quality Summary**
- SWC Meeting Highlights Summaries (4 times per year)
- Media releases about the SWC’s activities and achievements
- The SWC maintains an informative **website** and an active presence on **social media**

Local voices for local issues

The SWC is an advocate for the Shuswap watershed. This year, the SWC was engaged by the Province of BC to review and respond to the Provincial *Watershed Security Strategy and Fund Discussion Paper*. The SWC submitted a response, describing its views and concerns about water security, to the ideas presented in the Discussion Paper.

The SWC also wrote to provincial and federal authorities to ask for the steps and investments necessary to protect British Columbia from the introduction of aquatic invasive mussels. You can find this correspondence on the SWC’s website.

shuswapwater.ca

Follow us and stay up to date with our work!



Invasive Zebra and Quagga Mussel Prevention

The SWC partnered with the **Columbia Shuswap Invasive Species Society (CSISS)** to monitor the Shuswap watershed for invasive Zebra and Quagga Mussels (ZQM) throughout boating season, and to conduct educational seminars and outreach with boaters, paddlers, and marina staff about preventing the spread of ZQM. The SWC promoted **watercraft inspection** and **Clean-Drain-Dry** best practices through news articles and print media, social media, and signage.

116

samples collected and tested for the presence of Zebra and Quagga Mussels

15

sites on 8 waterbodies were repeatedly monitored in 2021

The SWC's media messaging had:

Over
530,000

Impressions
in the news
and travel literature

Up to
15,000

Impressions
on radio
listeners

Over
16,000

Impressions
on social
media

Over
1.5 million

Impressions
on travellers through
billboard campaigns



Staff are pictured here with sampling equipment at a monitoring location in Captain's Village Marina in Scotch Creek. A marina is an excellent site to look for Zebra and Quagga Mussels because mussels are often introduced to a waterbody via watercraft; therefore, where there is a high density of watercraft, there is a higher likelihood of detecting ZQM. Erin is holding a phytoplankton net which would capture microscopic mussel larvae if they were present at this site.

"By monitoring for Zebra and Quagga Mussels, essentially we are looking for something that we hope desperately not to find."

—Erin Vieira, SWC Program Manager

#DONTMOVEAMUSSEL

Zebra and Quagga mussels would have negative effects on water quality, beaches, and fish; they would also cause nuisance clogging in domestic water intakes, hydro-power facilities, and irrigation systems. **Fortunately, lakes in the Shuswap—and all of British Columbia—remain invasive mussel-free. The SWC is helping to keep it that way!**



Surveying invasive freshwater clams

Invasive freshwater clams—also known as pygmy clams, golden clams, or Asian clams—were found on the shores of Shuswap Lake in 2019. In 2020, the SWC sponsored CSISS to survey beaches on the shores of the Salmon arm and Main arm of Shuswap Lake, and on Mara Lake; these surveys found live clam populations at Sunnybrae and Canoe. In 2021, beach surveys continued with CSISS training local First Nations groups on survey methodology. No new infestations of adult invasive clams were found through these surveys. In addition to beach surveys, the water samples that are collected in Zebra and Quagga Mussel monitoring are also tested for invasive clam larvae. More surveys and monitoring are planned for 2022.



If the clam populations grow, they will start to have negative effects on the lake ecosystem. We should all be diligent about preventing their spread to new areas of the Shuswap. Here's what you should do:

- always **clean, drain, and dry watercraft** when moving from one lake or river to another, or from one area of Shuswap Lake to another area (if you remove your watercraft from the lake)
- stop for watercraft inspection when travelling
- avoid using invasive species as fishing bait
- never release aquarium plants, animals, or water into the environment
- report sightings of invasive clams and other invasive species using the **Report Invasives BC** app

Invasive freshwater clams are about the size of a fingernail, and are golden brown often with visible ridges. They have been discovered at Sunnybrae and Canoe.

Photo credit: Columbia Shuswap Invasive Species Society



You can help!

Report suspected sightings of aquatic invasive species via the Report Invasives BC app.

Administration and Governance

Four Council meetings were held throughout the year to approve projects and work plans, receive operational updates from staff, hear informative presentations from other groups, and discuss arising issues. Meetings were held virtually in 2021 due to the Covid-19 pandemic. SWC meetings are open to observers.

2021–22 Budget

(April 1st 2021–March 31st 2022)

The SWC's work is supported by contributions from the following organizations:

Contributor	Amount (\$)
2020-21 surplus (carried forward from March 31st, 2021)	69,072
Operating Reserve ¹	198,995
Columbia Shuswap Regional District Areas C, D, E, F and the District of Sicamous	97,200
Thompson-Nicola Regional District	32,590
City of Salmon Arm	24,320
Adams Lake Indian Band	790
Regional District of North Okanagan – Area F	5000
Shuswap Lifeboat Society	3200
Revenue for 2020-21	431,167

Operational Expenses

Program	Budgeted (\$)	Expenses (\$)	Variance (\$)
Water Quality Program: Monitoring	32,950	25,274	7,676
Water Quality Program: Protection	111,650	46,751	64,899
ZQM Prevention	42,750	44,354	-1,604
Safe Recreation	21,550	24,090	-2,540
Communications & Advocacy	48,100	36,033	12,067
Administration & Governance	41,500	40,193	1,307
Sub-total operational expenses	298,500	216,696	81,804²
Operating Reserve	132,667	0	132,667
Summary of expenses	431,167	216,696	214,471



Two of the SWC's Community Representatives —Lorne Hunter and Sharon Bennett—have completed 6- and 3-year terms with the SWC, respectively. The SWC gratefully acknowledges their contributions to its work during that time. New Community Representatives join the SWC membership as of April 1st, 2022. See the full SWC membership list on the back page.

¹ The Operating Reserve has been growing since 2016 because of annual surpluses. In 2021, the SWC requisitioned less funds from each of its four primary funders, proportionately, to draw down the reserve. Within the reserve the SWC holds a \$20,000 water quality contingency fund that can be drawn from in case of arising water quality issues that require additional, unplanned monitoring or response.

² Of the \$81,804 surplus as of March 31st 2022, \$71,430 is allocated toward projects that are carried forward to 2022–23.



Who We Are

About the Shuswap Watershed Council

The SWC was established in 2014 as a watershed-based partnership of several organizations with an interest in or responsibility for protecting water quality. There are up to 22 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 that focuses on strategic initiatives to protect, maintain, and enhance water quality and promote safe recreation in the Shuswap. The SWC 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 non-government 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.

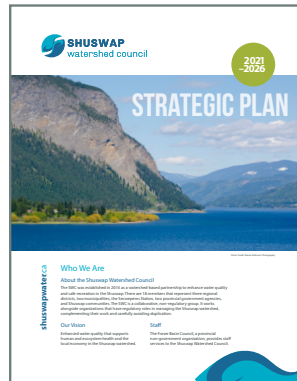
What We Do

Our Goals

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

The Work

The SWC's work is guided by its Strategic Plan for 2021–2026.



SWC Members

as at March 31, 2022

CHAIR—Jay Simpson
CSRD Area 'F'

VICE CHAIR—Paul Demenok
CSRD Area 'C'

Director Rene Talbot
CSRD Area 'D'

Director Rhona Martin
CSRD Area 'E'

Mayor Ken Christian
TNRD, City of Kamloops

Mayor Rod Crowe
TNRD, Village of Chase

Councillor Debbie Cannon
City of Salmon Arm

Councillor Colleen Anderson
District of Sicamous

Councillor Howard Nordquist
Secwepemc Nation,
Adams Lake Indian Band

Dave Nordquist
Secwepemc Nation,
Adams Lake Indian Band

Director Rick Fairbairn
RDNO, Area 'D'

Director Denis Delisle
RDNO, Area 'F'

Lorne Hunter
Community Representative

Natalya Melnychuk
Community Representative

Sharon Bennett
Community Representative

Kym Keogh
BC Ministry of Environment
& Climate Change Strategy

Lindsay Benbow
BC Ministry of Agriculture,
Food & Fisheries

Dennis Einarson
Senior Scientific Advisor



Photo Credit: Erin Vieira