

## AGENDA PACKAGE FOR:

### Council Meeting

**Wednesday December 14<sup>th</sup> 2022 • 9:30 AM – 12:00 PM**

Virtual meeting via Zoom

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| 1.       | September 21 <sup>st</sup> 2022 meeting summary for approval | 9:45 |

**Council Meeting**  
**September 21<sup>st</sup> 2022 • 10:00 AM – 12:00 PM**  
**Columbia Shuswap Regional District Boardroom**  
**555 Harbourfront Drive NE, Salmon Arm**

Draft Record of Decisions and Action Items

This summary is subject to revision and approval at the next Council meeting

**Meeting objectives**

1. Receive update from program managers
2. Receive presentation Phosphorus Action Plan for the Shuswap watershed
3. Discuss Shuswap Lake algal bloom and potential next steps

**Present**

Jay Simpson, Chair – Columbia Shuswap Regional District, Area F  
Paul Demenok, Vice Chair – Columbia Shuswap Regional District, Area C  
Rene Talbot – Columbia Shuswap Regional District, Area D  
Rhona Martin – Columbia Shuswap Regional District, Area E *(from 10:15 am)*  
Debbie Cannon – City of Salmon Arm  
Colleen Anderson – District of Sicamous  
Ken Christian – Thompson-Nicola Regional District, City of Kamloops  
Rod Crowe – Thompson-Nicola Regional District, Village of Chase  
Robyn Laubman – Splatins First Nation *(from 11:05 am)*  
Denis Delisle – Regional District of North Okanagan, Area F  
Kym Keogh – BC Ministry of Environment and Climate Change Strategy  
Natalya Melnychuk – Community representative *(from 10:45 am)*  
Erik Kok – Community Representative *(to 11:00 am)*  
Kimm Magill-Hofmann – Community representative  
Phil Owen – Community representative  
Dennis Einarson – Senior Scientific Advisor

Erin Vieira and Alex de Chantal – Fraser Basin Council

**Observers**

Rob Solinger  
Linda Franklin  
Alyssa Hopkins  
Ian Rogalski  
Clyde Mitchell

**Regrets**

Howard Nordquist  
Rick Fairbairn  
Lindsay Benbow  
Kelly Chiatto

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### Call to Order

SWC Chair Jay Simpson called the meeting to order at 10:06 am. He acknowledged the meeting taking place on unceded Secwepemc Territory.

### Adoption of meeting agenda and meeting summary

**Moved/seconded** by: Mayor Christian/Councillor Cannon that:

The agenda for the September 21<sup>st</sup> 2022 meeting of the Shuswap Watershed Council be approved.

**Carried**

**Moved/seconded** by: Vice Chair Demenok/Councillor Cannon that:

The draft summary of the June 8<sup>th</sup> 2022 Shuswap Watershed Council meeting be approved.

Discussion:

None

**Carried**

### Correspondence

None

### Old business

None

### Report from Chair

Chair Simpson reported that he attended the Union of BC Municipalities Annual General Meeting and Convention last week in Whistler. He met with Minister Josie Osborne (BC Ministry of Land, Water, & Resource Stewardship) to discuss invasive Zebra & Quagga Mussels. Mayor Sue McKortoff (Osoyoos), who chairs the Okanagan Basin Water Board, also participated in the meeting. He commented that it was a good meeting, and that the Minister has a background in biology and understands the issue. No commitments from the Province were made in the meeting.

*Director Martin entered the meeting at 10:15 am*

### Report from Program Managers

Erin Vieira provided a program operations update since the last Council meeting held in June:

- An algal bloom is occurring in the Salmon Arm portion of the lake (impacting Salmon Arm Bay, Tappen Bay, Canoe, Herald) since early August. The Shuswap Regional Algal Bloom Response Plan has been enacted, with Interior Health (IH) recommending that the City of Salmon Arm, CSRD, and First Nations Health collect water samples for analysis on a weekly basis. *[As part of this, Interior Health issued a Cautionary Advisory due to the bloom on August 9<sup>th</sup>. All water samples collected to-date have tested negative for microcystin (i.e., no microcystin present).]* SWC staff received phone calls, emails, and messages via social media about the algal bloom.

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- Two partner-led projects with funding from the SWC's Water Quality Grant Program are underway. The next intake for applications to the Grant Program will open in November.
- Staff have completed the Phosphorus Action Plan. Next steps include circulation of the Plan, and implementing the items identified for the SWC to take action on.
- The SWC's partner, Columbia Shuswap Invasive Species Society, has just recently completed their field season of monitoring lakes in the Shuswap for signs of invasive Zebra and Quagga Mussels. All water samples collected to-date have tested negative for invasive mussels (i.e., no mussels found).
- Staff implemented various education/outreach campaigns for the prevention of invasive mussels over the spring and summer months, with key messages of 'Clean-Drain-Dry' and watercraft inspection for all watercraft owners, especially those coming to BC from out of province.
- Staff relayed that the Province has recently published a Summer Status Report on the provincial Invasive Mussel Defence Program. Among the statistics, the province reported that six watercraft inspection stations were operational plus two roving inspection stations; 10 mussel-fouled watercraft were intercepted this summer.
- Staff implemented a variety of educational campaigns to promote safe boating and water-based recreation over the spring and summer months. Key messages focus on 8 tips for safety and promoting the availability of free self-serve lifejacket kiosks for children.
- The SWC's 6<sup>th</sup> Annual Water Quality Summary Report for the Shuswap watershed was published in July, covering a wide variety of water quality topics and summarizing water quality monitoring data from 2021. The report was broadly distributed electronically and in print.
- The SWC's social media was kept very active over the summer months. All three platforms (Facebook, Twitter, Instagram) have shown steady growth for the past few years. Staff have also been making updates to the SWC website, [www.shuswapwater.ca](http://www.shuswapwater.ca).

Erin provided a financial update for the first quarter (April 1<sup>st</sup> – June 30<sup>th</sup> 2022):

Revenue for 2022-23 (April 1<sup>st</sup> 2022 – March 31<sup>st</sup> 2023):

| Source   | (\$)    |
|--|---------|
| Surplus (from March 31 <sup>st</sup> 2022)           | 81,804  |
| Operating Reserve                                    | 132,667 |
| <i>Per Contribution Agreement:</i>                   |         |
| CSRD Areas C, D, E, F and District of Sicamous       | 160,000 |
| TNRD   | 53,600  |
| City of Salmon Arm                                   | 40,000  |
| Adams Lake Indian Band                               | 1300    |
| <i>Grant funding:</i>                                |         |
| Transport Canada Boating Safety Contribution Program | 22,900  |

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|                      |                |
|----------------------|----------------|
| <b>Total revenue</b> | <b>492,271</b> |
|----------------------|----------------|

EXPENSES (April 1<sup>st</sup> – June 30<sup>th</sup> 2022):

| Program (per 2022-23 work plan)              | Budget (\$)    | Expense (\$)  |
|--|----------------|---------------|
| Water Quality Monitoring                     | 28,850         | 12,890        |
| Water Quality Protection & Improvement*      | 150,730        | 9938          |
| Zebra & Quagga Mussel Prevention             | 35,875         | 28,179        |
| Safe Recreation                              | 27,600         | 14,333        |
| Communications, Engagement, & Advocacy       | 55,100         | 13,956        |
| Management & Administration                  | 43,750         | 7387          |
| <b>Sub-total Program Operations Expenses</b> | <b>341,905</b> | <b>86,683</b> |
| Operating Reserve                            | 150,366        | 0             |
| <b>Total expenses</b>                        | <b>492,271</b> | <b>86,683</b> |

\* Of the \$150,730 budget for Water Quality Protection, \$71,430 is carried forward from last fiscal year's workplan and budget.

Discussion:

Director Martin suggested that the SWC write a letter to Minister Osborne requesting the provincial watercraft inspection program operations return to previous levels (i.e., additional staffing and inspection stations).

Action item:

Staff will prepare a letter to Minister Osborne (as directed in the June SWC meeting), including a request for more staff and resources allocated to the Provincial Invasive Mussel Defence Program.

*Natalya Melnychuk entered the meeting at 10:45 am*

**Roundtable discussion on Shuswap Lake (Salmon Arm Bay / Tappen Bay) algal bloom**

Councillor Cannon commented that she is concerned that Interior Health issued a Cautionary Advisory at the end of June without confirming the presence of algae.

Mayor Christian suggested the SWC be cautious when sharing Interior Health advisories; want to be clear that the advisory is not 'owned' by the SWC, but that it comes from IH.

Vice Chair Demenok inquired what sort of questions and concerns staff heard throughout August and September regarding the algal bloom. Erin replied that most inquiries were either related to public health and safety (i.e., "Is it safe to swim") or the cause of the algal bloom. For the former, staff directed those inquiries to Interior Health. For the latter, staff explained the various factors that create an algal bloom.

The Vice Chair suggested that the SWC write a letter to Interior Health, outlining concerns with posting Cautionary Advisories without testing and also requesting that IH staff be available for follow up communications and inquiries related to

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algal blooms. Councillor Cannon added that IH staff should take a lead role in collecting water samples during an algal bloom.

**Moved/seconded** by Director Talbot/Vice Chair Demenok that:

The Shuswap Watershed Council write a letter, in partnership with the City of Salmon Arm and the Columbia Shuswap Regional District, to Interior Health requesting they confirm the presence of algae prior to releasing an Advisory, state the precise location of the bloom in the advisory, and be available for follow-up communications after the advisory is posted.

**Carried**

Action item:

Staff will work with the Chair and with partners to prepare a letter to IH as described above.

*Erik Kok left the meeting at 11:00 am*

*Robyn Laubman entered the meeting at 11:05 am*

**New business:  
Presentation of  
Phosphorus Action  
Plan**

Erin Vieira presented an overview of the recently completed Phosphorus Action Plan for the Shuswap watershed. SWC members have received the document from staff, but it is not yet published on the website nor has it been further circulated via email.

**Moved/seconded** by: Mayor Christian/Councill Cannon that:

The Phosphorus Action Plan be approved.

**Carried**

**Roundtable  
discussion on  
Phosphorus Action  
Plan**

Kimm Magill-Hofmann suggested that a map of the watershed be added the Plan.

Vice Chair Demenok commented that the Plan is a very good document. He specifically expressed his support for one of the items in the plan, that the SWC create a Wetland Strategy for the Shuswap watershed. He urged the SWC to go a step further and create a strategy for circulating the Phosphorus Action Plan, promoting it, and ensuring the actions described within get implemented by their respective groups and sectors; he suggested presentations to the agriculture and forestry sectors, and to community groups such as Shuswap Waterfront Owners Association. The Vice Chair further suggested that the authors of the Salmon River attainment monitoring report (prepared for the BC Ministry of Environment & Climate Change Strategy) be invited to a future meeting of the SWC to make a presentation.

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Director Martin suggested that some of the items in the Phosphorus Action Plan be shared with the school district to be included in environmental education curriculum. Councillor Cannon suggested 4H groups receive the Plan.

Dennis Einarson suggested that components of the Plan be adopted by local/regional government within planning and growth strategies.

Action items:

Staff will amend the Phosphorus Action Plan with a map, as suggested.

Staff will create a communications and outreach strategy for promoting the Phosphorus Action Plan.

Staff from the City of Salmon Arm Engineering Department will be invited to the next SWC meeting (December) to give a presentation on the City Wastewater Treatment Plan upgrades that are underway.

Staff will work with staff at BC MOE to arrange for a presentation on the Salmon River monitoring program and results at a future meeting of the SWC.

**Roundtable updates**

Councillor Anderson commented that she received notice of a traveler with watercraft arriving at a boat launch/marina in Sicamous who had driven there via Highway #1, and passed by the Golden watercraft inspection station which was closed. The traveler was proactive and cooperative, understanding the importance of being inspected before launching. Councillor Anderson relayed that she had some challenges contacting provincial staff to arrange for the watercraft to be assessed and/or inspected prior to launching.

**Parting comments**

Chair Simpson acknowledged Vice Chair Paul Demenok, Mayor Christian, Mayor Crowe, and Director Delisle who are not seeking re-election in October. He thanked them for their participation in the SWC, and especially thanked Vice Chair Demenok for chairing the SWC for eight years (2014 – 2022).

**Adjourn**

**Moved/seconded** by Mayor Christian/Director Talbot that:

The September 21<sup>st</sup> 2022 meeting of the Shuswap Watershed Council be adjourned.

**Carried**

The meeting adjourned at 12:05 PM.

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**CERTIFIED CORRECT:**

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Chair

DRAFT



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| 2-1      | Correspondence: Letter to Jim Standen, BC Parks and Conservation Officer Service, for information | 9:45 |



c/o Fraser Basin Council  
 200A – 1383 McGill Road  
 Kamloops, BC V2C 6K7  
 250.314.9660  
[www.shuswapwater.ca](http://www.shuswapwater.ca)

Jim Standen  
 Assistant Deputy Minister  
 BC Parks and Conservation Officer Service Division  
 Sent by e-mail to [Jim.Standen@gov.bc.ca](mailto:Jim.Standen@gov.bc.ca)

11 October 2022

Dear Mr. Standen,

I am writing on behalf of the Shuswap Watershed Council to express our concern about the lack of watercraft wastewater pump-out and disposal facilities around Shuswap and Mara Lakes.

Shuswap and Mara Lakes are a premium vacation destination, and the region sees many visitors including those who travel by houseboats and cabin cruisers. There are six provincial parks, including Shuswap Lake Marine Provincial Park with 23 separate sites – some of which are accessible only by boat – that offer incredible camping and beach-combing. Many visitors do multi-day voyages around the lakes, stopping at various sites on Shuswap and Mara Lakes for the day or to over-night.

In the past, commercial pump-out was available for watercrafts at some marinas on the lakes but these services have been discontinued. We are concerned that without adequate facilities at opportune locations, watercraft operators may be discharging greywater (i.e., from on-board sinks, showers, laundry facilities etc.) into the lakes as the holding tanks fill up over the course of the voyage even though such activity is prohibited.

The availability of watercraft wastewater pump-out facilities is important to maintaining the health of the lakes and to the tourism economy. As the leading agency providing camping and day-use sites on the lakes, we think BC Parks should also provide wastewater pump-out facilities. Therefore, we are requesting that BC Parks undertake a feasibility study for providing these facilities for watercraft on Shuswap and Mara Lakes. We are hopeful that such a study would determine a case for BC Parks to provide this service.

Thank you for your consideration of this request. Sincerely,

A handwritten signature in black ink, appearing to read "Jay Simpson".

Jay Simpson  
 Chair, Shuswap Watershed Council  
 Director, Columbia Shuswap Regional District, Area 'F' North Shuswap  
 250 517-9578 | [jsimpson@csrd.bc.ca](mailto:jsimpson@csrd.bc.ca)

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| 2-2      | Correspondence: Letter to George Heyman, Minister of Environment and Climate Change Strategy, for information | 9:45 |



c/o Fraser Basin Council  
200A – 1383 McGill Road  
Kamloops, BC V2C 6K7  
250.314.9660  
[www.shuswapwater.ca](http://www.shuswapwater.ca)  
f t i y

Hon. George Heyman  
BC Minister of Environment & Climate Change Strategy  
Sent by e-mail to [env.minister@gov.bc.ca](mailto:env.minister@gov.bc.ca)

12 October 2022

**Re: Water quality concerns and algal bloom in the Salmon Arm of Shuswap Lake**

Dear Minister Heyman,

I am writing on behalf of the Shuswap Watershed Council (SWC) to express our deep concern about deteriorating water quality in the Salmon Arm of Shuswap Lake, and to ask for your ministry's leadership in restoring and protecting this incredible waterway.

The Salmon Arm of Shuswap Lake – including Salmon Arm Bay, Tappen Bay, and downstream toward Herald and Canoe (see map, attached) – was impacted by a large algal bloom throughout August and into September. In some of the affected areas, the lake water has been compared to “pea soup”, being thick and green with algae (see photo, attached). Interior Health put a Cautionary Advisory in place for the affected areas of the lake, recommending residents and visitors not swim in the lake where algae are present. The algal bloom significantly impaired residents’ and visitors’ enjoyment of the lake and recreational use this summer.

To make the matter worse, this isn't the first large bloom that the Salmon Arm of Shuswap Lake has experienced. A similarly wide-spread, long-lasting bloom occurred in August-September 2020. For two large algal blooms to occur in three years is unprecedented, and we are very concerned about the health of the lake, impacts to fish and wildlife, safety of drinking water, and effects on our tourism economy. The species of algae identified in the 2020 and the 2022 blooms have the potential to produce cyanotoxins, and so we are also gravely concerned about the possibility of an algal bloom becoming toxic. This could result in illness to people, pets, or livestock – it could even cause a fatality.

There are a few factors that contribute to the formation of an algal bloom: sunlight, calm weather, a stable water column, and a supply of nutrients. It is well-known that phosphorus, in particular, is a determining factor in harmful algal blooms in North America. [A research project commissioned by the SWC and led by UBC-Okanagan](#) demonstrated that the highest proportion of phosphorus in Shuswap Lake is coming from agricultural lands via the Salmon River; the research also demonstrated that phosphorus-loading into Shuswap and Mara Lakes has been steadily increasing since the 1980s.

Nutrient management is critical to protecting water quality and preventing future algal blooms. For our part, we are invested in education and incentives to help protect Shuswap water quality. The SWC administers a [grant program](#) that provides financial assistance to farms to improve nutrient management. Additionally, the SWC has just published a [Phosphorus Action Plan](#) for the Shuswap

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watershed. The plan is an informational, educational document that provides guidance to everyone in the Shuswap about actions they can take to minimize their 'phosphorus footprint'.

Your Ministry plays a lead role in protecting environmental water quality through regular water quality monitoring, setting water quality objectives, and investigating causes of pollution and water quality degradation. In addition, your Ministry has the jurisdictional responsibility for ensuring environmentally protective agricultural practices through implementing and ensuring compliance with the *Agricultural Environmental Management Code of Practice*. With these in mind, we have the following comments and questions for you:

- Draft Water Quality Objectives (WQOs) for Shuswap Lake were published recently by your Ministry in partnership with Pespesellkwe te Secwepemc. The document states that the objectives are developed to “promote the full protection and improvement of water quality” of Shuswap Lake, and that “phosphorus and nitrogen concentrations are the primary water quality concern”. These WQOs are now being finalized by staff, and we eagerly await the publication. How will the Ministry measure and report on the attainment of these objectives? How will the Ministry respond if/when water quality does not meet the objectives?
- Ministry staff are also working on a report about water quality in the Salmon River (a large tributary to Shuswap Lake at Salmon Arm Bay, as previously mentioned). The report summarizes declining water quality in the river, including poorer (i.e., higher) results for phosphorus concentrations<sup>1</sup>. These results are consistent with our concerns about the Salmon River contributing to algal blooms. What will the Ministry do to address the report’s findings, and work toward restoring water quality in the Salmon River? Will the results prompt new monitoring programs focusing on nutrient-loading into the Salmon River and Shuswap Lake? Will the results prompt an investigation of the sources of phosphorus?
- The Ministry released the *Agricultural Environmental Management Code of Practice* in early 2018. How has the Ministry promoted the Code of Practice and its requirements with the agriculture sector? How is the Ministry measuring awareness of and compliance with it?

We are very appreciative of the work your staff are doing on the above-mentioned initiatives, including monitoring, setting water quality objectives, and analysing water quality data. It is clear that the Salmon River is contributing a nutrient-load to Shuswap Lake substantial enough to produce wide-spread, long-lasting, potentially toxic and potentially economy-crippling algal blooms. Furthermore, water samples are not consistently meeting WQOs set by your Ministry. Therefore, we are now asking your Ministry to act quickly to investigate and correct the water quality problems in the Salmon River and Salmon Arm of Shuswap Lake, and restore Shuswap Lake to a healthy state.

Thank you for your consideration of these requests.

Jay Simpson  
Chair, Shuswap Watershed Council  
Director, Columbia Shuswap Regional District Area 'F' North Shuswap  
250 517-9578 | [jsimpson@csrd.bc.ca](mailto:jsimpson@csrd.bc.ca)

<sup>1</sup> The report, authored by Chalifour et al. (February 2022) was not finalized at the time of writing this letter.

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Attachments:

- [ShuswapLakeAlgaeBloom\\_Aug2022\\_key.pdf](#). Map of approximate algal bloom-impacted area in the Salmon Arm of Shuswap Lake.
- [IMG\\_3131.jpg](#). Photo of a water sample collected by Linda Franklin, resident of Sunnybrae, on August 22<sup>nd</sup> 2022 showing the severity of the algal bloom (shared with permission).

CC:

- Hon. Josie Osborne, Minister of Land, Water & Resource Stewardship
- Shuswap MLA: Greg Kylo
- Columbia Shuswap Regional District Chair: Kevin Flynn
- Shuswap Mayors: Alan Harrison (Salmon Arm), Terry Rysz (Sicamous), Rod Crowe (Chase)
- Provincial Critic for Environment and Climate Change: Renee Merrifield

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| 2-3      | Correspondence: Letter to Josie Osborne, Minister of Land, Water and Resource Stewardship, for information | 9:45 |



c/o Fraser Basin Council  
 200A – 1383 McGill Road  
 Kamloops, BC V2C 6K7  
 250.314.9660  
[www.shuswapwater.ca](http://www.shuswapwater.ca)  
 f i t y

Hon. Josie Osborne  
 BC Minister of Land, Water and Resource Stewardship  
 Room 310 Parliament Buildings  
 Victoria, BC. V8V 1X4  
 Sent by e-mail to LWRS.Minister@gov.bc.ca

15 November 2022

**Re: New measures and more resources needed to prevent an invasion of Zebra or Quagga Mussels in British Columbia**

Dear Minister Osborne,

I am writing on behalf of the Shuswap Watershed Council as a follow up to our meeting at the UBCM Convention in September. Thank you again for taking the time to meet with me, and for listening to our concerns about the risk and consequences of invasive mussels arriving in British Columbia. I would like to re-iterate our top four calls-to-action for your Ministry to better protect the Shuswap – and all of BC – from invasive mussels.

As you know, the Shuswap watershed is at high risk of an invasion of Zebra and Quagga Mussels (ZQM, i.e., *Dreissenidae* sp.) due to boat traffic into the watershed. The primary vector for invasive mussels is watercraft. The Shuswap is a top destination for boaters, and that greatly increases the chance that infested watercraft will arrive in our waters. Fortunately, early detection monitoring has indicated that the Shuswap is still invasive-mussel free. This is due, in part, to the preventative work by the Province and regional organizations such as the Shuswap Watershed Council, and others. However, every year infested watercraft arrive at our provincial borders<sup>1</sup>. The threat of invasive mussels will never subside, and more action by the Province is needed to curb this significant threat to our water security.

We are calling for greater resourcing for the province's Invasive Mussel Defence Program (IMDP). While it could take just a single watercraft from out-of-province infested with invasive mussels launching into BC waters, it is of utmost importance that the IMDP be expanded such that all routes into BC from Alberta and the USA have a watercraft inspection and decontamination station. The IMDP is the first line of defense to protect BC's waters, but in 2022 there were only six permanent stations and two roving stations set up around the provincial border<sup>2</sup>. This presents a significant gap in the defense, as travellers with watercraft can enter BC via unchecked routes or outside of inspection station operating hours.

<sup>1</sup> The IMDP Summer Status Report (dated August 22, 2022) reported that 10 watercraft entering BC were confirmed to have adult invasive mussels.

<sup>2</sup> Since 2020, the watercraft inspection and decontamination stations have declined significantly; in 2019 and 2020, the IMDP had a peak level of 12 inspection stations.

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Secondly, we urge the Province to introduce ‘pull-the-plug’ legislation, which would require all watercraft to have their drain plugs removed prior to travelling on BC roads. We understand that the Province is already considering this, as part of updates to the *Wildlife Act*.

Thirdly, the Provincial ZQM Early Detection and Rapid Response Plan for British Columbia (published February 2015) should be reviewed and updated. New methods for eradicating ZQM from waterbodies should be researched and considered for use in BC. Additionally, we believe there would be great value in carrying out a mock response exercise on a BC lake, including rehearsing the process of quarantining watercraft as a key containment measure.

Lastly, we urge you to advocate for new containment measures in Manitoba and Ontario which already have ZQM infestations. The federal Department of Fisheries and Oceans needs to take strong action and fully enact the *Aquatic Invasive Species Regulation*. Our prevention efforts in the west must be met with robust containment measures in eastern and central Canada. Watercraft should not be able to leave watersheds known to have ZQM infestations without being inspected, decontaminated, and issued a quarantine period if necessary.

We have previously shared our concerns, and these calls-to-action, with the Minister of Environment’s office, and with your federal counterparts, on several occasions. Furthermore, we are not alone in our concerns: several other organizations in BC including the Shuswap Waterfront Owners Association, Okanagan Basin Water Board, and regional invasive species societies share these concerns and priorities for action. Unfortunately, we have not been satisfied with the responses we have received from provincial and federal offices to-date.

Considering all that is at risk in the Shuswap, and the projected on-going costs and lost revenue associated with an infestation of Zebra or Quagga Mussels in BC – which is conservatively estimated to be \$42 million<sup>3</sup> annually to BC tax-payers in the Okanagan alone – we call upon your Ministry to provide more resources and implement new measures to protect BC waters from invasive Zebra & Quagga Mussels.

Sincerely,

Jay Simpson  
Chair, Shuswap Watershed Council  
Director, Columbia Shuswap Regional District Area ‘F’ North Shuswap  
250 517-9578 | [jsimpson@csrd.bc.ca](mailto:jsimpson@csrd.bc.ca)

<sup>3</sup> Source: Limiting the Spread of Aquatic Invasive Species into the Okanagan. Larratt Aquatic Consulting. 2013. Available online [https://www.obwb.ca/fileadmin/docs/2013\\_obwb\\_ais\\_report.pdf](https://www.obwb.ca/fileadmin/docs/2013_obwb_ais_report.pdf). See Section 5.2.



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| 2-3      | Correspondence: Letter to Josie Osborne, Minister of Land, Water and Resource Stewardship, for information | 9:45 |



CC:

- Hon. George Heyman, Minister of Environment & Climate Change Strategy
- Shuswap MLA: Greg Kylo
- North Okanagan – Shuswap MP and Associate Shadow Minister for Fisheries, Oceans and the Coast Guard: Mel Arnold
- Provincial Critic for Land, Water and Resource Stewardship: Lorne Doerkson
- Columbia Shuswap Regional District Chair: Kevin Flynn
- Regional District of North Okanagan Chair: Kevin Acton
- Shuswap Mayors: Alan Harrison (Salmon Arm), Colleen Anderson (Sicamous), David Lepsoe (Chase)
- Okanagan Basin Water Board Chair: Sue McKortoff
- Shuswap Waterfront Owners Association

| Item No. | Agenda item   | Time |
|----------|---|------|
| 3-1      | Old business: draft summary of the Shuswap Water Monitoring Group meeting, November 7 <sup>th</sup> 2022, for information | 9:50 |



**Shuswap Water Quality Monitoring Group Meeting  
November 7<sup>th</sup> 2022 • 10:00 AM – 12:30 PM**

**Virtual meeting held via Zoom**

Draft meeting summary as at November 24<sup>th</sup>, 2022

**Attendance**

Ben Van Nostrand – Columbia Shuswap Regional District  
Christina Yamada – Interior Health  
Connie Hewitt – Regional District of North Okanagan  
Diana Tesic-Nagalingam – Interior Health  
Joni Heinrich – Village of Chase  
Kelsey Desilets – Columbia Shuswap Invasive Species Society  
Kym Keogh – BC Ministry of Environment & Climate Change Strategy  
Lucie Thomson – BC Ministry of Environment & Climate Change Strategy  
Marge Sidney – BC Lake Stewardship Society and Gardom Lake Stewardship Society  
Patrick Frank – White Lake Residents Association  
Rob Niewenhuizen – City of Salmon Arm  
Scott Beppe – Columbia Shuswap Regional District  
Wes Dearmond – BC Parks

Jason Schleppe – Ecoscape Environmental (guest – from 12:00 – 12:30)  
Mike Schutten – Ecoscape Environmental (guest – from 12:00 – 12:30)

Erin Vieira – Fraser Basin Council (SWC program manager)  
Alex de Chantal – Fraser Basin Council (SWC program manager)

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Alex welcomed all present. Secwepemc territory was acknowledged and a round of introductions took place.

The draft meeting of the last Water Quality Monitoring Group meeting (held on February 15<sup>th</sup> 2022) was approved without any revisions.

**1. Group discussion – algal bloom response 2022**

Erin provided a summary of the algal bloom that began in late June this summer. A cautionary advisory was issued by Interior Health in July. In August and September, there was a second algal bloom and another cautionary advisory was put out by Interior Health for the impacted areas. Multiple agencies took samples and fortunately all were negative for toxins.

Rob noted that the City of Salmon Arm does beach monitoring at the site of the water treatment plant (near Canoe Beach). Staff took samples when required/requested by Interior Health. Algae was observed in the Salmon Arm Bay area this summer, but Rob reported that staff never really saw an algae bloom in



| Item No. | Agenda item   | Time |
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the Canoe Beach area. Staff reported some confusion amongst the public with the map of the algae bloom that was produced; Rob also reported that some of the public didn't understand the "cautionary advisory".

Christina reported that Interior Health is working on a communications plan – she clarified that public communications is the one of IH's roles. IH's other roles include health risk assessment and making recommendations to local governments about monitoring algal blooms. Next season, Interior Health will provide everyone in the Shuswap Water Monitoring Group a concise summary of what Interior Health's role is and how to work together.

Erin inquired if the Interior Health Communications Plan will replace the Shuswap regional algal bloom response plan that was developed by this group. Christina suggested that it's up to this group to decide. Erin suggested that the IH plan replace the algal bloom response plan, as IH is a regulatory authority and the SWC is not.

**Action: Add an update from Interior Health to next Water Monitoring Group agenda (February 2023).**

Ben suggested that IH lead a meeting with local governments in the spring so they can gain an understanding of what the respective roles are for algal bloom response. Christina agreed with the idea.

Patrick asked if new Ministry of Land Water Resource Stewardship (LWRS) would be involved at all. Lucie agreed that it would be good to bring someone in from LWRS. Erin inquired if they have any field staff and Lucie confirmed that LWRS won't have field staff as majority of work is strategic and policy development.

**Action: Erin to follow up with senior staff at LWRS to see if it would be appropriate to seek a representative to join the Water Monitoring Group.**

Lucy shared that the role of the Ministry of Environment and Climate Change Strategy is to run the provincial Algae Watch program to engage with public about collecting algae observation. Her team reviews the submissions (photographs) and decides if it appears to potentially be a cyanobacteria (blue-green algae) bloom; if so, they post it on the website and if it's within the Shuswap it gets shared with Interior Health.

Erin summarized her interactions with the public over the summer. Several inquiries were received on social media from people who were upset about declining water quality and the impact on enjoyment of the lake. Erin also heard frustration about the lack of signage and public service announcements, and questions about safety concerns.

Rob suggested that future maps of algal blooms be as accurate as possible. Lucy responded that algal blooms are "notoriously fickle". She suggested that trying to keep up with mapping will be very time consuming and not practical. Other jurisdictions use general signage to inform the public about what to look for and how to practice caution.

Erin asked if Interior Health communicates with private property owners (resorts, kids camps, etc.). Christina replied that Interior Health will recommend that waterfront property owners create a beach safety plan with information on how to report a bloom, what to do if they suspect a bloom, where to find

| Item No. | Agenda item   | Time |
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information, etc. She clarified that during a bloom, Interior Health doesn't contact waterfront property owners. The communications plan will address the public as a whole.

Lucie reported that she is working with CCME (Canadian Council on Ministers of the Environment) on guidance document on algae in inland waters to provide information to lake managers about algae blooms. A draft is expected late next year, and a final copy in 2024. With climate change, the frequency and intensity of algal blooms will likely increase around the province.

**Action:** FBC to share the monitoring spreadsheet with Water Monitoring Group agendas from now on.

## **2. Group discussion – 2022 water quality monitoring**

Erin reviewed the watershed water quality monitoring spreadsheet on-screen to go over all agencies and organizations activities. Updates were made on-screen. Alex will follow up with a few people to finalize corrections to the spreadsheet.

Erin inquired of the group if Tappen Creek is monitored. Kym replied that she didn't think Tappen Creek had been monitored in a while.

**Action:** Alex will follow up with Water Monitoring Group members to finalize the monitoring spreadsheet.

**Action:** Add a discussion point about Tappen Creek to the next Water Monitoring Group agenda (February 2023).

## **3. Shuswap Lake Water Quality Objectives and Shuswap Lake Water Quality Assessment – presented by MOE staff**

Kym Keogh reported that water quality objectives have been approved for Shuswap Lake. She suggested to the organizations who monitor water quality to look at results to see if Water Quality Objectives are being met; if there are exceedances, organizations should consider what can be done to prevent discharges from causing exceedances. MOE will do attainment monitoring and investigations if Water Quality Objectives aren't met.

Kym also reported that the Water Quality Assessment Report for Shuswap Lake should be online now. It has a summary of discharges to the lake, water withdrawals, land use, values. It assesses water quality over period 2010 - 2019 and makes recommendations. She also commented that the Salmon River attainment summary should be online soon.

The MOE Water Quality Assessment Report for Shuswap Lake can be found online here:  
[https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/waterquality/monitoring-water-quality/thompson-okanagan-wq-docs/shuswap\\_water\\_quality\\_assessment.pdf](https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/waterquality/monitoring-water-quality/thompson-okanagan-wq-docs/shuswap_water_quality_assessment.pdf).

## **4. Update on SWC initiatives**

Erin shared that a Phosphorus Action Plan was published by the SWC in October. Additionally, the Water Quality Grant Program will open in December. The grant program provides funds to farmers, property owners and stewardship groups for nutrient management projects in Salmon River or Shuswap River valley bottoms. \$55,000 in grant funding is available and will be disbursed in 2023.

| Item No. | Agenda item   | Time |
|----------|---|------|
| 3-1      | Old business: draft summary of the Shuswap Water Monitoring Group meeting, November 7 <sup>th</sup> 2022, for information | 9:50 |



Marge provided an update on the SWC-funded Gardom Lake Stewardship Society wetland development. She reported that the work is nearly complete. The society is monitoring water quality to determine the impact of the wetland.

#### **5. Periphyton monitoring proposal – presented by CSRD staff and guests**

Ben shared that the CSRD is making updates to its Liquid Waste Management Plans (LWMP). LWMPs include a component of water quality monitoring. As part of these updates, staff are contemplating improvements to the water monitoring component.

Mike Schutten and Jason Schleppe (Ecoscape Environmental Consultants) joined the meeting.

Jason explained that there would be a benefit to introducing periphyton monitoring as a new method of detecting impacts of septic effluent seeping into the lake. Periphyton respond differently to nutrient inputs than algae, bacteria and benthic communities.

Erin asked what the management implications would be if the results suggested influences of septic effluent seeping into the lake. Jason replied that Liquid Waste Management Plans could respond appropriately, such as with new strategies, permitting processes or bylaws.

The monitoring group further discussed the methodology of this potential new monitoring program.

**Meeting Adjourned 12:15pm.**

| Item No. | Agenda item   | Time |
|----------|---|------|
| 3-2      | Old business: draft summary of the Shuswap Water Protection Advisory Committee meeting, November 23 <sup>rd</sup> 2022, for information | 9:50 |



**Water Protection Advisory Committee Meeting**  
**Wednesday November 24, 2022 | 10:00AM – 11:30AM**  
**Online Meeting**

Draft meeting summary as at November 24, 2022

**Meeting objectives**

1. Updates to grant program guidelines
2. Updates on existing funded projects
3. Share information

**Attendance (committee members)**

Dennis Lapierre, Agriculture – hobby/small lot  
Carolyn Farris, Horse Council BC  
Lily Kotzeva, Ministry of Environment and Climate Change Strategy  
Robyn Laubman, Splatsin  
Lindsay Benbow, Ministry of Agriculture, Food and Fisheries  
Ben Van Nostrand, Columbia Shuswap Regional District  
Ralph Van Dalfsen, Agriculture – dairy

**Staff**

Alex de Chantal, Fraser Basin Council  
Erin Vieira, Fraser Basin Council

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**Summary of discussions, decisions and action items**

1. **Welcome, Introductions, Agenda and Objectives**  
Alex de Chantal welcomed everyone and thanked them for their time. Secwepemc territory was acknowledged. The Agenda was reviewed and accepted as presented.
2. **Previous Meeting Summary**  
The WPAC meeting summary from February 16, 2022 was approved.
3. **Updates on Existing Funded Projects**  
Erin presented an update on the four SWC grant-funded projects. FRISP/Splatsin; Trinity Dairies; Gardom Lake Stewardship Society; Crystal Lake Ranch.

| Item No. | Agenda item   | Time |
|----------|---|------|
| 3-2      | Old business: draft summary of the Shuswap Water Protection Advisory Committee meeting, November 23 <sup>rd</sup> 2022, for information | 9:50 |



| Project                                       | Project type   | SWC \$ funding | Status  |
|---|--|----------------|---|
| FRISP/Splatsin Development Corporation (2020) | Fencing  | \$18,200       | \$8200 advanced. Behind on reporting and timelines. Following up.   |
| Crystal Lake Ranch (Werner and Jody Stump)    | Eagle River Bank Stabilization & Riparian Habitat Restoration & Protection | \$40,190       | \$20,095 has been advanced. Project is well underway with most of the work completed. Staff have received photos of the work completed. |
| Gardom Lake Stewardship Society               | Wetland restoration Upper Gardom Creek – Phase 2                           | \$11,820       | \$5910 has been advanced. Project is well underway with most of the work completed. Staff have visited the project site.                |
| Trinity Dairies (Van Dalfsen) (2021)          | Field drainage   | \$18,840       | \$9420 has been advanced. Project is complete. Staff have received final report from proponent.   |

#### 4. Updates to application and grant program guidelines

Grant Intake will open Dec. 1<sup>st</sup>, looking for any feedback to the program guide.

Ralph encouraged applicants to get in touch with program managers prior to applying. Erin confirmed that this suggestion is already in the program guide.

Robyn perhaps we should identify other potential funding sources in the program guide.

**Action: Add list of funding sources to the Grant Program Guide as an Appendix**

Lindsay commented that 'regenerative agricultural practices' is a broad term, perhaps update to state "Regenerative or conventional agricultural practices related to meeting the grant program goals of mitigating nutrient loss or improving soil health and quality, i.e., cover cropping, rotational grazing..."

Carolyn commented about projects meeting Agricultural Environmental Management Code of Practice (AEMCOP) regulation, don't want applications that cover what is already mandated. Certainly, wouldn't recommend grant funds to farms that have been given a compliance order, however if a proponent is building a new storage facility is proactive and above and beyond what is required it would be considered.

Ralph added there's a difference between manure storage and controlling run-off. He suggested that storage is beyond the scope of this grant program but controlling runoff would qualify in his opinion.



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Dennis noted it is a conundrum. Need to balance benefits to the watershed and the AEMCOP regulations that producers must follow.

Lily added it seems like the group needs a better understanding of what the regulation requires, and inquired if there a someone within the BC Ministry of Environment would could assist with this. AEMCOP is available online.

Dennis mentioned that regional districts can be a good conduit to spread awareness of the grant program. Electoral Area directors should be reaching out to producers in their area.

#### 5. Roundtable updates

Carolyn: Reaching small-lot farmers is not always easy; many are not included in commodity associations. Each organization's mandate is education but working with staff and board to support the reach of the Council.

Dennis: Encourage CSRD to develop an Agricultural Advisory Committee.

Robyn: Recent activities in the watershed include inventories on Salmon River, Besette, Duteau and Harris Creeks. To take a snapshot in time of watershed health and identify priorities for protection and restoration. Info is publicly available through the Community Mapping Network. These systems will be re-visited over long-term to observe and measure change. here's the link to the Salmon River and Besette creek network Sensitive Habitat Atlas:

<https://cmnbc.ca/atlasgallery/besette-creek-sensitive-habitat-atlas/>. Also looking at flow-needs in the Salmon River to inform better stewardship of the river, Connected Splatins school children to the Gardom Lake Stewardship Society to plant trees, learn turtle habitat, and build connections points between youth and leaders at the wetland site.

Ralph: see opportunities collaborating with producer organizations to lobby Province to fund research on crop production and nutrient trials. Ministry used to do this a lot, and extension work too – no longer. Crop production is regional, trials need to be done regionally too.

Ben: New CSRD board members being sworn in today. Maybe through Dennis' discussion with politicians they address that they would like to see staff from CSRD support more issues on Agriculture.

Erin: The SWC recently published a Phosphorus Action Plan. Meant to be an educational tool that provides suggestions on how to minimize 'phosphorus footprint'. Also includes an overview of provincial and federal regulations for phosphorus. Available on the [website](#).

#### 6. Meeting adjourned at 11:15.

| Item No. | Agenda item                  | Time |
|----------|------------------------------|------|
| 4        | Report from Program Managers | 9:50 |

### Financial report for the end of the second quarter (April 1<sup>st</sup> – September 30<sup>th</sup> 2022)

REVENUE for 2022-2023 (April 1<sup>st</sup> 2022 – March 31<sup>st</sup> 2023) *\*no change from last SWC meeting*

| Source   | (\$)           |
|--|----------------|
| Surplus (from March 31 <sup>st</sup> 2022)           | 81,804         |
| Operating Reserve                                    | 132,667        |
| <i>Per Contribution Agreement:</i>                   |                |
| CSRD Areas C, D, E, F and District of Sicamous       | 160,000        |
| TNRD   | 53,600         |
| City of Salmon Arm                                   | 40,000         |
| Adams Lake Indian Band                               | 1300           |
| <i>Grant funding:</i>                                |                |
| Transport Canada Boating Safety Contribution Program | 22,900         |
| <b>Total revenue</b>                                 | <b>492,271</b> |

### EXPENSES

| Program (per 2022-23 work plan)<br>(April 1 <sup>st</sup> – September 30 <sup>th</sup> 2022) | Budget (\$)    | Expense (\$)   |
|--|----------------|----------------|
| Water Quality Monitoring   | 28,850         | 14,987         |
| Water Quality Protection & Improvement*  | 150,730        | 31,926         |
| Zebra & Quagga Mussel Prevention   | 35,875         | 29,179         |
| Safe Recreation  | 27,600         | 23,289         |
| Communications, Engagement, & Advocacy   | 55,100         | 26,933         |
| Management & Administration  | 43,750         | 14,304         |
| <b>Sub-total Program Operations Expenses</b>   | <b>341,905</b> | <b>140,618</b> |
| Operating Reserve  | 150,366        | 0              |
| <b>Total expenses</b>  | <b>492,271</b> | <b>140,618</b> |

| Item No. | Agenda item                        | Time |
|----------|------------------------------------|------|
| 5        | Proposed meeting schedule for 2023 | 9:50 |

### Shuswap Watershed Council proposed meeting schedule for 2023

|                                      | Date                            | Draft agenda   |
|--------------------------------------|---------------------------------|--|
| 4 <sup>th</sup> quarter<br>(2022-23) | March 8 <sup>th</sup> 2023      | <ul style="list-style-type: none"> <li>• Election of Chair and Vice Chair</li> <li>• 2022-23 work plan presentation and approval</li> <li>• Financial and program operations update</li> <li>• New business</li> </ul> |
| 1 <sup>st</sup> quarter<br>(2023-23) | June 14 <sup>th</sup> 2023      | <ul style="list-style-type: none"> <li>• Financial and program operations update</li> <li>• 2020-21 Annual Report presentation</li> <li>• New business</li> </ul>  |
| 2 <sup>nd</sup> quarter              | September 13 <sup>th</sup> 2023 | <ul style="list-style-type: none"> <li>• Financial and program operations update</li> <li>• New business</li> </ul>  |
| 3 <sup>rd</sup> quarter              | December 13 <sup>th</sup> 2023  | <ul style="list-style-type: none"> <li>• Financial and program operations update</li> <li>• New business</li> <li>• Meeting schedule for 2024</li> </ul>   |

Meetings are held quarterly, on a date most convenient to the SWC members which falls on the second Wednesday of the month in the months of March, June, September, and December.

Meetings are held at the Columbia Shuswap Regional District Boardroom, except for the December meeting which is held via Zoom.

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#### Other important dates that will affect some SWC members:

Southern Interior Local Government Association (SILGA) Annual General Meeting and Convention: April 25<sup>th</sup> - 28<sup>th</sup> in Vernon.

Federation of Canadian Municipalities (FCM) Annual Conference and Trade Show: May 25<sup>th</sup> – 28<sup>th</sup> in Toronto.

Union of British Columbia Municipalities (UBCM) Annual Convention: September 18<sup>th</sup> – 22<sup>nd</sup> in Vancouver.