

AGENDA PACKAGE FOR:

Council Meeting
Wednesday December 13th 2023 • 9:30 – 11:30 AM
Zoom meeting

Contents

1. Meeting summary: September 13 th 2023 Shuswap Watershed Council draft meeting summary for approval, and signature from Chair	p. 2
2. Correspondence (in):	
i. Correspondence from Anna Warwick-Sears, Executive Director of Okanagan Basin Water Board regarding immediate action to prevent invasive mussel introduction to BC, copied to the Shuswap Watershed Council:	
a. Letter to local governments, dated October 18 th 2023	p. 11
b. Letter to Provincial Ministers Cullen and Heyman, dated October 18 th 2023	p. 15
c. Letter to Federal Ministers LeBlanc and LeBouthillier, dated October 18 th 2023	p. 18
ii. Letter from the Shuswap Waterfront Owners Association to Provincial Minister Cullen and Federal Minister LeBouthillier regarding invasive mussels, dated October 28 th 2023, copied to the Shuswap Watershed Council	p. 20
iii. Letter from MPs Mel Arnold, Dan Albas, Tracy Gray, Frank Caputo, and Rob Morrison to Federal Ministers LeBlanc and LeBouthillier regarding invasive mussels, dated November 3 rd 2023, copied to the Shuswap Watershed Council	p. 22
iv. Reply letter from Provincial Ministers Cullen and Heyman regarding invasive mussels, dated November 30 th , 2023	p. 24
v. Letter from CSRD Board of Directors to Provincial and Federal Ministers regarding invasive mussels, dated December 4 th 2023, copied to the Shuswap Watershed Council	p. 27
vi. [Late Item] Letter from TNRD Board of Directors to Provincial Ministers regarding invasive mussels, dated December 6 th 2023, copies to the Shuswap Watershed Council.	p. 29
Correspondence (out):	
vii. Letter from the Shuswap Watershed Council Chair Jay Simpson to Provincial Ministers Cullen and Heyman regarding preventing an introduction of invasive mussels to BC, dated November 2 nd , 2023.	p. 30
viii. [Late item] Letter from the Shuswap Watershed Council Chair Jay Simpson and four local governments to Courtney Zimmerman, Interior Health, regarding algal bloom response and responsibilities	p. 33
ix. Letter from Shuswap Watershed Council Chair Jay Simpson to Federal Ministers LeBouthillier, LeBlanc, and Rodriguez regarding preventing an introduction of invasive mussels to BC, dated November 28 th , 2023.	p. 35

3. Old business:	
i. Draft summary of the Shuswap Water Protection Advisory Committee meeting held November 22 nd , 2023, for information	p. 38
ii. Draft summary of the Shuswap Water Monitoring Group meeting held November 28 th , 2023, for information	p. 41
iii. Water Quality Grant Program Guide, for information	p. 45
iv. Item deferred from the September 13 th 2023 meeting – Water Quality Grant Program budget	p. 46
4. Report from Program Managers:	
i. Financial report to end of second quarter (April 1 st – September 30 th 2023)	p. 47
ii. Revised communications budget for 2023-24	p. 49
5. New business:	
SWC meeting schedule for 2024	p. 50

Item No.	Agenda item	Time
1.	September 13 th 2023 meeting summary for approval	9:40

Council Meeting
September 13th 2023 • 10:00 AM – 12:00 PM
Zoom meeting

Draft Record of Decisions and Action Items
This record is subject to change at the next Council meeting

Meeting objectives

1. Receive update from Columbia Shuswap Regional District re: referendum
2. Receive update from program managers
3. Discuss SWC Water Quality Grant Program

Present

Jay Simpson, Chair – Columbia Shuswap Regional District, Area F
Natalya Melnychuk, Vice Chair – Columbia Shuswap Regional District, Area G
Marty Gibbons – Columbia Shuswap Regional District, Area C
Rhona Martin – Columbia Shuswap Regional District, Area E
Tim Lavery – City of Salmon Arm (*alternate for Debbie Cannon, to 11:25 am*)
Reid Hamer-Jackson – Thompson-Nicola Regional District, City of Kamloops
David Lepsoe – Thompson-Nicola Regional District, Village of Chase (*from 10:17 am*)
Robyn Laubman – Splatins te Secwepemc
Jim Johnson – Regional District of North Okanagan, Area E (*from 10:16 am*)
Kym Keogh – BC Ministry of Environment and Climate Change Strategy
Lindsay Benbow – BC Ministry of Agriculture & Food
Kelly Chiatto – BC Ministry of Forests (*from 11:20 am*)
Erik Kok – Community representative
Kimm Magill-Hofmann – Community representative
Phil Owen – Community representative
Dennis Einarson – Senior Scientific Advisor

Erin Vieira and Alex de Chantal – Fraser Basin Council

Observers

Linda Franklin
Ian Rogalski
Clyde Mitchell
Barbra Fairclough
James Telford

Regrets

Dean Trumbley
Pam Beech
Howard Nordquist
Alyssa Hopkins

Item No.	Agenda item	Time
1.	September 13 th 2023 meeting summary for approval	9:40

Call to Order

Chair Jay Simpson called the meeting to order at 10:06 AM

Chair Simpson acknowledged the traditional and historic lands of the Secwepemc and Syilx First Nations.

Adoption of meeting agenda

Moved/seconded by Councillor Lavery/Vice Chair Melychuk that:

The agenda for the September 13th 2023 meeting of the Shuswap Watershed Council be adopted.

Carried

Adoption of meeting summary

Moved/seconded by Mayor Hamer-Jackson/Kimm Magill-Hofmann that:

The summary of the June 14th 2023 meeting of the Shuswap Watershed Council be adopted.

Carried

Correspondence

Moved/seconded by Erik Kok/Kimm Magill-Hofmann that:

The correspondence be received for information (letter from Anna Warwick-Sears, Executive Director of the Okanagan Basin Water Board to three Provincial Ministers regarding calls to action to protect BC from invasive mussels, dated August 15th 2023, copied to the Shuswap Watershed Council).

Carried

Old business

None

Report from Chair

The Chair reported briefly on the devastation caused by wildfires in the Shuswap region. The fires impacted the CSRD holding a referendum in August for the continuation of the Shuswap Watershed Council service; as such, the CSRD has postponed the referendum (due to Provincial Ministerial Order) to a later date not yet determined. In light of this, the financial contribution to the SWC from the CSRD which was set to expire on December 31st 2023 has been extended to December 31st 2024. Chair Simpson commented that therefore the Contribution Agreement between the Fraser Basin Council and the four funders will need to be amended to reflect the extension by the CSRD.

Moved/seconded by Chair Simpson/Councillor Lavery that:

Staff be directed to work with the administrators of the four funding organizations (CSR, TNRD, City of Salmon Arm and Adams Lake Indian Band) to amend the Contribution Agreement by extending it by a year.

Carried (Director Gibbons opposed)

Item No.	Agenda item	Time
1.	September 13 th 2023 meeting summary for approval	9:40

Chair Simpson also remarked that he is attending the Union of BC Municipalities (UBCM) Convention next week in Vancouver and has meetings scheduled with Minister Cullen (Ministry of Land, Water and Resource Stewardship) about the SWC and Provincial support and involvement, Minister Alexis (Agriculture & Food) regarding the SWC's programs to support and encourage sustainable agriculture practices, and with BC Hydro regarding invasive mussels.

Erik Kok suggested that the Chair speak with the Minister of Agriculture & Food at UBCM about agricultural compliance and find out what enforcement actions are planned for the Salmon and Shuswap River valleys.

Director Johnson and Mayor Lepsoe entered the meeting at 10:17 am

Chair Simpson commented on the impacts that the 2023 wildfires will have on water quality in the Shuswap in the next few years. A roundtable discussion took place with many Council members expressing concerns about impacts to infrastructure, drinking water, and riparian ecosystems. Concerns about challenges of re-building homes in their former locations in proximity to riparian areas was also brought forward, given that riparian setbacks and rules have changed since some home were first built.

Report from Program Managers

Erin Vieira provided a financial report for the first quarter, April 1st – September 30th 2023:

Table 1. Revenue sources (unchanged from June SWC meeting)

Revenue sources	(\$)
2022-23 operational surplus	47,656
2023-23 funds allocated and carried forward to 2023-24 projects	53,004
<i>Per Contribution Agreement:</i>	
CSRD Areas C, D, E, F, G 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	24,025
Habitat Conservation Trust Foundation (confirmed)	0
Total revenue	379,585

Budget and expenses presented on the next page ...

Item No.	Agenda item	Time
1.	September 13 th 2023 meeting summary for approval	9:40

**Report from
Program Managers**

Table 2. Budget and actual expenses to-date

Program	Annual budget (\$)			Q1 actual expenses (\$)		
	External expenses	Program mgmt. (labour)	Sub-total	External expenses	Program mgmt. (labour)	Sub-total
Water Quality Monitoring Program						
Shuswap Water Monitoring Group	0	7200	7200	0	600	600
Water monitoring expenses	21,900	2200	24,100	13,125	0	13,125
Annual Water Quality Report	7200	5800	13,000	3836.25	920	4756.25
Water Quality Protection Program						
Water Protection Advisory Committee	0	4200	4200	0	106.67	106.67
Water Quality Grant Program	108,464	9800	118,264	26,590.93	2880.00	29,470.93
Wetland Strategy	20,000	4000	24,000	0	3413.33	3413.33
Climate change impact study (with TRU)	3000	600	3600	3000.00	280.00	3280.00
Zebra & Quagga Mussel Prevention Program						
Education and outreach campaigns	33,300	6600	39,900	30,306.86	2840.00	33,146.86
Safe Recreation Program						
Safety campaigns	20,000	10,000	30,000	6558.12	1240.00	7798.12
Communications, Public Engagement, & Advocacy						
Communications collateral	3250	6100	9350	2183.81	2400.00	4583.81
Public and media engagement	4150	16,800	20,950	1291.76	3800.00	5091.76
Advocacy	0	4200	4200	0	0	0
Administration						
Council meetings, work planning, staff liaise with Chair and Vice Chair	2600	20,800	23,400	578.88	5946.67	6525.55
Financial management and fund development	0	16,700	16,700	0	4586.67	4586.67
Sub-total expenses	223,864	115,000	338,864	87,471.59	29,013.33	116,484.92
Contribution to Operating Reserve			*40,721			
Total budget for 2023-24			379,585			

Item No.	Agenda item	Time
1.	September 13 th 2023 meeting summary for approval	9:40

**Report from
Program Managers**

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

1. SWC members toured Crystal Lake Ranch and Gardom Lake wetland on June 14th to learn about projects completed there with SWC Water Quality Grant funding
2. The 7th annual Shuswap Water Quality Summary Report was published in June, it presents data from the 2022 monitoring season and a variety of articles about water quality and stewardship. The report is available online and print copies are available at Shuswap libraries.
3. Several communiques have been published since June including three media releases, an Annual Highlights Summary, and a series of FAQs. Staff also gave presentations about the SWC at community meetings in Sorrento and Sicamous in June and July.
4. The Zebra & Quagga Mussel Prevention Program has progressed over the summer. Educational campaigns are being delivered during boating season, promoting 'Clean-Drain-Dry' and watercraft inspection for travellers. Early detection monitoring for invasive mussels is underway at 13 sites in the Shuswap by the Columbia Shuswap Invasive Species Society (CSISS); this work is funded by the SWC and the Habitat Conservation Trust Foundation. SWC program manager participated in a CSISS monitoring day in August.
5. The Safe Recreation Program has progressed over the summer and will continue until mid-October. Staff promoted national safety campaigns (e.g., Water Safety Week in June and Drowning Prevention Week in July) and promoted 8 tips for safety through rack cards, posters, advertising and social media.
6. Staff are currently applying to Transport Canada for federal grant funding to support the SWC's Safe Recreation Program in 2024; Transport Canada will fund up to 75% of program costs.
7. The Wetland Strategy is progressing. The ad hoc Wetland Committee met on June 19th and directed staff to hire a contractor to complete a GIS analysis and inventory of water and wetland features for the study area. The committee will meet again in October to discuss next steps. Staff are seeking external funding opportunities for the development and implementation of the Wetland Strategy.
8. Staff have initiated a second letter to Interior Health to be jointly signed by local government partners regarding algal bloom response and responsibilities.
9. Staff relayed another opportunity for a field tour to learn about agriculture and nutrient management.

Discussion

Robyn Laubman inquired if future Water Quality Summary Reports could include trends, demonstrating water quality differences over time. Ms. Vieira replied that the BC Ministry of Environment & Climate Change Strategy recently released a detailed assessment report on Shuswap Lake that covers trends

Item No.	Agenda item	Time
1.	September 13 th 2023 meeting summary for approval	9:40

(report is available here); in addition, SWC staff are updating the 2020 Nutrient Research Summary Report to include historical information about nutrient conditions in Mara Lake, as revealed in the sediment core study done by UBC-Okanagan.

Director Martin inquired if there is any water monitoring data to show the effectiveness of the new wetland built there.

Action item:

Alex de Chantal will follow up with the Gardom Lake Stewardship Society.

New business

Alex de Chantal explained the changes that staff are recommending to the Water Quality Grant Program: (1) adjust the way grant applications are reviewed and scored such that increased weight be given to the technical merit and scale and scope of proposals; and, (2) increase the grant program budget in recognition of increased demand for the program and inflation impacting project costs. Mr. de Chantal also announced that staff are streamlining the grant submission process this year and incorporating an online application. The grant program will open for applications on December 1st 2023 and close on January 31st 2024 (i.e., a two-month application window)

Kelly Chiatto entered the meeting at 11:20 am

Discussion

A roundtable discussion took place. Chair Simpson expressed his support for the recommendations. Other SWC members had comments and questions about the type of projects the grant program provides funding to. Comments were also made about the goals of the Wetland Strategy underway, which overlaps with the goals of the Water Quality Grant Program. Phil Owen and Erik Kok commented that the grant program could encourage and fund post-wildfire riparian restoration projects. The Chair requested that staff present the full Water Quality Grant Program guide at the December Council meeting for information.

Moved/seconded by Kimm Magill-Hofmann/Vice Chair Melnychuk:

That the recommended revision to the grant program scoring criteria be approved.

Carried

The Motion to increase the Water Quality Grant Program budget could not be made because there wasn't financial quorum in the meeting.

Item No.	Agenda item	Time
1.	September 13 th 2023 meeting summary for approval	9:40

Action items:

Staff will discuss the grant program guidelines with the Water Protection Advisory Committee members at their next meeting (this Fall, date TBD).

Staff will include the Grant Program Guide in the agenda package for the December 13th Shuswap Watershed Council meeting, for information.

**Guest presentation:
Anna Warwick-Sears,
Okanagan
Basin Water Board**

Anna Warwick-Sears, Executive Director of the Okanagan Basin Water Board, presented an overview of the OBWB's history, governance, and programs. The OBWB was established 1968 as an Okanagan valley-wide partnership to identify and resolve critical water issues in the Okanagan watershed. There are 12 directors on the Board, nine of whom are appointed by the three Okanagan Regional Districts; there is also one representative each from the Okanagan Nation Alliance, the BC Water Supply Association, and the Okanagan Water Stewardship Council (WSC). The WSC is a technical advisory committee of the OBWB with experts in the field of health, fisheries, agriculture, water utilities and more from across the valley. There are nine staff working for the OBWB.

The OBWB is funded by local taxation from three local government partners. Ms. Warwick-Sears explained that everyone in the Okanagan watershed – regardless of which regional district they live in – pays into the OBWB at the same rate. This funding model was established in the late 1960s, shortly after the regional districts were set up.

The OBWB's mandate is to define water problems, identify priorities, communicate and coordinate with various orders of government, present recommendations to government regulators to better manage the watershed, and provide funding for water quality and conservation projects.

In their 53 years of operation, the OBWB has consistently run three programs: a Sewage Infrastructure Grants Program whereby the OBWB provides grant funds to local governments for upgrades; a Eurasian Watermilfoil Control Program in Okanagan Lake; and a Water Management Program. Over the years other programs have been delivered including water conservation, water quality improvement grants, 'Don't Move a Mussel' education and advocacy, drought communication, collaborative flood mapping and flood risk mapping, and hydrometric monitoring and modeling.

There was a question period following Ms. Warwick-Sears presentation. Director Gibbons inquired how the funding model, with equal contributions from three local governments, was established. Ms. Warwick-Sears replied that it was set up in the very beginning (late 1960s) shortly after regional districts were established.

Vice Chair Melnychuk commented on the shared water responsibilities by local government and the Province. Ms. Warwick-Sears further commented that the

Item No.	Agenda item	Time
1.	September 13 th 2023 meeting summary for approval	9:40

OBWB is sensitive to the fact that it is doing work that falls within Provincial mandates but that the OBWB feels strongly that they need to be leading work in order to mitigate the risk of water quantity and quality issues.

Chair Simpson thanked Anna for her presentation and commented that another meeting with her to learn more would be beneficial.

Action item:

Staff to set up another meeting with Ms. Warwick-Sears (possibly March 2024 SWC mtg).

Roundtable

This agenda item was removed from the agenda.

Adjourn

Moved/seconded by Mayor Hamer-Jackson/Vice Chair Melnychuk that:

The September 13th 2023 meeting of the Shuswap Watershed Council be adjourned.

Carried

Meeting adjourned at 12:24 PM.

CERTIFIED CORRECT:

Chair

Item No.	Agenda item	Time
2.i.a	Correspondence	9:45



Okanagan Basin
WATER BOARD

1450 KLO Road, Kelowna, BC V1W 3Z4
P 250.469.6270 F 250.762.7011
www.obwb.ca

Local Governments in British Columbia

Oct 18, 2023

Re: CALL FOR IMMEDIATE ACTION TO PREVENT INVASIVE MUSSEL INTRODUCTION TO B.C.

Dear B.C. Local Government Boards and Councils,

We are writing to request your support; calling on senior governments for immediate action to prevent the introduction of invasive mussels into B.C. If senior governments fail to act, local governments and First Nations in B.C. will bear the brunt of managing and paying for the costs of invasive mussel mitigation.

On September 18th, the State of Idaho announced that invasive quagga mussels had been found in the Snake River, a tributary to the Columbia. The location of the discovery at Twin Falls is less than an 11-hour drive from the B.C. border.

Based on water chemistry analysis, every major population centre in B.C. is at moderate to high risk from invasive mussels. These rapidly spreading species are expected to cost the province more than \$129 million annually, based on costs for infrastructure, maintenance for boats and marinas, lost profits and provincial revenue and loss in residential property values and lost property taxes. These costs do not include the devastating effects on fish – especially Pacific salmon, and aquatic ecosystems in general. Invasive mussels can create toxic algae blooms, litter beaches with razor-sharp shells, clog water intakes and boat motors, and corrode concrete and metal in the water. In the Great Lakes region, invasive mussels have cost more than \$500 million per year just to manage the effects.

In response to the mussel detection in Idaho, state officials released more than 116,000 litres – almost four large tanker-trucks – of a copper-based pesticide into a 26 km stretch of the Snake River, killing invertebrates, algae, plants, and fish, including 2-meter-long sturgeon. This will be followed up with another chemical treatment and a biocontrol treatment. This was considered a better option than allowing the mussels to take hold, but there is still no guarantee that it will have the desired affect. It is possible that mussels have already escaped the containment area, and if so, they will spread through the Columbia Basin over the next several years.

Chemical treatments in most large lakes in B.C. are unlikely to be effective. We do not wish to have such treatments as a public-relations exercise.

The OBWB has provided a detailed memorandum to the Province of B.C. and will provide a letter to both levels of government this week summarizing our Calls to Action (attached). We ask that local government boards and councils provide a letter or resolution of support for these calls to action and send them to the Ministers listed below. We have also prepared a short video presentation outlining the threat of invasive mussels, the current situation in Idaho, and the reasons behind the calls to action. You can view this video on our YouTube channel here: <https://youtu.be/j255i8HtzLg>

Item No.	Agenda item	Time
2.i.a	Correspondence	9:45



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Actions to be taken immediately by the Province of B.C.:

1. Introduce a temporary moratorium on out-of-province watercraft entering B.C., until the full status of the infestation in the Columbia Basin is assessed, and until the effectiveness of the chemical and biocontrol treatments in Idaho is known.
2. Introduce "pull-the-plug" legislation to be in effect prior to the 2024 boating season, and before the moratorium is lifted, requiring all watercraft owners to remove drain plugs prior to vessels being transported on public roads.
3. Ask Canada's Minister for Public Safety to issue direction for all watercraft entering Canada at all border crossings, from Saskatchewan to B.C., to be inspected prior to allowing entry.
4. Commit funding to the Invasive Mussel Defence Program of no less than \$4 million per year (all sources), indexed to inflation for at least 10 years going forward.

Following these immediate actions, we call on the province to fill the following gaps in the current inspection and prevention system, and in planning for response and long-term mitigation:

5. Enhance funding to recruit and retain B.C. Conservation Officers, Auxiliary Conservation Officers, and other Invasive Mussel Defence Program staff as needed to 2019 levels (64 inspectors).
6. Update the provincial Early Detection, Rapid Response plan, including a round of consultation with partner organizations prior to finalization.
7. Lead a planning process to create long-term response, containment, and control plans in regions at high risk of introduction and vulnerable to infestation, including the Okanagan, Shuswap, and Kootenay Regions.
8. Promote vulnerability assessments by utilities, local jurisdictions, and private entities.

Finally, we call on the province to reconsider our previous call to action to require inspection for all watercraft entering B.C., both at federal and provincial borders.

Actions to be taken immediately by the Government of Canada:

1. We ask that the Minister of Public Safety issue immediate direction to all Canada Border Service Agency locations between Saskatchewan and the Pacific that all watercraft entering Canada in that region be inspected for invasive mussels following provincial protocols.
2. We have asked the Government of B.C. to issue a temporary moratorium on out-of-province boats until the full extent of the infestation is known, and until the success of chemical treatments in Idaho is determined. And so, we also ask that the federal government use its authority to support any such temporary moratorium.

Since 2012, the Okanagan Basin Water Board has run the Don't Move A Mussel public awareness campaign, including the message to boaters to Clean, Drain, Dry their watercraft before launching in B.C. waters. We are also developing a guide for vulnerability assessments for in-water infrastructure which will allow all facility operators to assess the vulnerability of their source waters and understand specific risks to infrastructure

Item No.	Agenda item	Time
2.i.a	Correspondence	9:45



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components, how to mitigate those risks, and will allow for advanced capital planning for changes or retrofits as needed. The guide should be ready by the end of this year and will be freely available for all users.

We appreciate your consideration and support protecting the waters of B.C.

Yours truly,

Anna Warwick Sears, Ph.D. — Executive Director
Okanagan Basin Water Board
1450 KLO Road, Kelowna, B.C. V1W 3Z4
Email : anna.warwick.sears@obwb.ca
Office: 250.469.6251

Addressees for Letters of Support:

Honourable Dominic LeBlanc
Minister of Public Safety, Democratic Institutions and Intergovernmental Affairs
269 Laurier Avenue West
Ottawa, Ontario K1A 0P8
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Honourable Diane Lebouthillier
Minister of Fisheries, Oceans and the Canadian Coast Guard
200 Kent St Station 15N100
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Honourable Nathan Cullen
Minister of Water, Land and Resource Stewardship
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Victoria, BC V8M 9L6
WLRs.Minister@gov.bc.ca

Honourable George Heyman
Minister of Environment and Climate Change Strategy
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Item No.	Agenda item	Time
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CC:

- Okanagan MLAs: Harwinder Sandhu, Norm Letnick, Renee Merrifield, Ben Stewart, Dan Ashton, Roly Russell
- Okanagan MPs: Mel Arnold, Tracy Gray, Dan Albas, Richard Cannings
- Okanagan Nation Alliance, Chiefs Executive Council
- Pacific NorthWest Economic Region: Matt Morrison, Chief Executive Officer
- Invasive Species Council of B.C.: Gail Wallin, Executive Director
- Okanagan Chambers of Commerce
- Thompson Okanagan Tourism Association
- Union of BC Municipalities
- Shuswap Watershed Council
- Okanagan and Similkameen Invasive Species Society

Attachments:

- Letter to Province: Call for Immediate Action to Prevent Invasive Mussel Introduction to B.C.
- Letter to Federal Govt: Call for Immediate Action to Prevent Invasive Mussel Introduction to B.C.
- Memorandum to Deputy Minister: Recommendations for Invasive Mussel Prevention

Item No.	Agenda item	Time
2.i.b	Correspondence	9:45



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Oct 18, 2023

Honourable George Heyman
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ENV.Minister@gov.bc.ca

Re: CALL FOR IMMEDIATE ACTION TO PREVENT INVASIVE MUSSEL INTRODUCTION TO B.C.

Dear Ministers,

We are writing to again express our extreme concern over the threats posed by invasive mussels to B.C. waters, recognizing the September 18th announcement that invasive quagga mussels have been found in Idaho in the Snake River. On September 25th, following meetings with Minister Cullen at UBCM, we provided a memorandum with specific recommendations and details to mitigate, prepare for, and respond to this threat (attached). The calls to action here are a summary of that memorandum.

We are writing to ask for the following actions to be taken immediately by the province of B.C.

1. Introduce a temporary moratorium on out of province watercraft entering B.C. until the full status of the infestation in the Columbia basin is assessed, and until the effectiveness of the chemical and biocontrol treatments in Idaho is known.
2. Introduce "pull-the-plug" legislation to be in effect prior to the 2024 boating season, and before the moratorium is lifted, requiring all watercraft owners to remove the drain plug prior to vessels being transported on public roads.
3. Ask Canada's Minister for Public Safety to issue direction for all watercraft entering Canada at all border crossing from Saskatchewan to B.C. to be inspected prior to allowing entry.
4. Commit funding to the Invasive Mussel Defence Program of no less than \$4 million per year (all sources), indexed to inflation for at least 10 years.

Following these immediate actions, we ask you to fill the following gaps in the current inspection and prevention system, and in planning for response and long-term mitigation:

5. Enhance funding to recruit and retain B.C. Conservation Officers, Auxiliary Conservation Officers, and other IMDP staff as needed to 2019 levels (64 inspectors).
6. Update the provincial Early Detection, Rapid Response plan (EDRR), including a round of consultation with partner organizations prior to finalization.

Item No.	Agenda item	Time
2.i.b	Correspondence	9:45



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7. Lead a planning process to create long-term response, containment, and control plans in regions at high risk of introduction and vulnerable to infestation, including the Okanagan, Shuswap, and Kootenay Regions.
8. Promote vulnerability assessments by utilities, local jurisdictions, and private entities.

Finally, we ask you to reconsider our previous call to action to require inspection for all watercraft entering B.C., both at federal and provincial borders. Again, the attached memorandum provides details for how this can be accomplished.

In response to the mussel detection in Idaho, state officials released more than 116,000 litres - almost four large tanker-trucks - of a copper-based pesticide into a 26 km stretch of the Snake River, killing invertebrates, algae, plants, and fish, including 2-meter-long sturgeon. This will be followed up with another chemical treatment and a biocontrol treatment. This was considered a better option than allowing the mussels to take hold, but there is still no guarantee that it will have the desired affect. It is possible that mussels have already escaped the containment area, and if so, they will spread throughout the Columbia Basin over the next several years.

Chemical treatments in most large lakes in B.C. are unlikely to have the desired effect, and the Province must take strong immediate action to close the obvious gaps in inspections and legislation to prevent invasive mussels in the first place.

We will also be writing to federal ministers to call for their support in your efforts, especially enhanced inspections at federal border crossings. We will also continue our own efforts in public awareness and education, providing a vulnerability assessment guide to prepare infrastructure, and working with local governments and First Nations to promote these calls to action, and the Clean, Drain, Dry message for boat owners.

The critical time to act is now.

Yours truly,

Anna Warwick Sears, Ph.D. — Executive Director
Okanagan Basin Water Board
1450 KLO Road, Kelowna, B.C. V1W 3Z4
Email : anna.warwick.sears@obwb.ca
Office: 250.469.6251

Item No.	Agenda item	Time
2.i.b	Correspondence	9:45



Okanagan Basin
WATER BOARD

1450 KLD Road, Kelowna, BC V1W 3Z4
P 250.469.6270 F 250.762.7011
www.obwb.ca

CC:

- Okanagan MLAs: Harwinder Sandhu, Norm Letnick, Renee Merrifield, Ben Stewart, Dan Ashton, Roly Russell
- Okanagan Nation Alliance, Chiefs Executive Council
- Okanagan Local Government Chairs and Mayors
- Okanagan MPs: Mel Arnold, Tracy Gray, Dan Albas, Richard Cannings
- Pacific NorthWest Economic Region: Matt Morrison, Chief Executive Officer
- Invasive Species Council of B.C.: Gail Wallin, Executive Director
- Okanagan Chambers of Commerce
- Thompson Okanagan Tourism Association
- Union of BC Municipalities
- Shuswap Watershed Council
- Okanagan and Similkameen Invasive Species Society

Item No.	Agenda item	Time
2.i.c	Correspondence	9:45



Okanagan Basin
WATER BOARD

1450 KLO Road, Kelowna, BC V1W 3Z4
P 250.469.6270 F 250.762.7011
www.obwb.ca

Honourable Dominic LeBlanc
Minister of Public Safety, Democratic Institutions and Intergovernmental Affairs
269 Laurier Avenue West
Ottawa, Ontario K1A 0P8
jga.minister-ministre.aig@pco-bcp.gc.ca

Oct 18, 2023

Honourable Diane Lebouthillier
Minister of Fisheries, Oceans and the Canadian Coast Guard
200 Kent St Station 15N100
Ottawa, Ontario K1A 0E6
DFO.Minister-Ministre.MPO@dfo-mpo.gc.ca

Re: CALL FOR IMMEDIATE ACTION TO PREVENT INVASIVE MUSSEL INTRODUCTION TO B.C.

Dear Ministers,

We are again writing to express our extreme concern over the threats posed by invasive mussels to B.C. waters, recognizing the September 18th announcement that invasive quagga mussels were found in Idaho in the Snake River, a tributary to the Columbia River. A May 2023 report by the Province of B.C., *Potential Economic Impact of Zebra and Quagga Mussels in B.C.*, shows that both the Fraser River and Columbia River watersheds are at moderate to high risk of a mussel infestation based on water chemistry. In order to protect Pacific salmon habitat in both of these major river systems, and protect the economy of the west, the Government of Canada must act now.

1. We ask that you issue immediate direction to all Canada Border Service Agency locations between Saskatchewan and the Pacific that all watercraft entering Canada in that region be inspected for invasive mussels following provincial protocols.
2. We have asked the Government of B.C. to issue a temporary moratorium on out-of-province boats until the full extent of the infestation is known, and until the success of chemical treatments in Idaho is determined. We ask you to use your authority to support any such temporary moratorium.

In response to the mussel detection in Idaho, state officials released more than 116,000 litres – almost four large tanker-trucks – of a copper-based pesticide into a 26 km stretch of the Snake River, killing invertebrates, algae, plants, and fish, including 2-meter-long hatchery sturgeon. This will be followed up with another chemical treatment and a biocontrol treatment. This was considered a better option than allowing the mussels to take hold, but there is still no guarantee that it will have the desired affect. It is possible that mussels have already escaped the containment area, and if so, they will spread throughout the Columbia Basin over the next several years.

Chemical treatments in most large lakes in B.C. are unlikely to be effective. Instead, we need senior governments to take strong immediate action to close the obvious gaps in inspections and legislation to prevent invasive mussels in the first place.

Item No.	Agenda item	Time
2.i.c	Correspondence	9:45



Okanagan Basin
WATER BOARD

1450 KLO Road, Kelowna, BC V1W 3Z4
P 250.469.6270 F 250.762.7011
www.obwb.ca

The Okanagan Basin Water Board will continue our own efforts in public awareness and education, providing a vulnerability assessment guide to prepare infrastructure, and working with local governments and First Nations to promote these calls to action, and the Clean, Drain, Dry message for boat owners.

The critical time to act is now.

Yours truly,

Anna Warwick Sears, Ph.D. — Executive Director
Okanagan Basin Water Board
1450 KLO Road, Kelowna, B.C. V1W 3Z4
Email : anna.warwick.sears@obwb.ca
Office: 250.469.6251

CC:

- Okanagan MPs: Mel Arnold, Tracy Gray, Dan Albas, Richard Cannings
- Okanagan MLAs: Harwinder Sandhu, Norm Letnick, Renee Merrifield, Ben Stewart, Dan Ashton, Roly Russell
- Okanagan Nation Alliance, Chiefs Executive Council
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- Pacific Northwest Economic Region: Matt Morrison, Chief Executive Officer
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- Okanagan Chambers of Commerce
- Thompson Okanagan Tourism Association
- Union of BC Municipalities
- Shuswap Watershed Council
- Okanagan and Similkameen Invasive Species Society

Item No.	Agenda item	Time
2.ii	Correspondence	9:45



October 28, 2023

Hon. George Heyman
Minister of Environment and Climate Change Strategy of British Columbia
via Email: env.minister@gov.bc.ca
PO Box 9360 Stn Prov Govt
Victoria, BC
V8W 9M2

The Honourable Diane Lebouthiller
Minister of Fisheries, Oceans and the Canadian Coast Guard
via Email: DFO Minister-Ministre.MPO@dfo-mpo.gc.ca
200 Kent St
Station 15N100
Ottawa, ON
K1A 0A6

Re: Invasive Mussels

Dear Minister Heyman and Minister Lebouthiller:

The Shuswap Waterfront Owners Association (SWOA) is a registered society incorporated in 2009 representing over 1300 members who own lakefront properties on Shuswap and Mara Lakes in the Columbia Shuswap Regional District of British Columbia.

Previously, SWOA has written in support of the Provincial and Federal governments' defensive actions to prevent the introduction of invasive Zebra and Quagga (ZQM) mussels into B.C. waters. However, given recent reports where a boat heavily infested with Zebra and Quagga mussels was detected at the Golden Inspection Station along with a confirmed infestation of ZQM in the Snake River in Idaho, a tributary of the Columbia River, the level of concern of our members has increased significantly. It is our opinion, that despite current efforts and initiatives, the risk of introducing ZQM to British Columbia waters remains unacceptably high.

The May 2023 release of *Potential Economic Impact of Zebra and Quagga Mussels in B.C.* by the Ministry of Water, Land and Resource Stewardship, contains updated information and figures that is of little comfort. The original report, released in 2013, indicated that the annual cost resulting from a ZQM invasion could be \$53.4 million dollars. The most recent report now estimates that the annual cost could actually range from \$64 to \$129 million, including:

Item No.	Agenda item	Time
2.ii	Correspondence	9:45

- ☐ \$33.7 to \$92.5 million in mitigation costs for water-related infrastructure; including \$17.1 to \$23.3 million for hydro infrastructure.
- ☐ \$8 to \$49.7 million for water supply infrastructure for municipal, domestic and aquaculture.
- ☐ \$2.5 to \$5.3 million for agricultural irrigation and golf courses.
- ☐ \$3.7 to \$8.1 million in additional annual maintenance to boats and marinas.
- ☐ \$2.5 to \$12.6 million in lost profits and provincial revenues from losses in water-based non-resident tourism; and,
- ☐ \$30.2 million annualized loss in residential property values and property taxes due to reduced water quality and lost shoreline amenity values.

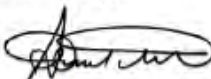
Considering the budgeted cost of \$3.8 million for the full mussel defense program, including 24/7 operation of inspection sites at B.C. borders, the costs associated with an invasion far exceed the costs of prevention. On behalf of our members, we ask that you take immediate steps to fully fund the mussel defense program and bolster the efforts for this prevention program.

Finally, as noted above, news reports of the detection of Zebra and Quagga mussels in the Snake River in Idaho, a tributary to the Columbia River are very concerning. The reports indicated that the infestation has been treated with a copper compound, but further monitoring will be needed to determine if the treatment has been successful in eradicating the infestation.

As a result of these findings, both the Okanagan Basin Water Board in BC and the Alberta government are lobbying for a ban on boats from the area being brought across the border into Canada from the US. Even with the potential economic loss that might occur if such a ban be adopted, we would expect the loss would be much less than the costs that would be incurred if ZQM were to become established in BC waters.

In conclusion, SWOA is urging your governments to take decisive action to ensure that the introduction of invasive mussels into B.C does not occur.

Yours truly,



A.C. Mitchell
President
Shuswap Waterfront Owners Association

Shuswap Watershed Council, **Jay Simpson** jsimpson@csrd.bc.ca

MLA for Shuswap, **Greg Kylo** Greg.Kylo@MLA.leg.bc.ca

Columbia Shuswap Invasive Species Society, **Robyn Hooper** info@columbiaShuswapinvasives.org

Okanagan Similkameen Invasive Species Society, **Lisa Scott** oasiss@shaw.ca

Invasive Species Council of B.C., **Gail Wallin** info@bcinvasives.ca

Columbia Shuswap Regional District, **John MacLean** jmaclean@csrd.bc.ca

MP for Okanagan Shuswap, **Mel Arnold** mel.arnold@parl.gc.ca

Okanagan Basin Water Board **Anna Warwick Sears** anna.warwick.sears@obwb.ca

Item No.	Agenda item	Time
2.iii	Correspondence	9:45



Honourable Diane LeBouthillier, P.C., M.P.
Minister of Fisheries, Oceans and the Canadian Coast Guard
Mail Stop 15N100, Floor 15, 200 Kent Street
Ottawa, ON, K1A 0E6
Via Email: DFO.Minister-Ministre.MPO@dfo-mpo.gc.ca

Honourable Dominic LeBlanc, P.C., K.C., M.P.
Minister of Public Safety
269 Laurier Avenue
Ottawa, Ontario, K1A 0P8
Via Email: ps.ministerofpublicsafety-ministredelasecuritepublique.sp@ps-sp.gc.ca

November 3, 2023

Dear Minister LeBouthillier and Minister LeBlanc,

We write you today to express our grave concerns regarding the persisting threats posed by aquatic invasive species (AIS), particularly zebra and quagga mussels (ZQM), to the waters and aquatic habitats of British Columbia. AIS pose acute threats to BC's diverse biological landscape while also posing threats of permanent harm and costs to local economies and communities. Harms inflicted by AIS on aquatic resources and communities where ZQM have taken hold are well documented and actions must be taken now to prevent these harms in British Columbia.

The threats of AIS that MP Arnold conveyed to Minister LeBouthillier at the Standing Committee on Fisheries and Oceans (FOPO) on October 26, 2023, and threats we have previously conveyed to your predecessors and officials not only persist but have moved closer to BC. In 2016, ZQM larvae were detected in Montana's Tiber and Canyon Ferry reservoirs, and this was the closest to BC that ZQM were detected until September 18, 2023, when the presence of ZQM were confirmed in the Snake River near Twin Falls, Idaho south of British Columbia.

In 2019, the Commissioner of the Environment and Sustainable Development (CESD) released her audit report that concluded that the Department of Fisheries and Oceans (DFO) and the Canada Border Services Agency (CBSA) had not taken the steps required to prevent AIS from becoming established in Canada's waters despite commitments to do so over the years. The Commissioner also found that the *Aquatic Invasive Species Regulations* were not adequately enforced, partly because of the DFO's and the CBSA's failures in equipping and training fishery officers and border services officers with the means to prevent aquatic invasive species from entering Canada. We encourage you to read the Commissioner's report.

We have repeatedly pressed your government for federal resources dedicated to AIS prevention to be allocated equitably across Canada because doing so would increase protection for BC's water as the threats of AIS increase. At the time when the CESD report was released in 2019, DFO was allocating 2% of federal funding for AIS activities to Pacific Region and by 2021-22 this figure dropped to 1.75%. This inequitable distribution leaves the large geographic area and ecologies and economies in BC and the Pacific Region at risk.

The Government of British Columbia's Invasive Mussel Defense Program (IMDP) is an essential and effective means of protecting BC's waters from ZQM and the DFO is a funding partner of the program. However, since 2019, as your government has cut funding for AIS prevention in BC, the capacities and work of the IMDP have been severely reduced as the number of inspection stations declined by 50% and inspectors working at the stations declined by 33%.

1

Item No.	Agenda item	Time
2.iii	Correspondence	9:45

From 2019 through the summer of 2023, these funding reductions to BC correlated with reductions in the operating hours of remaining inspection stations and a 68% reduction in the total number of watercrafts inspected, a 90% reduction in identifications of high-risk watercraft, and a 54.5% reduction in the number of mussel-fouled watercraft prevented from entering BC. These reductions occurred during a period when the number of visitors to BC, including those with watercraft, increased.

Ministers, the threats that AIS, especially ZQM, pose to British Columbia cannot be overstated. We have witnessed the ecological and economic costs and destruction that ZQM have caused as they have proliferated from Lake St. Clair across North America since 1988. Earlier this year, the Government of British Columbia's report titled *"Potential Economic Impact of Zebra and Quagga Mussels in B.C."* concluded that introduction of ZQM to BC would precipitate new annual costs of up to \$129 million for the province.

We know that mandatory watercraft inspections such as those carried out at BC's borders by CBSA and BC's IMDP program are essential means of protecting BC's waters from ZQM and these prevention activities that your departments are already involved in must be strengthened.

Ministers, if your government is serious about protecting aquatic habitats for fish, especially Pacific salmon, and serious about conserving biodiversity and natural ecosystems, then you must act now to establish equitable allocation of federal resources for AIS prevention in British Columbia and establish a requirement for all recreational boaters entering Canada from the United States at ports of entry from Saskatchewan to B.C. with a watercraft to be inspected for high risk Aquatic Invasive Species prior to entering Canada.

Should you wish to discuss this pressing matter, we are happy to meet with you and provide an opportunity for you to connect with AIS prevention experts in British Columbia working tirelessly on the front lines of protecting waters and ecosystems from aquatic invasive species.

We look forward to your response.

Sincerely,



Mel Arnold, M.P.
North Okanagan- Shuswap



Dan Albas, M.P.
Central Okanagan-Similkameen- Nicola



Frank Caputo, M.P.
Kamloops-Thompson-Cariboo



Tracy Gray, M.P.
Kelowna- Lake Country



Rob Morrison, M.P.
Kootenay-Columbia

Cc: Okanagan Basin Water Board
Columbia Shuswap Invasive Species Society
Shuswap Watershed Council
Fraser Basin Council
Okanagan and Similkameen Invasive Species Society

Item No.	Agenda item	Time
2.iv	Correspondence	9:45



Reference: WLRS 32370 | ENV 405396

November 30, 2023

VIA EMAIL: EVieira@fraserbasin.ca

Jay Simpson, Chair
Shuswap Watershed Council
200A – 1383 McGill Road
Kamloops, British Columbia
V2C 6K7

Dear Jay Simpson:

Thank you for your letter of November 2nd, 2023, regarding new measures and more resources needed to prevent an invasion of zebra or quagga mussels to British Columbia (B.C.).

Keeping B.C. waters free of invasive mussels is an ongoing priority for our government. Both the Ministry of WLRS and the Ministry of Environment and Climate Change Strategy (the Conservation Officer Service (COS) in particular) remain committed to the Invasive Mussel Defence Program (IMDP) and its watercraft inspections, enforcement actions, lake monitoring, and education. We will continue to monitor changes in information, knowledge, and threats, as well as collaborate with neighbouring jurisdictions in Canada and the United States (U.S.) to ensure our prevention measures are commensurate to the risks posed by invasive mussels.

We are pleased to provide further information on your Calls to Action below.

Call to Action The IMDP be expanded such that all routes into B.C. from Alberta and the U.S. have a watercraft inspection and decontamination station and that all watercraft coming into B.C. be inspected.

The annual program workplan incorporates ongoing feedback from partners, the public, and jurisdictions across western Canada and the U.S. to ensure funding allocations maximize program effectiveness. Results and lessons learned from previous inspections seasons are available on the [program website](#). The program scope is scalable, and your support for additional resources to expand program operations is appreciated.

Immediately following the announcement of the positive detection of quagga mussels in Idaho, the IMDP triggered operational changes to treat all boats coming from Idaho as high risk. This is consistent with the response plan for boats from any other mussel-positive jurisdiction. There have been no additional positive detections in other parts of the Columbia River Basin through B.C. or neighbouring jurisdictions' monitoring programs.

Page 1 of 3

Ministry of Water, Land and
Resource Stewardship

Ministry of Environment and
Climate Change Strategy

Mailing Address:
PO Box 9367 Stn Prov Govt
Victoria, BC V8W 9M3

Item No.	Agenda item	Time
2.iv	Correspondence	9:45

IMDP program staff are working with Canadian Border Services Agency (CBSA) regarding the critical importance of coverage at the U.S. - Canada border crossings. IMDP staff are currently supporting the Federal Government's border management by following up with each notification from CBSA and conducting necessary inspections and decontaminations when required.

Call to Action: Introduce 'pull-the-plug' legislation, requiring all watercraft to have their drain plugs removed prior to travelling on B.C. roads.

Regulatory tools to enforce Clean, Drain, Dry, such as Pull the Plug legislation has been identified for consideration in the current *Wildlife Act* review. We encourage recommendations to be submitted through the *Wildlife Act* review process (WildlifeActReview@gov.bc.ca).

Call to Action: Update the provincial Early Detection, Rapid Response plan (EDRR) (published February 2015).

A review and update of the EDRR is currently underway. The update will include reviewing available tools for invasive mussel response, containment, and control. Program staff (Martina Beck) traveled to Idaho to observe the quagga mussel response and treatment firsthand. This was a unique learning opportunity, and it will be used to inform the plan update. In addition, the IMDP is exploring next steps for rapid response training and exercises with our U.S. counterparts in the Columbia River Basin. This was chosen as the initial action area, as these partners have been running rapid response exercises for many years, and the IMDP can learn from their experience.

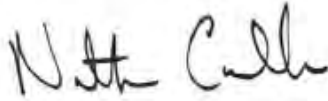
Call to Action: Advocate for new containment measures in Manitoba and Ontario which already have Zebra and Quagga Mussel (ZQM) infestations.

A central principle to the IMDP is perimeter defence. In 2016, B.C. signed the Interprovincial Territorial Agreement for Coordinated Regional Defence Against Invasive Species. Through this agreement, B.C. regularly collaborates with Alberta, Yukon, Saskatchewan, and Manitoba on enhanced coordination for preventing and managing aquatic invasive species. Collectively, western Canada jurisdictions are united that ZQM's are the top Aquatic Invasive Species priority. As a result, we coordinate our actions and communications with each other and key partners including the Federal Government. Collectively, our priorities include supporting containment efforts in Manitoba (and other jurisdictions) who are at the forefront of mitigating the spread and inspecting/decontaminating high risk watercraft. These measures will further strengthen the perimeter defence approach that will help protect B.C.'s freshwater ecosystems.

Again, thank you for raising your concerns, and highlighting the importance of the IMDP. We appreciate the continued support and advocacy provided by the Shuswap Watershed Council regarding invasive mussel prevention in B.C.

Item No.	Agenda item	Time
2.iv	Correspondence	9:45

Sincerely,



Nathan Cullen
Minister
Ministry of Water, Land and
Resource Stewardship



George Heyman
Minister
Ministry of Environment and Climate
Change Strategy

pc: Kelly Greene, Parliamentary Secretary for Fisheries and Aquaculture
Fin Donnelly, Parliamentary Secretary for Watershed Restoration

Item No.	Agenda item	Time
2.v	Correspondence	9:45



COLUMBIA SHUSWAP REGIONAL DISTRICT

555 Harbourfront Drive NE, PO Box 978, Salmon Arm, BC V1E 4P1
T: 250-832-8194 | F: 250-832-3375 | TF: 1-888-248-2773 | www.csr.d.bc.ca

December 4, 2023

Sent by email:

- Honourable Chrystia Freeland, Deputy Prime Minister and Minister of Finance chrystia.freeland@parl.gc.ca
- Honourable Mark Holland, Minister of Health Mark.Holland@parl.gc.ca
- Honourable Soraya Martinez Ferrada, Minister of Tourism Soraya.MartinezFerrada@parl.gc.ca
- Honourable Katrine Conroy, Minister of Finance FIN.Minister@gov.bc.ca
- Honourable Adrian Dix, Minister of Health HLTH.Minister@gov.bc.ca
- Honourable Lana Popham, Minister of Tourism, Arts, Culture and Sport TAC.Minister@gov.bc.ca

Dear Ministers:

Re: Measures and Resources Needed to Prevent an Invasion of Zebra or Quagga Mussels in BC

On behalf of the CSR D Board of Directors, I am writing to convey our concern over a matter that our Board has frequently discussed - a potential invasion of Zebra or Quagga Mussels (ZQM). We urgently request your Ministry's call-to-action and leadership in protecting and safeguarding the water resources in our region.

During the November 16, 2023 CSR D Board meeting, Directors reviewed a letter submitted by the Shuswap Watershed Council. The following resolution was a result of the discussion: the Board write a letter bringing awareness to the prevention of an invasion of Zebra or Quagga mussels in BC and that the letter be sent to the Provincial and Federal Ministers and copied to local regional districts and agencies asking for their support to have all crossings monitored.

The spread of ZQM in BC would have a devastating and irreversible impact to BC's economy; prevention is viewed as the best and most cost-effective option. Should an infestation spread to our local lakes, it would be disastrous for the Southern Interior region of BC, which is a popular tourist destination. As the Shuswap Watershed Council expressed in their November 2, 2023 letter to the Province, that aside from extremely negative effects to the tourism industry, there are serious concerns regarding the damage to local government infrastructure. This includes potential damage to hydro-electric facilities, water utilities and intakes, irrigation infrastructure and food production, in addition to losses to the tourism industry and property values, should an aquatic invasive mussel infestation occur in BC.

A ZQM infestation would not only have a significant negative economic impact, but it would also have far-reaching consequences on tourists and property owners. The lake ecosystem and the pleasure that locals and visitors alike gain from the lakes cannot be quantified in monetary terms.

With respect to proactively preventing the spread of mussels in BC, without unfavourable and significant impact to the tourism industry or local infrastructure, we ask for your support to have all crossings into BC monitored.

ELECTORAL AREAS

A GOLDEN-COLUMBIA
B REVELSTOKE-COLUMBIA

C EAGLE BAY-WHITE LAKE-TAPPEN
D FALKLAND-SALMON VALLEY

E SICAMOUS-MALAKWA
F NORTH SHUSWAP-SEYMOUR ARM
G BLIND BAY-SORRENTO-NOTCH HILL

MUNICIPALITIES

GOLDEN
REVELSTOKE

SALMON ARM
SICAMOUS

Item No.	Agenda item	Time
2.v	Correspondence	9:45

Meaningful Provincial involvement is necessary and requires the involvement of Provincial staff with decision-making, compliance, and enforcement authorities. We ask that the Province commit statutory decision-makers and executive-level staff to collaboratively address cross-jurisdictional issues which impact the health of the province's water systems.

Given the urgency of the situation, the CSRD wants to ensure an ongoing coordinated response and trust our request for funding is seriously considered and that continuous coordinated actions between the government, regional districts and municipalities in BC are implemented.

We look forward to collaborating with you to protect BC's waters from invasive mussels.

Yours truly,
COLUMBIA SHUSWAP REGIONAL DISTRICT
 Per:


 Kevin Flynn
 Board Chair

KF/jf

cc: Shuswap MLA Greg Kylo
 North Okanagan Shuswap MP Mel Arnold
 Adams Lake Indian Band
 Skwílax te Secwepemcúlecw
 Neskonalith Indian Band
 Splatshin
 City of Salmon Arm
 District of Sicamous
 Shuswap Watershed Council
 Okanagan Basin Water Board
 Columbia Basin Trust
 Columbia Shuswap Invasive Species Society
 Thompson-Nicola Regional District
 Regional District North Okanagan
 Regional District of Okanagan-Similkameen
 Regional District Central Okanagan
 Thompson Okanagan Tourism Association
 Shuswap Chambers of Commerce: Salmon Arm, Sicamous, South Shuswap, North Shuswap

Item No.	Agenda item	Time
2.vi	Correspondence	9:45



THOMPSON-NICOLA
REGIONAL DISTRICT
The Region of BC's Best

300-465 Victoria Street
Kamloops, BC V2C 2A9
Tel: 250-377-8673
Toll Free in BC: 1-877-377-8673
Email: admin@tnrd.ca

Department: Board of Directors

December 6, 2023

Honourable Nathan Cullen
Minister of Water, Land and Resource Stewardship
Via email: WLRSMinister@gov.bc.ca

The Honourable George Heyman
Minister of Environment and Climate Change Strategy
Via email: ENV.Minister@gov.bc.ca

Dear Ministers;

Subject: Measures and resources required to prevent invasion of Zebra and Quagga Mussels

Please accept this letter as confirmation of Thompson-Nicola Regional District Board of Directors support of the requests noted in the attached letter sent you to from the Shuswap Watershed Council.

While neither the Zebra or Quagga mussels have been found in BC lakes or waterways the presence of these invasive species in Idaho have heightened concerns of imminent spread into British Columbia if mitigation measures are not put in place.

Visitors from other Canadian Provinces and the United States flock to our region to enjoy some of the most pristine lakes and waterways in North America, thus fueling tourism as a major economic driver for the entire Regional District. The invasion of Zebra or Quagga mussels and the recorded damage they can cause to potable water, irrigation and hydro electric infrastructure will result in a profound negative effect on the economy and the quality of life of the residents of the TNRD, its member municipalities and the Indigenous communities within our areas.

We respectfully request that your Ministry staff work towards enacting measures and implementing strategies to mitigate the spread of these invasive species into our lakes and waterways.

Yours truly,

Barbara Roden, Chair
Thompson-Nicola Regional District

Encl. Shuswap Watershed Council letter dated November 2, 2023

MUNICIPALITIES: Ashcroft | Barriere | Cache Creek | Chase | Clearwater | Clinton
Kamloops | Logan Lake | Lytton | Merritt | Sun Peaks

ELECTORAL AREAS: "A" "B" "C" "D" "E" "F" "G" "H" "I" "J" "K" "L" "M" "N" "O" "P"

www.tnrd.ca

Item No.	Agenda item	Time
2.vii	Correspondence	9:45



c/o Fraser Basin Council
200A – 1383 McGill Road
Kamloops, BC V2C 6K7
250.314.9660
www.shuswapwater.ca



Hon. Nathan Cullen
BC Minister of Land, Water and Resource Stewardship
LWRS.Minister@gov.bc.ca

Hon. George Heyman
BC Minister of Environment & Climate Change Strategy
ENV.Minister@gov.bc.ca

MLA Kelly Greene
Parliamentary Secretary for Fisheries and Aquaculture
Kelly.Greene.MLA@leg.bc.ca

MLA Fin Donnelly
Parliamentary Secretary for Watershed Restoration
Fin.Donnelly.MLA@leg.bc.ca

2 November 2023

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

Dear Ministers,

I am writing on behalf of the Shuswap Watershed Council to express our extreme concern once again about the threats posed by invasive Zebra and Quagga Mussels (ZQM) to BC waters. Our concern has only heightened in recent months with the release of the economic impact report¹ and with the recent discovery of Quagga Mussels in the Snake River at Twin Falls, Idaho. We are calling upon your Ministries to respond with urgency and with new measures to prevent a potentially catastrophic spread of invasive mussels to the Shuswap and to BC.

The Shuswap truly is a treasure, and so much will be lost if ZQM were to establish here. The cost of dealing with a ZQM infestation is now estimated at \$64 - \$129 million annually in BC. The economic impact report shows that every major population centre and agricultural region in the province is at risk of a moderate-to-high infestation based on water chemistry, and that there will be impacts to hydro-electric facilities, water treatment facilities and water intakes, irrigation infrastructure and food production, and losses to tourism and property values. This would be a huge burden to tax payers and property owners, yet that number doesn't take into account priceless attributes unique to the Shuswap such as the lake ecosystem or enjoyment of the lakes and beaches by residents and visitors.

¹ Potential Economic Impact of Zebra and Quagga Mussels in BC. BC Ministry of Water, Land and Resource Stewardship. May 2023.

Item No.	Agenda item	Time
2.vii	Correspondence	9:45



Fortunately, BC is still invasive mussel-free but with the newest detection in Idaho – with which we share a border and the trans-boundary Columbia River system – many of us are concerned that it's not a matter of *if*, but *when* invasive mussels will spread to BC if new prevention measures aren't put in place.

We are very appreciative of the good work done by Conservation Officers and Provincial staff on watercraft inspection. Additionally, there are several organizations in BC including ourselves working to educate watercraft owners about the importance of 'Clean-Drain-Dry'.

However, we are quite concerned about gaps in the Invasive Mussel Defence Program (IMDP). Additionally, there are other measures that could be enacted by the Province to stop the spread of invasive mussels. I would like to re-iterate our calls-to-action² for your Ministries to better protect the Shuswap – and all of BC – from invasive mussels:

1. 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 and that all watercraft coming into BC be inspected. Staffing at the inspection stations should be increased so that the stations can be operational year-round, 24 hours/day. It will take just a single infested watercraft launching into BC waters to start a new population of invasive mussels here. Every year, infested watercraft arrive at our Provincial borders³. The IMDP is the first line of defense to protect BC's waters, but in 2022 and 2023 there were only six permanent stations and two roving stations set up around the Provincial border⁴. 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.

2. Introduce 'pull-the-plug' legislation, requiring all watercraft to have their drain plugs removed prior to travelling on BC roads.

3. Review and update the *Provincial ZQM Early Detection and Rapid Response Plan for British Columbia* (published February 2015). As part of this, 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 and quarantine exercise on a BC lake.

4. 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.

² These calls-to-action were previously stated in a letter to the Ministry (WLRS) in November 2022.

³ The IMDP Final Report for 2022 reported that 13 watercraft entering BC were confirmed to have adult invasive mussels; the 2023 Summer Status Report reported that 10 watercraft entering BC were confirmed to have adult mussels (this is not a year-end statistic).

⁴ Since 2020, the number of watercraft inspection stations has declined significantly; in 2019 and 2020, the IMDP had a peak level of 12 inspection stations.

Item No.	Agenda item	Time
2.vii	Correspondence	9:45



We have previously shared our concerns, and these calls-to-action, with the Ministers' offices and with your federal counterparts on several occasions. Unfortunately, we have not been satisfied with the responses we have received from provincial and federal offices to-date. Furthermore, we are not alone in our concerns and requests: in addition to our own calls-to-action, we are in support of recent correspondence and calls-to-action sent to you by our fellow stewards in the Okanagan, the Okanagan Basin Water Board⁵.

The threat of invasive mussels will not go away. Every year, mussels get closer and closer to BC. More action and resources are urgently and immediately needed from the Province – who has the responsibility and mandate for invasive species – to prevent the spread of ZQM into BC. The investment to expand the Provincial IMDP and enact new measures is well worth it to protect our waters and would be a small fraction of the cost of dealing with the impacts of a ZQM invasion.

We would be pleased to meet with you to further discuss these requests and how we can work together to better protect BC's waters from invasive mussels.

Sincerely,

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

CC:

- Shuswap MLA: Greg Kylo
- North Okanagan – Shuswap MP and Associate Shadow Minister for Fisheries, Oceans and the Coast Guard: Mel Arnold
- Shadow Minister for Water, Land and Resource Stewardship: Lorne Doerkson
- Shadow Minister for Environment and Climate Change Strategy: Renee Merrifield
- Columbia Shuswap Regional District Chair: Kevin Flynn
- Thompson-Nicola Regional District Chair: Barbara Roden
- Regional District of North Okanagan Chair: Kevin Acton
- Secwepemc Kikpi7s: Lynn Kenoras-Duck Chief (Adams Lake Indian Band), James Tomma (Skwix te Secwepemculecw), Irvine Wai (Neskonlith), and Megan Nicholas, Executive Secretary (Splatsin)
- Shuswap Mayors: Alan Harrison (Salmon Arm), Colleen Anderson (Sicamous), David Lepsoe (Chase)
- Okanagan Basin Water Board Chair: Sue McKortoff
- Shuswap Waterfront Owners Association
- Columbia Shuswap Invasive Species Society
- Thompson Okanagan Tourism Association
- Shuswap Chambers of Commerce: Salmon Arm, Sicamous, South Shuswap, North Shuswap

⁵ "Call for immediate action to prevent invasive mussels introduction to BC". Letter sent by Okanagan Basin Water Board to Provincial Ministers (WLRS and ENV), October 18th, 2023.

Item No.	Agenda item	Time
2.viii	Correspondence	9:45



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

Courtney Zimmerman
Corporate Director, Environmental Public Health
Interior Health
Sent by e-mail to courtney.zimmerman@interiorhealth.ca

8 November 2023

Re: Algal bloom recommendations and responsibilities

Dear Ms. Zimmerman,

We are writing to you on behalf of the Shuswap Watershed Council (SWC), the City of Salmon Arm, the Columbia Shuswap Regional District (CSRD), the District of Sicamous, and the Village of Chase to thank you for the joint meeting on May 5th to discuss algal bloom response. While we appreciate the time you took to speak with us, we want to let you know that we remain unsatisfied with recent changes to algal bloom recommendations and responsibilities.

Over recent years, responsibilities for monitoring water quality at beaches for the assurance of public health has shifted to local governments. New recommendations, as explained to us in the meeting on May 5th, are now placed upon local government to collect water samples from our respective managed beaches on a weekly basis to be tested for the presence of harmful algae. Furthermore, local governments are now being asked to interpret the results of water tests (with support from IH staff) and potentially decide to post a cautionary advisory at beaches impacted by algae.

We completely agree with the need for regular water quality monitoring at beaches and alerting beach-goers to potential risks associated with harmful algae. However, we disagree with this responsibility being placed on our organizations. Local governments do not have a health mandate, and these recommendations and responsibilities create significant additional expenses and workload on our staff.

In our view, Interior Health is responsible for monitoring and communications where public health is concerned. Our suggestions from our January 2023 letter remain the same:

- IH should be the lead agency for monitoring beach water quality and algal blooms. This includes the collection and analysis of water samples, and posting advisories based on the results of water tests.
- IH should be the lead agency for communicating to the public about algal blooms. There is a great demand for this information, and several platforms should be considered including websites, social media, and news media. Local governments and the Shuswap Watershed

Item No.	Agenda item	Time
2.viii	Correspondence	9:45



Council can amplify these communiques through their social media platforms to help increase the reach.

- Advisory notices should state the location of the algal bloom as precisely as possible, and be updated regularly to reflect changing conditions.
- IH staff should be available to respond to inquiries about algal bloom advisories. Having a staff person on-call on weekends would be very beneficial for providing clarifying information about advisories.

We thank you for your consideration of these recommendations and for the ongoing cooperation with Interior Health.

Sincerely,

Jay Simpson
Chair, Shuswap Watershed Council
250 517-9578 | jsimpson@csrd.bc.ca

Alan Harrison
Mayor, City of Salmon Arm
250 803-4034 | aharrison@salmonarm.ca

Kevin Flynn
Chair, Columbia Shuswap Regional District
250 804-8342 | boardchair@csrd.bc.ca

Colleen Anderson
Mayor, District of Sicamous
250 517-7820 | canderson@sicamous.ca

David Lepsoe
Mayor, Village of Chase
250 679-3238 | david.lepsoe@chasebc.ca

www.shuswapwater.ca



Item No.	Agenda item	Time
2.ix	Correspondence	9:45



c/o Fraser Basin Council
 200A – 1383 McGill Road
 Kamloops, BC V2C 6K7
 250.314.9660
www.shuswapwater.ca
 Facebook, Instagram, Twitter, YouTube icons

Hon. Diane Lebouthillier
 Minister of Fisheries, Oceans, and the Canadian Coast Guard
 House of Commons
 Ottawa, ON
 Sent by e-mail to DFO.Minister-Ministre.MPO@dfo-mpo.gc.ca

Hon. Dominic LeBlanc
 Minister of Public Safety, Democratic Institutions, and Intergovernmental Affairs
 House of Commons
 Ottawa, ON
 Sent by e-mail to IGA.Minister-Ministre.AIG@pco-bcp.gc.ca

Hon. Pablo Rodriguez
 Minister of Transport
 House of Commons
 Ottawa, ON
 Sent by e-mail to TC.MinisterofTransport-MinistredesTransports.TC@tc.gc.ca

28 November 2023

Re: Urgent need to prevent the spread of invasive mussels to British Columbia

Dear Ministers,

I am writing to you on behalf of the Shuswap Watershed Council (SWC) to express our extreme concern once again about the potential for invasive Zebra and Quagga Mussels (ZQM) to spread to British Columbia waters. BC does not presently have any known infestations of these invasive mussels. An introduction of them would have devastating ecological and economic impacts to the Shuswap watershed, to BC, and all of Western Canada. Our concern has heightened with the recent discovery of Quagga Mussels in the Snake River at Twin Falls, Idaho. We are calling upon your Ministries to respond with urgency and with new measures to prevent a potentially catastrophic spread of invasive mussels to the Shuswap and to BC.

First and foremost, we ask that you issue immediate direction to all Canada Border Service Agency locations in Western Canada (BC, Alberta, Saskatchewan) that all watercraft entering Canada in that region be inspected for invasive mussels following Provincial protocols.

Secondly, we request that more federal funding be allocated to British Columbia specifically for preventing the spread of invasive mussels. A new federal investment in BC could go toward the following:

- Expansion of the Provincial watercraft inspection program that's operated by the BC Conservation Officer Service to allow for the establishment of more inspection stations and longer hours and seasons of operation. We are very appreciative of the good work done by Conservation Officers and Provincial staff on watercraft inspection, however there are significant gaps in this defense and

Item No.	Agenda item	Time
2.ix	Correspondence	9:45



we are very concerned that watercraft infested with invasive mussels will enter BC via an unchecked route or outside of station operating hours.

- New measures to ensure aircraft (i.e., floatplanes) aren't transporting aquatic invasive species
- Early detection monitoring programs. These are already underway in BC by regional groups and the Province of BC. Federal funding would allow these programs to expand.
- Education and outreach. Campaigns are already underway in BC, including "Clean-Drain-Dry" and "Don't Move a Mussel". Federal funding would allow these programs to expand.

Thirdly, we ask that the Department of Fisheries and Oceans take stronger action on containing mussel infestations where they exist in Manitoba, Ontario, Quebec and the Maritimes. The *Aquatic Invasive Species Regulation* of the Federal Fisheries Act must be fully implemented, including existing prohibitions against possession, transportation, release, and introduction of aquatic invasive species. Prevention efforts in the west must be met with robust measures for containment in eastern and central Canada. Simply put, no watercraft should be able to leave lakes or rivers known to have ZQM infestations without being inspected, decontaminated, and issued a quarantine period if necessary.

Ministers, we have shared our concerns with your predecessors through previous correspondence on several occasions. Unfortunately, we feel that the federal government still has not taken sufficient action on this issue, nor has it provided equitable federal funding to British Columbia to stop the spread of ZQM. A report on Aquatic Invasive Species by the Commissioner of the Environment and Sustainable Development (April 2019) notes that Zebra mussels are "one of the most destructive invasive species ever to have invaded North American fresh waters..." and the report is consistent with our concerns about the lack of urgency and intervention by the Department of Fisheries and Oceans. Additionally, a report from the Standing Committee on Fisheries and Oceans (July 2019) found that the federal government's protection of Canadian lakes and waterways against aquatic invasive species is inadequate. We urge you to review those reports and take immediate action.

Zebra and Quagga mussels would cause devastating impacts to the Shuswap watershed, an important nursery watershed for Pacific salmon. Many aspects of the lake environment will be negatively affected. The economy is also greatly at risk: the Province of BC released a report in May this year estimating an annual cost of \$64 – 129 million in BC to deal with ZQM infestations. The time to act is now. We call upon the Government of Canada to take a more active and invested role to defend BC's waters against ZQM. We would be pleased to meet with you to discuss any of the above-mentioned requests. Thank you for your attention to this matter.

Sincerely,

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

Item No.	Agenda item	Time
2.ix	Correspondence	9:45



CC:

- Shuswap / Okanagan / Thompson / Kootenay / Columbia MPs: Mel Arnold, Dan Albas, Frank Caputo, Tracy Gray, Rob Morrison, Richard Cannings
- Shuswap MLA: Greg Kylo
- Columbia Shuswap Regional District Chair: Kevin Flynn
- Thompson-Nicola Regional District Chair: Barbara Roden
- Regional District of North Okanagan Chair: Kevin Acton
- Secwepemc Kukpi7s: Lynn Kenoras-Duck Chief (Adams Lake Indian Band), James Tomma (Skwlaw te Secwepemculecw), Irvine Wai (Neskonlith), and Megan Nicholas, Executive Secretary (Splatshin)
- Shuswap Mayors: Alan Harrison (Salmon Arm), Colleen Anderson (Sicamous), David Lepsoe (Chase)
- Okanagan Basin Water Board Chair: Sue McKortoff
- Shuswap Waterfront Owners Association
- Columbia Shuswap Invasive Species Society
- Thompson Okanagan Tourism Association
- Shuswap Chambers of Commerce: Salmon Arm, Sicamous, South Shuswap, North Shuswap

Item No.	Agenda item	Time
3.i	Old business: draft summary of the Shuswap Water Protection Advisory Committee meeting, November 22 nd 2023	9:50

Water Protection Advisory Committee Meeting
Wednesday November 22nd, 2023 • 10:30 AM – 12:00 PM
Online Meeting

Draft meeting summary as at November 22, 2023

Meeting objectives

1. Updates to grant program guidelines
2. Updates on existing funded projects
3. Information sharing

Attendance (committee members)

Carolyn Farris, Horse Council BC
 Robyn Laubman, Splatstn te Secwepemc (Joined at 11am)
 Carly Foster, Ministry of Environment & Climate Change Strategy
 Dennis Einarson, SWC Senior Scientific Advisor
 Dan Gietema, Dairy Farmer
 Marge Sidney, Gardom Lake Stewardship Society
 Lindsay Benbow, Ministry of Agriculture and Food
 Kevin Skrepnek, Thompson-Nicola Regional District

Staff

Alex de Chantal, Shuswap Watershed Council c/o Fraser Basin Council
 Erin Vieira, Shuswap Watershed Council c/o Fraser Basin Council

Meeting Outcomes

1. Grant program updates received by committee and feedback on the grant program provided to staff.

Summary of discussions, decisions and action items

1. Welcome, Introductions, Agenda and Objectives

Alex de Chantal welcomed everyone to the meeting and a round of introductions took place. Secwepemc territory was acknowledged. Alex reviewed the agenda and objectives for the meeting.

2. Previous Meeting Summary

Alex reviewed the meeting summary from February 9th, 2023. Alex briefly reviewed the draft summary of the last WPAC meeting held in February 2023. No action items were noted from that meeting. The draft summary was approved with no changes.

3. Updates to Application Process

Alex introduced the 2024 Water Quality Grant Program. It will be open for applications at the beginning of December. Alex relayed that staff are introducing an online application to the grant program. Dennis commented that applicants need to know the eligibility requirements; Alex replied that there will be a Program Guide accompanying the application process that describes all the program goals and eligibility requirements, etc.

Item No.	Agenda item	Time
3.i	Old business: draft summary of the Shuswap Water Protection Advisory Committee meeting, November 22 nd 2023	9:50

Alex reviewed the evaluation criteria for the grant program, which have been slightly revised considering input from the WPAC and from the Shuswap Watershed Council members.

In the past, applications were evaluated and scored objectively by the Water Protection Advisory Committee based on the following scoring guide:

- Technical merit of what is proposed and likelihood to achieve outcomes **(25%)**
- Location and proximity of the project to a water body (creek, river, or lake) **(25%)**
- Scale and scope of project **(20%)**
- Leveraging of other funds or in-kind donation of labour, equipment or material beyond the minimum of 50% **(10%)**
- New applicants, not previous recipients **(10%)**
- Clarity and completeness of proposal **(10%)**

The following changes were approved by the Shuswap Watershed Council:

- Technical merit of what is proposed and likelihood to achieve outcomes **(30%)**
- Location and proximity of the project to a water body (creek, river, or lake) **(20%)**
- Scale and scope of project **(30%)**
- Leveraging of other funds or in-kind donation of labour, equipment or material beyond the minimum of 50% **(10%)**
- ~~New applicants, not previous recipients (10%)~~
- Clarity and completeness of proposal **(10%)**

Alex announced that the grant fund has \$55,000 available; however, the SWC is meeting ~~next~~ in December and they will discuss and vote on increasing the grant fund budget. If the SWC supports an increase to the grant fund budget, it would be effective for 2024.

Alex introduced a [new tool](#) to support the grant program. CSRD staff have kindly developed a map tool for prospective applicants to determine if they are located in the Shuswap watershed. Applicants can simply navigate to the map tool online and enter their address, and the map tool will ~~say~~ determine if the address is in the Shuswap watershed. Alex noted his thanks to staff at CSRD for developing this tool.

4. Update on 2023 funded projects

Project	Project type	SWC \$	Status
Rivershore Nursery	Fertilizer and irrigation reduction	\$6,235	Mycorrhizal purchased and applied. Cover crops planted. Irrigation project in progress. Agrologist consultation complete. Final report in progress.
Crystal Lake Ranch (Werner and Jody Stump)	Livestock control fencing along Eagle River	\$14,325	Brushing complete, off-stream waterers purchased. Final report in progress.
Shuswap Organics	Cover crops and no-till	\$6,000	Interim report received, final report in progress.
Fresh Valley Farms	Automated pastured-livestock management.	\$20,400	RovaBarn received, final report in progress.
Iron Horse Ranch	Farmland revitalization – fencing and off-stream livestock watering	\$6,044	Environmental Farm Plan complete. Fencing complete, off-stream waterers installed. Final report received.

Item No.	Agenda item	Time
3.i	Old business: draft summary of the Shuswap Water Protection Advisory Committee meeting, November 22 nd 2023	9:50

5. Additional Funding Opportunities

Alex reviewed a list of other potential funding sources for agriculture and water quality projects. Staff have developed a long list of funding sources to assist applicants find matching funding. Committee members suggested new funding sources and links were added to the grant program guidelines.

6. Other items, next steps

Erin reviewed the new, updated *Nutrients and Water Quality Research Summary Report*. The report now summarizes two research projects done by a team at UBC Okanagan to better understand the modern-day and historic nutrient inputs to Shuswap and Mara Lakes. The report is available on www.shuswapwater.ca. Committee members are encouraged to review the report if they haven't already.

Committee members had the following ideas for promoting the grant program:

Chambers of Commerce

Thompson-Nicola Conservation Collaborative

Community Futures groups, Salmon Arm Ec. Dev. Society

Arts group working on a Shuswap watershed quilt

Groups and channels opening up post-wildfire and disaster relief.

Robyn reported that Wilsey Dam on the middle Shuswap River is being considered for de-commissioning and as part of that, BC Hydro who operated the dam will need a strategy for dealing with the sediment that has built up above the dam over the years.

Next Meeting

Alex will send out Doodle poll in advance to find a date that works for majority, targeting mid to late February 2024. Main agenda item will be to review grant applications. Will look to book an in-person meeting, Robyn offered up space at the Splatins Community Centre.

Meeting Adjourned at 11:30am.

Item No.	Agenda item	Time
3.ii	Old business: draft summary of the Shuswap Water Monitoring Group meeting, November 28th 2023	9:50

**Shuswap Water Quality Monitoring Group
November 28th, 2023 • 10:30 - 12:00 PM
Virtual meeting held via Zoom**

Draft meeting summary as at December 4th, 2023

Attendance

Marge Sidney – Gardom Lake Stewardship Society
Patrick Frank – White Lake Residents Association
Gary Winram – White Lake Residents Association
Colan Morrow – District of Sicamous
Hamish Kassa – Columbia Shuswap Regional District
Diana Tesic-Nagalingam – Interior Health Authority
Lucie Thomson – BC Ministry of Water, Land & Resource Stewardship
Carly Foster – BC Ministry of Environment & Climate Change Strategy
Scott Beppe – Columbia Shuswap Regional District
Tricia Brett – Regional District of North Okanagan
Priscilla Cheung – First Nations Health Authority
Robyn Hooper – Columbia Shuswap Invasive Species Society
Mike Sokal – BC Ministry of Environment & Climate Change Strategy
Kevin Skrepnek – Thompson-Nicola Regional District
Liz Freyman – BC Ministry of Environment & Climate Change Strategy

Staff

Alex de Chantal – SWC staff c/o Fraser Basin Council
Erin Vieira – SWC staff c/o Fraser Basin Council

1. Welcome and introductions

Alex welcomed all present and acknowledged Secwepemc Territory. A round of introductions took place. Alex reviewed the meeting agenda.

2. Meeting summary from February 15th, 2023

Alex briefly reviewed action items from the February meeting summary. Carly Foster relayed that efforts to find a report regarding water quality after a dominant-salmon return has yet to be found. The meeting summary was approved.

3. Group discussion: wildfires and water quality

Alex inquired if anyone in the meeting has any comments on the effects of the summer's wildfires on water quality or plans for post-wildfire monitoring. Patrick said he is part of a Shuswap wildfire recovery team; he asked if there is a Provincial wildfire team assembled. Mike Sokal replied there isn't anything planned specifically to monitor impacts of wildfire however there is a long-term monitoring location in the lower reach of Shuswap Lake that will allow for the detection of changes in the lake. He further

Item No.	Agenda item	Time
3.ii	Old business: draft summary of the Shuswap Water Monitoring Group meeting, November 28th 2023	9:50

commented that an influx of nutrients is typically associated with forest fires due to the soils becoming hydro-phobic and rainwater washing surface soils away. These effects could be observed from early spring to late summer. Lucie also commented that there is federal-provincial monitoring site on the Thompson River at Spence's Bridge.

4. White Lake Residents Association (WLRA) water monitoring update

Patrick reported that a Level 3 monitoring program is being carried out on White Lake with support from BC Lake Stewardship Society and the Ministry of Environment. Three years of monitoring the Level 3 program is nearly complete, which includes water chemical analyses. The WLRA is awaiting a summary from Lucie Thomson. The data has been entered into the Provincial Environmental Monitoring System (database). WLRA is interested in reverting to a Level 1 monitoring program when the Level 3 program is complete. WLRA is willing to support other nearby communities in the Shuswap carry out a Level 3 program if there is interest – WLRA has equipment and expertise to share.

Lucie reported that the Ministry has a website, [B.C. Lake Monitoring Portal](#), click on a site to learn more and access information including:

- detailed monitoring reports written in partnership with the [B.C. Lake Stewardship Society](#)
- lake depth, elevation, and surface area
- bathymetric maps
- data summary and download from the [B.C. Environmental Monitoring System](#)

Patrick reported that the WLRA is hosting a community meeting on January 17th which will feature a presentation from Lucie on water quality.

5. Group discussion: 2023 water quality monitoring

Alex reviewed a spreadsheet of water monitoring throughout the Shuswap watershed. All committee members gave a brief report on their 2023 monitoring programs. The spreadsheet was updated as needed. Key changes are also noted here:

- Carly Foster noted that Water Quality Objective attainment monitoring began at Sandy Point in 2023. Uncertain if this will be an annual monitoring program.
- There is historic water quality data for White Creek and Tappen Creek collected by the Ministry but uncertain if it is summarized in a report. Erin commented that the Shuswap Watershed Council is interested in this as it is an impacted area of the watershed (Tappen Bay, Salmon Arm Bay impacted by algal blooms recently).
- Tricia Brett commented that RDNO provides funding to community groups for water quality monitoring in the upper Shuswap River watershed. The groups carry out the monitoring and house the data themselves (RDNO does not have the data).
- Hamish reported that an algal bloom was reported in Sunnybrae, but water sampling did not reveal any cyano-toxins that would be associated with a blue-green algae bloom.
- Colan reported that the District of Sicamous started monitoring for oil and grease in their water intake system.
- Robyn relayed that the BC Conservation Officers intercepted invasive mussel-fouled watercraft this summer. In one such instance, a trained sniffing dog detected Zebra mussels on a boat travelling to BC from Ontario. Robyn also relayed that the Province of BC released an economic report on the impacts of Zebra & Quagga Mussels (ZQM) to BC. It is estimated that it will cost up

Item No.	Agenda item	Time
3.ii	Old business: draft summary of the Shuswap Water Monitoring Group meeting, November 28th 2023	9:50

to \$129 million to property owners, business owners and taxpayers in BC to deal with the impacts of invasive ZQM. The economic report can be found on the Province's website here: https://www2.gov.bc.ca/assets/gov/environment/plants-animals-and-ecosystems/invasive-species/invasive-mussels/zqm_economic_report_2023_05_26_final.pdf. Robyn relayed her thanks to the Shuswap Watershed Council for their support of early detection monitoring for ZQM in the Shuswap and for their advocacy work with senior orders of government for more action and resources to stop the spread of ZQM to BC.

Action item:

RDNO staff to provide details for Upper Shuswap River and tributaries monitoring (Fairy Creek, Cherry Creek).

6. Floating Treatment Wetlands research project

Erin relayed that a student pursuing her Master's degree, Margot Webster, approached her a few months ago to let her know of a research project on the efficacy of 'floating treatment wetlands' taking place on the Salmon River / Salmon Arm Bay next year. A floating treatment wetland (FTW) is a constructed wetland analog that can be installed in a waterbody to perform many of the same function as a natural wetland, including water purification and nutrient uptake. Margot plans to install three FTWs in the Salmon River / Salmon Arm Bay next year and study how many nutrients they take up out of the water. FTWs have the potential to decrease the frequency and severity of algal blooms. Ms. Webster is presenting her research project to the Shuswap Watershed Council at their next meeting on December 13th (taking place via Zoom).

Marge commented that a similar project was done at Logan Lake. She reported that there were variable results. Waterfowl were observed on the mats. Kevin inquired about possible interference of an FTW in a river during flooding season. Erin commented that it's a good question that Margot might be able to answer in her presentation to the SWC in December.

7. Update on SWC initiatives

Erin reported that an updated Nutrients and Water Quality Report is now available, summarizing two phases of water quality research by UBC Okanagan from 2016 – 2021. The report is available on the SWC website, www.shuswapwater.ca. Erin commented that the results of the research led to the creation of the SWC's Water Quality Grant Program, and the emphasis of supporting new and improved nutrient management on Shuswap-area farms to protect water quality.

Alex reported that the SWC Water Quality Grant Program is opening for applications on December 1st. The Shuswap Watershed Council would like to help you keep nutrients on the land and in the soil, and out of surface waters. The purpose of the grant program is to provide financial assistance to farms and other large land holdings for projects to improve nutrient management, and to ultimately reduce the amount of nutrients that wash off or leach out of soils into nearby creeks, rivers, and lakes within the Shuswap watershed. A grant program guide is available on the SWC website, www.shuswapwater.ca. An online application is being introduced this year.

8. Next steps and adjourn

Item No.	Agenda item	Time
3.ii	Old business: draft summary of the Shuswap Water Monitoring Group meeting, November 28th 2023	9:50

Alex announced that the next Water Monitoring Group will meet in mid-to-late February. A doodle poll will go out in January to find a time that suits the majority.

Meeting adjourned at 11:45am.

DRAFT

Item No.	Agenda item	Time
3.iii	Old business: draft summary of the Shuswap Water Monitoring Group meeting, November 28th 2023	9:50

Water Quality Grant Program

The Shuswap Watershed Council Water Quality Grant Program is accepting applications from December 1st 2023 – January 31st 2024.

The Grant Program Guide can be viewed online here:

https://www.fraserbasin.bc.ca/Library/TR_SWC_2/SWC_Grant_Program_GUIDE_2023-2024.pdf

Item No.	Agenda item	Time
3.iv	Old business: item deferred from September 13 th SWC meeting: Water Quality Grant Program budget	9:50

The text below is clipped from a Memo from staff that was included in the September 13th 2023 Shuswap Watershed Council meeting agenda. In summary, staff are recommending an increase to the Water Quality Grant Program budget; however, the September 13th SWC meeting did not meet quorum for financial decisions therefore it was deferred to the December 13th SWC meeting.

Memo to the Shuswap Watershed Council members for the September 13th meeting
Prepared by: Alex de Chantal, Program Manager

[a portion of the Memo follows]

The Water Quality Grant Program budget is currently approved for \$55,000 (in the 2023-24 fiscal year). Increasing the funding amount allocated to the grant program would be a strategic move that could have several benefits. To provide rationalization for an increase, especially considering inflation and the program being oversubscribed in the previous year, consider the following points:

- Inflation has led to an escalation in project costs, adversely affecting the feasibility and scope of water quality improvement initiatives. By increasing the grant program budget, the SWC can mitigate the impact of inflation and provide applicants with the necessary resources to execute their projects successfully.
- The program's oversubscription in the previous year underlines the demands for the Water Quality Grant Program. To meet this demand and enhance the community's capacity to address nutrient management and water quality challenges, an increase in funding is recommended.
- With more funding allocated to the grant program budget, the program can support projects of greater scope and impact. This will enable the SWC to address multiple dimensions of water quality improvement, resulting in more comprehensive and lasting outcomes for the watershed.
- Increased funding allocated to the grant program aligns with the SWC's commitment to the sustainable growth of the watershed. Investing now in water quality initiatives will yield lasting benefits, including improved environmental health, reduced future restoration costs, and a legacy of responsible stewardship.
- Increased funding allocated to the grant program aligns seamlessly with the SWC's strategic objectives of promoting a healthy and resilient watershed. By providing the program with the necessary resources, it demonstrates its commitment to achieving long-term water quality goals.

Considering these rationales, it is recommended that the Shuswap Watershed Council considers increasing the funding allocated to the Water Quality Grant Program by 10 – 20% (for an annual grant program budget of ~ \$60,000 - \$66,000). Doing so will empower the community to take meaningful strides towards preserving and enhancing the water quality in the Shuswap watershed.

Recommended MOTION:

MOTION to increase the Water Quality Grant Program budget by ____.

Item No.	Agenda item	Time
4.i	Report from Program Managers	10:10

Program Managers' report: financial update for the second quarter (April 1st – October 30th 2023)
Prepared by: Erin Vieira

Table 1. Revenue sources (no change from what was presented at September SWC meeting)

Revenue sources	(\$)
2022-23 operational surplus	47,656
2023-23 funds allocated and carried forward to 2023-24 projects	53,004
<i>Per Contribution Agreement:</i>	
CSRD Areas C, D, E, F, G 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	24,025
Habitat Conservation Trust Foundation (confirmed)	0
Total revenue	379,585

Budget and actual expenses shown on next page ...

Item No.	Agenda item	Time
4.i	Report from Program Managers	10:10

Table 2. Budget and actual expenses to end of second quarter (April 1st – September 30th 2023)

Program	Annual budget (\$)			Q1 + Q2 actual expenses (\$)		
	Expenses	Program mgmt. (labour)	Sub-total	Expenses	Program mgmt. (labour)	Sub-total
Water Quality Monitoring Program						
Shuswap Water Monitoring Group	0	7200	7200	0	640.00	640
Water monitoring expenses	21,900	2200	24,100	16,453.08	600.00	17,053.08
Annual Water Quality Report	7200	5800	13,000	8019.51	3760.00	11,779.51
Water Quality Protection Program						
Water Protection Advisory Committee	0	4200	4200	0	853.33	853.33
Water Quality Grant Program	108,464	9800	118,264	26,590.93	4040.00	30,630.93
Wetland Strategy	20,000	4000	24,000	2316.50	3813.33	6129.83
Climate change impact study (with TRU)	3000	600	3600	3000.00	280.00	3280.00
Zebra & Quagga Mussel Prevention Program						
Education and outreach campaigns	33,300	6600	39,900	30,417.11	3760.00	34,177.11
Safe Recreation Program						
Safety campaigns	20,000	10,000	30,000	11,872.20	3880.00	15,752.20
Communications, Public Engagement, & Advocacy						
Communications collateral	3250	6100	9350	2488.62	2400.00	4888.62
Public engagement and media	4150	16,800	20,950	5375.97	10,386.67	15,762.63
Advocacy	0	4200	4200	0	493.33	493.33
Administration						
Council meetings, work planning, staff liaise with Chair and Vice Chair	2600	20,800	23,400	578.88	11,466.67	12,045.55
Financial management and fund development	0	16,700	16,700	0	7626.67	7626.67
Sub-total expenses	223,864	115,000	338,864	107,112.79	54,000.00	161,112.79
Contribution to Operating Reserve			40,721			
Total budget for 2023-24			379,585			

Item No.	Agenda item	Time
4.iii	Report from Program Managers	10:10

Revised Communications budget for 2023-24

Budget: Communications, Public Engagement & Advocacy

	Current		Revised	
	Expenses	Program mgmt. (labour)	Expenses	Program mgmt. (labour)
Communications collateral (no change)	3250	6100	3250	6100
Public engagement and media	4150	16,800	9650 (+ 5500)	17,400 (+600)
Advocacy (no change)	0	4200	0	4200
Sub-total	7400	27,100	12,900	27,700
Contribution to Operating Reserve		40,721		34,621 (- 6100)

The increase to the public engagement and media budget will allow for SWC to place more information (paid advertisements, FAQs, etc.) in the media in the weeks leading up to the re-scheduled CSRD referendum. Doing so will help ensure voters within the CSRD have accurate information about the role and activities of the SWC.

The additional \$6100 to the public engagement and media budget will come from the projected year-end contribution to the operating reserve (surplus).

Re-allocation within Wetland Strategy budget for 2023-24

Budget: Wetland Strategy

	Current		Revised	
	Expenses	Program mgmt. (labour)	Expenses	Program mgmt. (labour)
Wetland Strategy	20,000	4000	18,400 (-1600)	5600 (+1600)

A re-allocation of the Wetland Strategy budget is needed to allow staff to continue managing the project until fiscal year-end. At this time, based on the guidance from the Wetland Committee, staff do not anticipate needing the full \$20,000 budget for expenses however staff have already used the program management budget.

Item No.	Agenda item	Time
5.	Meeting schedule for 2024	10:45

Shuswap Watershed Council meeting schedule for 2024

	Date	Draft agenda	Location
4 th quarter (2023-24)	March 13 th 2024	<ul style="list-style-type: none"> • Election of Chair and Vice Chair • 2024-25 work plan presentation and approval • 2024 Water Quality Grant approvals • Financial and program operations update • New business 	CSRD Boardroom 555 Harbourfront Drive NE, Salmon Arm
1 st quarter (2024-25)	June 12 th 2024	<ul style="list-style-type: none"> • Financial and program operations update • 2023-24 Annual Report presentation • New business 	CSRD Boardroom 555 Harbourfront Drive NE, Salmon Arm
2 nd quarter	September 11 th 2024	<ul style="list-style-type: none"> • Financial and program operations update • New business 	CSRD Boardroom 555 Harbourfront Drive NE, Salmon Arm
3 rd quarter	December 11 th 2024	<ul style="list-style-type: none"> • Financial and program operations update • New business • Meeting schedule for 2025 	Zoom meeting

Meetings take place on a quarterly basis, 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 (555 Harbourfront Drive NE, Salmon Arm) except for the December meeting which is held via Zoom.

Other important dates that will affect some SWC members:

Southern Interior Local Government Association (SILGA) Annual General Meeting and Convention:
April 30th – May 3rd in Kamloops

Federation of Canadian Municipalities (FCM) Annual Conference and Trade Show: June 6th – 9th in Calgary

Union of British Columbia Municipalities (UBCM) Annual Convention: September 16th – 20th in Vancouver.