SHUSWAP
watershed council

ANNUAL HIGHLIGHTS REPORT

APRIL 2020 — MARCH 2021

Photo Credit: Darren Robinson Photography

shuswapwater.ca

2020 was the fifth year of program operations for the SWC, and the completion of the SWC's five-year plan for 2016–2021. The year brought some new challenges due to the Covid-19 pandemic. The SWC's program operations continued with some work needing to adapt to the changing circumstances but overall, the SWC's objectives for the year were met. In this Annual Report you'll find the highlights of the SWC's work on water quality monitoring and reporting, a new water quality grant program to protect and improve water quality, invasive mussel prevention, safe boating and recreation, communications and community engagement, administration, and a summary of expenditures.

Message from the Chair

The clean, pristine waters of the Shuswap watershed have attracted residents and visitors to this area for many years. We enjoy the beautiful scenery and feel very fortunate that we are able to spend time in, on, and beside the many lakes and rivers that make up this fabulous ecosystem. We know that everyone who lives and visits here places a very high value on having a clean watershed, and this supports the need for its stewardship and preservation for the benefit of future generations. The Shuswap Watershed Council (SWC) is dedicated to maintaining and enhancing the water quality of our watershed. We have used science-based approaches to guide our strategies and actions, and believe that our collaborative model involving multiple jurisdictions at our table is the best approach to achieving our goals.

I would like to thank the Fraser Basin Council, the members of the Shuswap Water Quality Monitoring Group and Water Protection Advisory Committee, and all the members of the SWC for their ongoing contributions. I am honoured to be part of this group and would encourage all residents and visitors to go to our website to learn about our programs and activities in further detail. We hope that you find our 5th Annual Report to be informative, and we encourage your comments and suggestions.

Paul Demenok Columbia Shuswap Regional District Area C—South Shuswap

Water Quality Monitoring

The Shuswap Watershed Council serves as a facilitator for the **Shuswap Water Quality Monitoring Group**, which is made up of several organizations that have responsibilities for monitoring. Regular meetings of the Monitoring Group enable dialogue, information sharing, and planning to ensure that the entire watershed—large lakes, small lakes, and rivers—is adequately and efficiently monitored.

In 2020, a **persistent algal bloom** in Salmon Arm Bay (Shuswap Lake) required a response from some of the Monitoring Group members. Additional water monitoring and public communications were coordinated with support from the SWC, City of Salmon Arm, Interior Health, First Nations Health Authority, and Columbia Shuswap Regional District. The bloom was the focus of the Monitoring Group's discussions, and the Group reached an important agreement to collaborate on monitoring future algal blooms and to improve communicating regular algal bloom updates to the public.

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

850+ water samples collected and analyzed in 2020

The SWC committed over $9,000 toward a comprehensive water quality monitoring program on Shuswap and Mara Lakes. These funds support monitoring at a network of long-term stations, established by the BC Ministry of Environment and Climate Change (MOE). Funding from the SWC helps to boost the MOE's capacity, and allows for ten stations to be monitored twice per year, spring and fall.

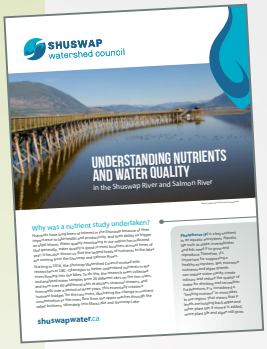
Water Quality Grant Program

The SWC launched a new **Water Quality Grant Program** in 2020 to help farms in the Shuswap watershed improve nutrient management, and ultimately protect water quality in nearby creeks and rivers. Five grants were awarded, worth a total of $65,470, to go toward new and improved methods of keeping nutrients on the land and in the soil, and not washing off or leaching into nearby waterways where it could lead to contamination. The grant funding leveraged an additional $71,165 financial and in-kind contributions from the grant recipients for a total investment of $136,635 in new water quality protection projects.

5 grants awarded

$65,470 SWC funds toward better nutrient management

$71,165 other funds leveraged for better nutrient management



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

The grant program is a follow-up to the findings of a three-year research project by UBC-Okanagan on behalf of the SWC. 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.

Mike Schroeder of Lakeland Farms in Salmon Arm discusses his project with SWC staff. Lakeland Farms received grant funding for a cover-crop trial and demonstration project.

Rack cards and posters describing 7 top tips for safety were distributed to over 50 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 2020, 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 promoted 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 support the installation of **lifejacket loaner kiosks for children** at several locations throughout the Shuswap.

The SWC received grant funding from Transport Canada in 2020 to help with the cost of safety campaigns.

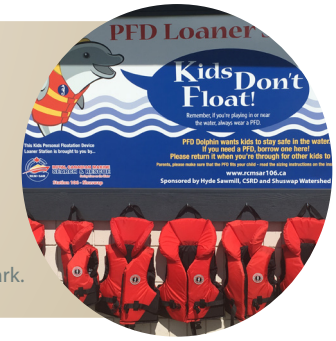
The SWC's safety messaging had up to

61,500
IMPRESSIONS ON SOCIAL MEDIA

292,500
IMPRESSIONS IN THE NEWS & IN PRINT

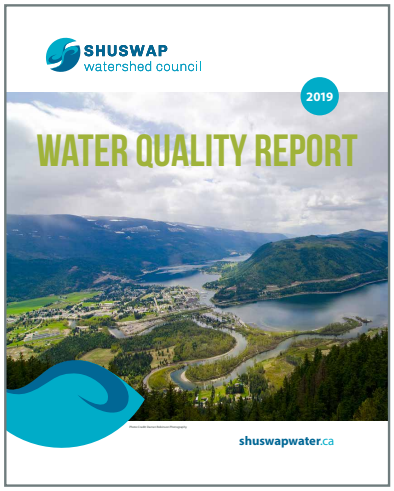
800,000
IMPRESSIONS ON THE RADIO

Did you know there are 15 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.



Lifejackets in various kids' sizes can be borrowed from this kiosk at Sunnybrae Park.

Communications and Community Engagement



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

- Completion and distribution of the SWC's fourth annual water quality report, the **2019 Shuswap Water Quality Summary**
- SWC Meeting Highlights Summaries (4 times per year)
- Media releases about the SWC's activities, as well as emerging issues
- The SWC has a **website** and an active presence on **social media**, including new Instagram and YouTube accounts that were launched in 2020
  - —The SWC posted regular updates about the algal bloom in Shuswap Lake to its social media pages from June to October
  - —The SWC delivered a watershed awareness campaign on social media to improve the understanding of the Shuswap and of the SWC. The campaign had over 16,000 impressions and increased the SWC social media following by over 35%.

Virtual Presentations

The SWC did a series of virtual presentations to Shuswap-area community associations, commerce groups, and service clubs to share information about the SWC and to discuss water quality and related issues.

Informative Video now on YouTube!

The SWC produced a short, informative video with four Salmon Valley-based farmers that received water quality grant funding from the Council in 2020. The video highlights how the farms are reducing their impact on the environment through new, improved nutrient management practices. **Find the video on the SWC's YouTube channel!**

Follow us and stay up to date with our work!

#DONTMOVEAMUSSEL

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 virtual educational seminars with target audiences about preventing the spread of ZQM. The SWC promoted **watercraft inspection** and **Clean-Drain-Dry** through news articles and print media, social media, and signage.

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

13 sites on 7 waterbodies were repeatedly monitored in 2020

The SWC's media messaging had up to

48,500 IMPRESSIONS IN THE NEWS

&

23,000 IMPRESSIONS ON SOCIAL MEDIA

&

2,500,000 IMPRESSIONS ON TRAVELLERS THROUGH BILLBOARDS AND TRAVEL LITERATURE

Staff from the SWC and CSISS are pictured here with sampling equipment at a monitoring location in Blind Bay. On the left, Erin is holding a phytoplankton net which would capture mussel larvae, if they were present at this site.

Zebra Mussels and Aquariums

In early 2021, zebra mussels were found in 'moss ball' aquarium plants in several locations across BC. Although the introduction of zebra mussels to BC 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.

Zebra and Quagga mussels would have negative effects on water quality, beaches, and fish; they would also cause nuisance clogging in water utilities, hydro-power, 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!**

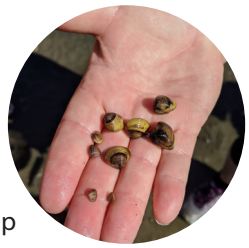
A zebra mussel, about the size of a small finger nail, is growing in this aquarium moss ball plant. Photo credit: BC Conservation Officer Service.

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 where the clams have established in Shuswap Lake. Several beaches on the shores of the Salmon arm, Main arm, and on Mara Lake were surveyed. Unfortunately, the surveys revealed live clam populations at Sunnybrae and Canoe. It is possible the clams exist in other locations in the Shuswap. More surveys are planned in 2021.

If the clam populations grow, they may 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 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 2020, due to the Covid-19 pandemic. SWC meetings are open to observers.

2020–21 Budget

(April 1st 2020–March 31st 2021)

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

Contributor	Amount ($)
2019–20 surplus (carried forward from March 31st, 2020)	241,995
Columbia Shuswap Regional District (Areas C, D, E, F and the District of Sicamous)	160,000
Thompson-Nicola Regional District	53,600
City of Salmon Arm	40,000
Adams Lake Indian Band	1,300
Regional District of North Okanagan (Area F)	5,000
Grant Funding: Transport Canada, Boating Safety Contribution Program	20,550
Revenue for 2020–21	**522,445**

Operational Expenses

Program	Budgeted ($)	Expenses ($)	Variance ($)
Water Quality Program: Monitoring	35, 200	21,849	13,351
Water Quality Program: Protection	113,600	70,501	43,099
Zebra & Quagga Mussel Prevention	35,400	32,929	2,471
Safe Recreation	27,400	24,335	3,065
Communications & Community Engagement	68,700	62,453	6,247
Administration & Governance	43,150	42,311	839
Sub-total Operational Expenses	**323,450**	**254,378**	**69,072**
Operating Reserve*	198,995	0	198,995
Summary of Expenses	**522,445**	**254,378**	**268,067**

* The Operating Reserve has been growing each year since 2016, as a result of annual surpluses. In 2021, the SWC will requisition less funds from each of its funders, proportionately, and draw down the reserve by approximately $100,000. 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. The fund has not been drawn from to-date.

Photo credit: Victoria Haack Photography.

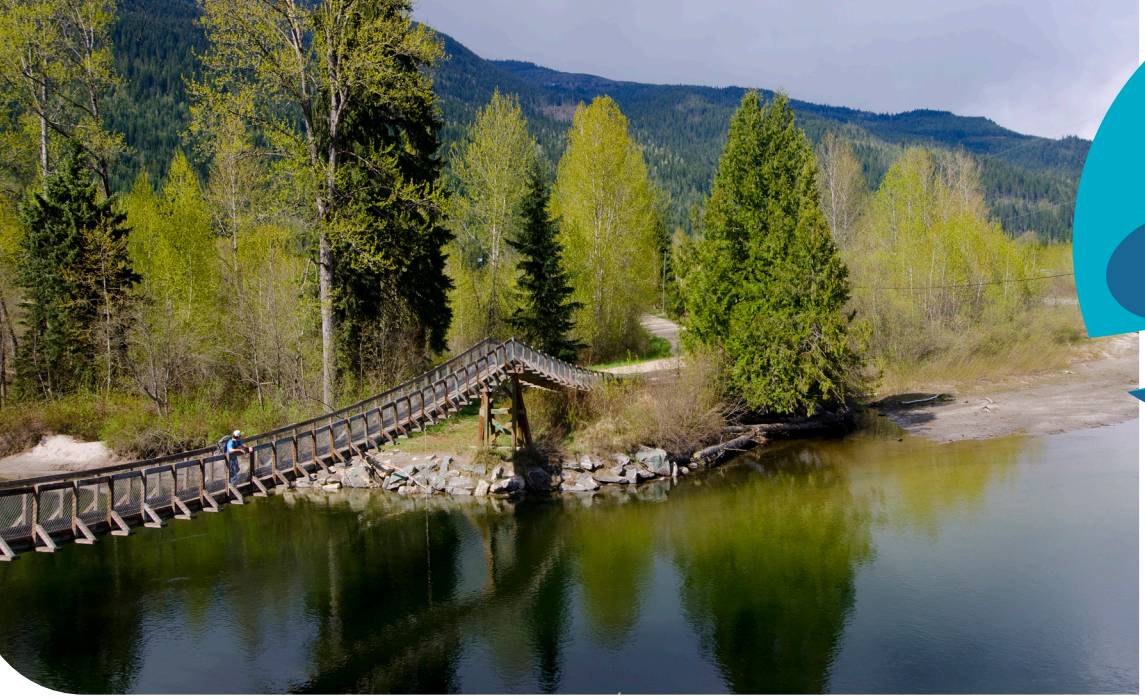


Photo Credit: Darren Robinson Photography

Who We Are

About the Shuswap Watershed Council

The SWC was established in 2014 as a watershed-based partnership of several organizations 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 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.

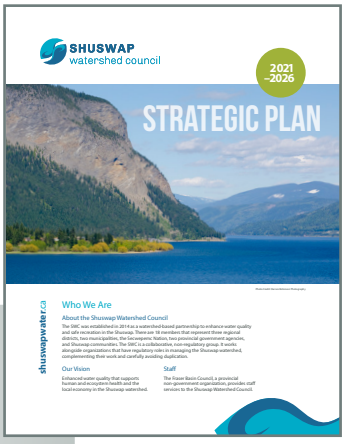
What We Do

Our Objectives

The SWC's primary objective is to maintain and enhance water quality in the Shuswap watershed by working with water quality monitors and advocating for good practices to prevent water quality degradation. Its other objectives are to coordinate and report on water quality in the Shuswap; to inform residents and visitors about water quality, and to encourage and promote safe boating and water-based recreation.

The Work

The SWC's work has been guided by its five-year plan for 2016–2021. Starting in April 2021, the SWC is implementing its new Strategic Plan for 2021–2026.



Beginning in April 2021, the SWC is implementing its new Strategic Plan for 2021–2026. Find it on their website.

SWC Members

as at March 31, 2021

Paul Demenok—Chair
CSRD Area 'C'

Jay Simpson—Vice Chair
CSRD Area 'F'

Rene Talbot
CSRD Area 'D'

Rhona Martin
CSRD Area 'E'

Rod Crowe
TNRD, Village of Chase

Ken Christian
TNRD, City of Kamloops

Debbie Cannon
City of Salmon Arm

Colleen Anderson
District of Sicamous

Dave Nordquist
Secwepemc Nation,
Adams Lake Indian Band

Steven Teed
Secwepemc Nation,
Adams Lake Indian Band

Rick Fairbairn
RDNO, Area 'D'

Denis Delisle
RDNO, Area 'F'

Dennis Einarson
BC Ministry of Environment
& Climate Change Strategy

Lindsay Benbow
BC Ministry of Agriculture,
Food, and Fisheries

Lorne Hunter
Community Representative

Randy Wood
Community Representative

Sharon Bennett
Community Representative

Natalya Melnychuk
Community Representative