

Okanagan Basin Water Board Meeting Agenda



Okanagan Basin
WATER BOARD

DATE: Tuesday, May 3, 2022

TIME: 10 a.m. to 12 p.m.

PLACE: *Online (see notation below)

1. CALL MEETING TO ORDER

1.1 Acknowledgement of First Nations Traditional Territory

We acknowledge that we are holding this meeting on the unceded territory of the Syilx Okanagan Nation.

2. INTRODUCTION OF LATE ITEMS

3. APPROVAL OF AGENDA

4. ADOPTION OF MINUTES

4.1 Minutes of the Regular Meeting of the Okanagan Basin Water Board of April 5, 2022 held online. (page 1)

5. DELEGATION

Kari Alex, Okanagan Nation Alliance Fisheries Biologist – update on Okanagan fisheries restoration and environmental flows

6. STAFF REPORTS

6.1 Executive Director Report (page 4)

6.2 Water Stewardship Director Report (page 6)

6.2.1 Kalra & Glovers OWSC poster

6.2.2 Water Supply Webinar poster

6.3 Operations and Grants Manager Report (page 11)

6.3.1 Milfoil Asset Management Plan

6.4 Policy and Planning Specialist Report (page 23)

6.5 Special Projects Coordinator Report (page 25)

6.6 Communications Director Report (page 27)

7. CORRESPONDENCE

7.1 Letter from Sicamous to B.C. Government regarding invasive mussels (page 33)

8. NEXT MEETING

8.1 The next meeting of the Okanagan Basin Water Board will be Tuesday, June 7, 2022 at 10 a.m. at location TBD.

9. ADJOURNMENT

*** NOTE:** Meetings of the Okanagan Basin Water Board are open to the public, and only closed for in-camera sessions as set out in the B.C. Community Charter. Given the current situation with COVID-19, the board will be holding its meeting online. If you are interested in attending this online meeting, please contact our Communications Director Corinne Jackson at corinne.jackson@obwb.ca for further details. Thank you for your patience and understanding.



**MINUTES OF A REGULAR MEETING OF THE OKANAGAN BASIN WATER BOARD
HELD APRIL 5, 2022, ONLINE
OKANAGAN, B.C.**

PRESENT

Chair Sue McKortoff	Regional District Okanagan-Similkameen
Director Victor Cumming	Regional District North Okanagan
Director Rick Fairbairn	Regional District North Okanagan
Director Bob Fleming	Regional District North Okanagan
Director James Baker	Regional District Central Okanagan
Director Doug Holmes	Regional District Okanagan-Similkameen
Director Rick Knodel	Regional District Okanagan-Similkameen
Director Bob Hrasko	Water Supply Association of B.C.
Director Scott Boswell	Okanagan Water Stewardship Council (OWSC)

REGRETS

Vice-Chair Cindy Fortin	Regional District Central Okanagan
Director Colin Basran	Regional District Central Okanagan
Director Christopher Derickson	Okanagan Nation Alliance (ONA)
Caitlyn Glasser	ONA Technical Staff

STAFF

Anna Warwick Sears	Executive Director
Nelson Jatel	Water Stewardship Director
Corinne Jackson	Communications Director
James Littlely	Operations and Grants Manager
Kellie Garcia	Policy and Planning Specialist
Carolina Restrepo-Tamayo	Special Projects Coordinator

1. CALL MEETING TO ORDER

Chair McKortoff called the meeting to order at 9 a.m.

Chair McKortoff respectfully acknowledged that the meeting was being held on the traditional and unceded territory of the Syilx Okanagan Nation.

2. INTRODUCTION OF LATE ITEMS

No late items were introduced.

3. APPROVAL OF AGENDA

“THAT the agenda of the regular meeting of the Okanagan Basin Water Board of April 5, 2022 be approved.”

CARRIED

4. ADOPTION OF MINUTES

- 4.1 Minutes of the Regular Meeting of the Okanagan Basin Water Board of March 1, 2022 held online.

“THAT the minutes of the regular meeting of the Okanagan Basin Water Board on March 1, 2022 held online be approved.”

CARRIED

Dir. Boswell exited the meeting at 9:04 AM.

5. IN-CAMERA

5.1 In-camera session (under sec. 90(1)(m) of the Community Charter)

6. RISE & REPORT FROM IN-CAMERA

“THAT the OBWB approve the 2022 Water Conservation and Quality Improvement Grant funding as presented. AND THAT the OBWB Rise and Report the 2022 grant funding as approved.”

CARRIED

Dir. Boswell re-entered the meeting at 9:12 AM.

7. STAFF REPORTS

7.1 Executive Director Report

Dr. Sears reported that OBWB staff continue to follow COVID-19 safety protocols. Office staff are working under a hybrid office/home workplace model while milfoil staff are following safety protocols when working in the milfoil shop.

Dr. Sears reported on the OBWB's March 16 submission to the Government of B.C. regarding the province's Watershed Security Strategy discussion paper. The submission was developed in collaboration with a Okanagan Water Stewardship Council members, ensuring that it reflected the experience of those working in different water sectors.

Dr. Sears noted the OBWB-OkWaterWise event hosted on March 16 in celebration of UN World Water Day. The event included a special screening of CBC The Fifth Estate's documentary "Come Hell ... B.C. Under Water," followed by a panel discussion. The panel included those working for urban utilities, in agriculture, fisheries, forestry, and on regional water management. A video of the event is now posted on our YouTube channel.

Last, Dr. Sears stated that snow pillow graphs for Mission Creek, Brenda Mines, and Silver Star show lower than normal snowpacks in the Okanagan, adding snowpack is already melting at the Brenda Mines station.

“THAT the Executive Director's Report, dated March 30, 2022, be received.”

CARRIED

7.2 Operations and Grants Manager Report

Mr. Littley reported on a letter from B.C. Minister of Environment and Climate Change Strategy George Heyman, regarding the OBWB's calls to action on invasive mussels. Correspondence from Department of Fisheries and Oceans Canada regarding the mussels was also noted.

Discussion ensued regarding Mr. Littley's suggestion that the board review the feasibility of restricting local lake access sites to out-of-province watercraft that have proof of inspection from B.C.'s Invasive Mussel Defence Program. Several directors acknowledged the complexity of this

issue and suggested the topic be brought forward to a future meeting for broader discussion.

“THAT OBWB send a letter to Fisheries and Oceans Canada objecting to the reliance on deleterious substances as a control measure for an invasive mussel infestation, requesting more information about CBSA protocols and about the \$700K funding that has been provided to a project in B.C., and calling for a multi-year extension of federal funding for invasive mussel research, education and outreach in B.C.”

CARRIED

“THAT the Operations and Grants Manager Report, dated March 29, 2022, be received.”

CARRIED

8. NEXT MEETING

7.1 The next meeting of the Okanagan Basin Water Board will be held Tuesday, May 3, 2022 at 10 a.m. The meeting will be held online.

9. ADJOURNMENT

“THAT there being no further business, the regular meeting of the Okanagan Basin Water Board of April 5, 2022 be adjourned at 9:49 a.m.”

CARRIED

Certified Correct:		
Chair		Executive Director

MEMORANDUM

Okanagan Basin Water Board
Regular meeting
May 3, 2022
Agenda No: 7.1

To: OBWB Directors
From: Anna Warwick Sears
Date: April 27, 2022
Subject: Executive Director Report

COVID-19 Considerations:

COVID-19 swept through the office this month and seems to be widespread in Kelowna. Despite this, we still are aiming to continue the hybrid workplace model as and when we can, going forward slowly and safely. Milfoil staff are observing COVID-19 safety protocols while moving equipment, and mostly work alone.

Fiscal Year-end

This month, I've been working with the finance department to review our detailed accounting in preparation for the annual audit. We've also been reviewing all of the funding we've received, and filing reports to the province and other funders. The audited financial statements will be provided to the board prior to our June 7 regular meeting, for approval and adoption, and as usual, the auditors will be available to answer any questions.

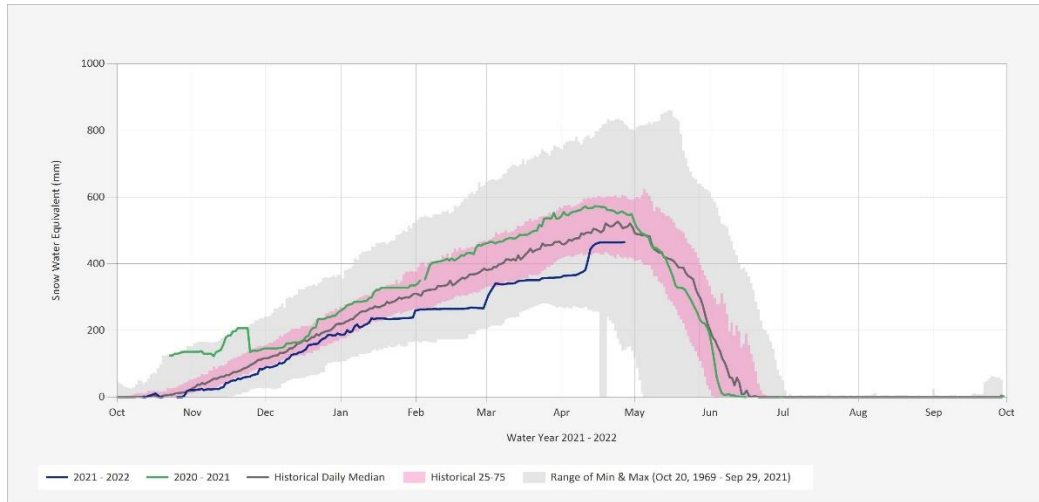
IJC Climate Resilience

I had the opportunity to attend a 2-session workshop on Climate Resilience Strategies, hosted by the International Joint Commission (IJC) for IJC Watershed Boards and Boards of Control. The IJC is interested in bringing all the transboundary watersheds up to the same level of preparedness for climate change, including advancing binational coordination and cooperative approaches. The Osoyoos Lake Board of Control (OLBC) is one of the most advanced for climate studies in Western Canada, in part because of the close working relationship between the OLBC and OBWB. The IJC has been funding a number of hydrological studies in the South Okanagan to aid with Osoyoos Lake management, and these are contributing to the OBWB's basin-wide water management studies. There is a lot of potential for continued fruitful collaboration.

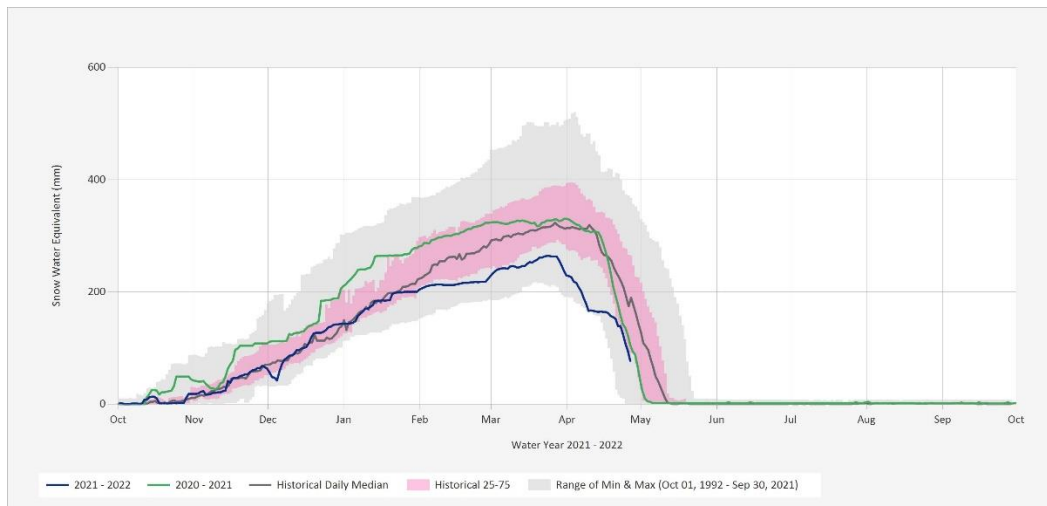
Weather Report

The Mission Creek and Silver Star snow pillows appear to have recovered to normal levels for this time of year. However, Brenda Mines snow pillow is showing a rapid melt, much faster than normal. Okanagan Lake levels have now recovered, and are well within the normal range for this time of year. National Oceanic and Atmospheric Administration (NOAA) continues to predict below normal precipitation for Eastern Washington for May – September (Environment and Climate Change Canada doesn't have as detailed long-term seasonal forecasts). NOAA forecasts temperatures to be above normal for June – September.

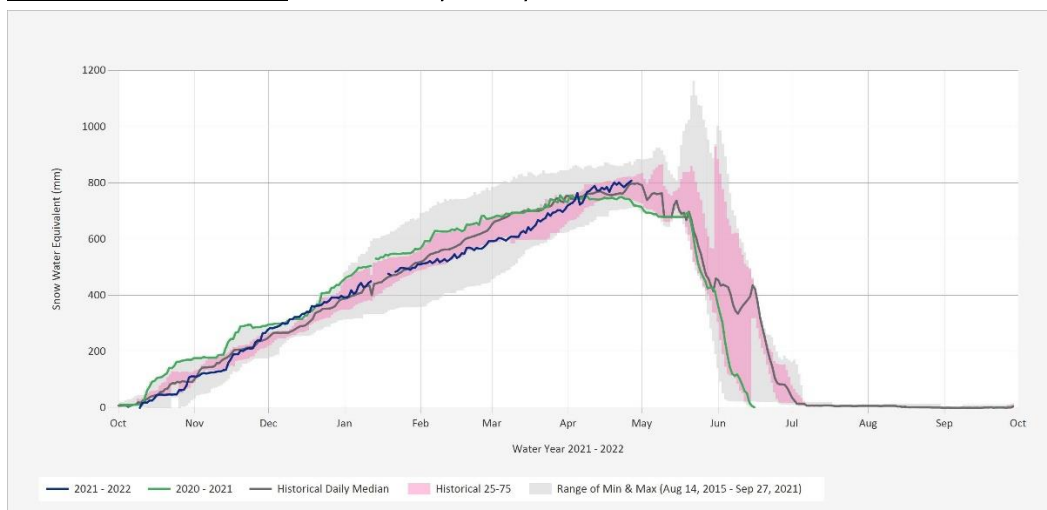
Mission Creek Snow Pillow – April 27, 2022, elevation: 1780 m.



Brenda Mines Snow Pillow – March 29, 2022, elevation: 1460 m.



Silver Star Snow Pillow – March 29, 2022, elevation: 1840 m.



MEMORANDUM

Okanagan Basin Water Board
Regular meeting
May 3, 2022
Agenda No: 6.2

File No. 0550.04

To: OBWB Directors
From: Nelson R. Jatel
Date: April 27, 2022
Subject: **Water Stewardship Director's Report**

Okanagan Water Stewardship Council (Council)

The Council is the Board's standing technical advisory body and meets monthly to discuss relevant and timely watershed issues, supporting information sharing and knowledge building. Current leadership is provided by two volunteers: Chair Mr. **Scott Boswell** (Okanagan Collaborative Conservation Program), and Vice-chair Dr. **Jeremy Fyke** (Environment and Climate Change Canada).

The Council has five active committees: *Policy, Water and Climate, Alluvial Fans, Wetlands, Agriculture Water, Water Quality, and one standing committee: Source Protection*. The Council leadership team consisting of the chair, co-chair and committee chairs is scheduled to meet this week.

Last month's April 5th annual joint Board-Council meeting provided a forum for participants to engage with each other and provided each of the five active committee chairs an opportunity to report on recent activities and accomplishments. At this meeting, we also heard from each of the Board members about important water issues and projects that are relevant to their individual communities throughout the Okanagan. Both Board and Council members voiced their appreciation for meeting together to share ideas and perspectives.

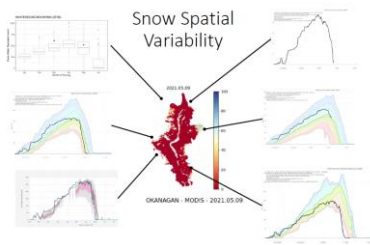
Our next Council meeting is Thursday, March 10th from 1 – 4 p.m. on Zoom. Our special guest speaker, **Nidhi Kalra**, Senior Information Scientist with RAND corporation, and **David Geoffrey Groves**, Senior Climate Change Specialist – The World Bank, will be discussing the decision making around water resources, given climate change uncertainty and its implications to the Okanagan. A poster with further information is attached to this report – please post and circulate to interested parties. Board members are encouraged to attend and participate.

Project updates:

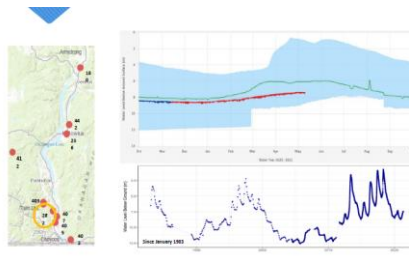
Okanagan Water Supply Webinar 2022 (May 10)

The 2022 Okanagan Water Supply Webinar provides a one-hour presentation from water experts on the annual outlook for flood and drought. Several water supply indicators and management indicators will be discussed with a panel of water professionals.

Snowpack status



Groundwater status



Salmon return outlook



This will be the ninth year the OBWB hosts this important water-information sharing webinar. This year's supply webinar will take place on Tuesday, May 10th from 11 a.m. – 12 p.m. Details on how to connect to the webinar are included in the attached poster – please circulate widely.

Okanagan Flood Risk Mapping project

Due to COVID-19 and other extenuating circumstances, the project deadline is being extended from May to mid-June.

A 3rd workshop/discussion in early June will provide an opportunity to solicit input on the newly developed final flood risk maps. At this meeting, the technical working groups will have a further look at draft flood risk map model results and will have an opportunity to comment.

This project builds on a previously completed flood and debris-flow risk mapping project by the Okanagan Nation Alliance (ONA) and will increase the resolution and granularity of flood risk maps. The project will produce digital maps to support flood planning and adaptation, customized to support all levels of government.



Okanagan Lake flooding in 2017.

OBWB Hydrometric Service

The objective of the OBWB's Okanagan Basin Hydrometric Information Network is to develop and manage an adequate hydrometric information network for the valley. Operation meetings with ONA Fishery Department and Environment and Climate Change Canada (ECCC) staff took place throughout April. We are developing operation plans and budgets for this year's hydrometric monitoring installation and maintenance program. The most recent installation of a hydrometric station is taking place this week on Deep Creek near the mouth of Okanagan Lake.



Both ECCC and ONA staff were busy throughout April collecting and managing hydrometric data. Efforts continued to ensure Okanagan real-time station data was processed through our Aquarius server as well as data QA/QC work. Data collected by OBWB/ONA hydrometric stations is posted on the B.C. government water data websites, providing public access to our collected hydrometric data. The spring Technical Advisory Committee meeting is scheduled for May 25th.

Information about the OBWB's hydrometric service is available online at <https://www.obwb.ca/hydrometrics/>.



Pearson Creek (Mission Creek Watershed). Photos courtesy ECCC.



Okanagan Basin
WATER BOARD

THURSDAY
12 MAY 2022
1:00PM – 2:30 PM

**JOIN US FOR OUR MAY
WATER STEWARSHIP COUNCIL MEETING WITH
SPECIAL GUESTS:**



Nidhi Kalra

**Senior Information Scientist
RAND Corporation**



David Geoffrey Groves

**Senior Climate Change Specialist
The World Bank**

**TOPIC: Decision making around water resources, given climate
change uncertainty.**

Join Zoom Meeting
<https://us02web.zoom.us/j/83618940425>

For more info:
nelson.jatel@obwb.ca

2022 Okanagan Water Supply Webinar

Tuesday, May 10th 11:00 am – 12:00 pm

**Join us for this year's water webinar
exploring water supply in the Okanagan:**

- reservoir levels
- snowpack
- groundwater
- weather forecast
- salmon returns

**Past participants have included: Local government,
agricultural community, water managers, general public,
business owners, and water professionals.**

Zoom webinar link:

<https://us02web.zoom.us/j/87346802445>

For more info contact Nelson at:
nelson.jatel@obwb.ca | (250) 469.6295

MEMORANDUM

Okanagan Basin Water Board
Regular meeting
May 3, 2022
Agenda No: 6.3

File No. 0550.04

To: OBWB Directors
From: James Littley
Date: April 27, 2022
Subject: Operations and Grants Manager Memo

Milfoil Asset Replacement Plan 2023 – 2027 (Attached)

Asset management is an important process for local governments. A proper asset management program can help ensure financial stability, increase efficiency, and enhance transparency for the public. With the approval of the first Asset Management Plan in 2016, the OBWB significantly improved the operational efficiency and financial planning for milfoil control equipment purchases. In the intervening years, the OBWB has made investments in new equipment, enabling a more cost-effective maintenance and repair regime, meeting updated environmental standards, and increasing worker safety.

*The **purpose** of this Asset Replacement Plan is to increase operational efficiency and enhance financial planning, to ensure that the OBWB has stability in its year over year budgeting process through the proper use of reserves.*

This plan relies on significantly extended useful lifespans on OBWB equipment, compared to what is considered the maximum useful lifespan of similar equipment by the B.C. Ministry of Finance. In some cases, we may be able to delay the purchase date for replacement equipment even beyond the extended lifespan.

This plan meets the need to have appropriate capital reserves on the expected replacement date to ensure no reduction in milfoil treatment services.

*The **intent** of this plan is to identify the minimum annual budget necessary to meet the needs of the milfoil control program in order to maintain a consistent level of service.*

The plan was developed with guidance from Asset Management BC, using their “Asset Management for Sustainable Service Delivery” framework. It was also informed by a project in partnership with the University of British Columbia Okanagan which identified a number of gaps in our past processes. The plan is reviewed annually and updated as needed, including any new assets, and incorporating new methods, tools and technology as necessary. This annual review occurs as part of the budgeting process.

Recommended Resolution: That the OBWB approve the Asset Replacement Plan 2023 - 2027, and direct staff to seek the approval of Okanagan regional districts for the Asset Replacement Schedule given in the plan, prior to the next budget cycle.

Environment Funders Canada Conference

After two years of delays due to COVID-19, the Environment Funders Canada (EFC) conference is scheduled to take place in person May 16-19 in Kelowna. In addition to the conference content focussing on connection and collaboration, there are also several opportunities for members to visit sites in the Okanagan including through a pre-conference field trip to the South Okanagan. Stops include tours of the *k'əmcənɪtkw* Floodplain Re-engagement project in Penticton, the Desert Cultural Centre in Osoyoos, *kʰilxʷ* (Spotted Lake), and the White Lake Biodiversity Ranch. Funders will also receive a presentation on the proposed National Park Reserve led by Parks Canada and the Osoyoos Indian Band. During the conference, there will also be an early morning river walk led by the Mission Creek Restoration Initiative, and an afternoon field trip to a local forestry site focusing on forestry practices to mitigate wildfire risk and improve forest function.

The B.C. Water Funders Collaborative will also be hosting a session during the EFC conference in Kelowna, enhancing collaborative discussions with water funders from across Canada. OBWB is a member of both EFC and the BC Water Funders Collaborative, and as such, I currently serve on the EFC Board of Directors, as Chair of the Conference Planning Committee, and also as Chair of the BC Water Funders Collaborative Steering Committee.

Milfoil Control Program

Winter de-rooting is currently still underway in Wood Lake, Osoyoos Lake, and Okanagan Lake in Kelowna. While we had significant scheduling setbacks this winter primarily due to low lake levels, we have been able to de-root in most of the high-priority areas throughout the valley. Most of the de-rooting work will be complete by May 1st.

UBC-O Research Project

Engineering students at UBC-O recently completed their capstone project entitled: Improving Eurasian milfoil Control in the Okanagan. The team submitted a detailed design report, exploring various ways to better store and transport cut milfoil to reduce some of our current operational constraints. Through lab analysis, they found that there was an average 91% weight reduction in dried milfoil compared to submerged milfoil. Their final design recommendation is to combine an industrial shredder, a hydraulic press, and a de-watering barge which would potentially allow us to store and transport 10X the volume of cut milfoil as we do with current harvesting methods.

I will continue to work with Dr. Nicolás Peleato, Assistant Professor, civil engineering to discuss next steps for further research and development of this machine, as well as other potential equipment-based improvements.



Milfoil Control Program Asset Replacement Plan 2023



Physical Asset Management for the Okanagan Basin Water Board

Asset management is recognized as an important process for local governments. A proper asset management program can help to ensure financial stability, increase efficiency, and enhance transparency for the public. With the approval of the first Asset Management Plan in 2016, the OBWB significantly improved the operational efficiency and financial planning for milfoil control equipment purchases. In the intervening years, the OBWB has made investments in new equipment, enabling a more cost-effective maintenance and repair regime, meeting updated environmental standards, and increasing worker safety.

*The **purpose** of this Asset Replacement Plan is to increase operational efficiency and enhance financial planning, to ensure that the OBWB has stability in its year over year budgeting process through the proper use of reserves.*

This plan relies on significantly extended useful lifespans on OBWB equipment, compared to what is considered the maximum useful lifespan of similar equipment by the BC Ministry of Finance. In some cases, we may be able to delay the purchase date for replacement equipment even beyond that extended lifespan. This plan meets the need to have appropriate capital reserves on the expected replacement date in order to ensure no reduction in milfoil treatment services.

*The **intent** of this plan is to identify the minimum annual budget necessary to meet the needs of the milfoil control program in order to maintain a consistent level of service.*

The plan was developed with guidance from Asset Management BC, using their “Asset Management for Sustainable Service Delivery” framework. It was also informed by a project in partnership with the University of British Columbia Okanagan which identified a number of gaps in our past processes. The plan is reviewed annually and updated as needed, including any new assets, and incorporating new methods, tools and technology as necessary. This annual review occurs as part of the budgeting process.

Contents

OBWB Assets – Informing the Plan.....	4
Milfoil Control Program.....	5
Level of Service	6
Service and Asset Risks	6
Research and Development.....	6
State of existing assets	7
Asset replacement schedule – 5-Years.....	7
Milfoil Equipment Reserve Planning.....	8
Equipment Reserve Allocation Table – 3.5% Annual Inflation.....	8
Specialized Asset Descriptions	9
Rototillers	9
MRV.....	9
Rototiller – Blue and Red	9
Shallow-Water Cultivator	9
Harvesters	9
Haul Truck and Crane	9
Future R&D Equipment.....	10

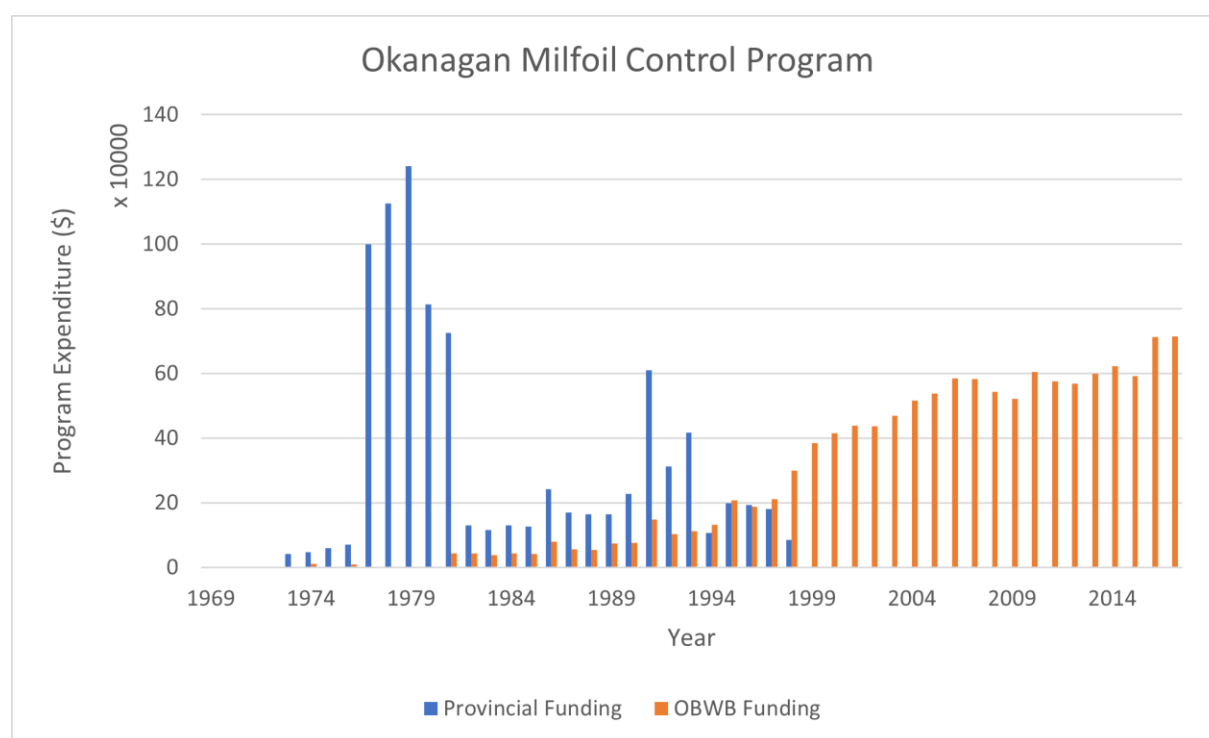
OBWB Assets – Informing the Plan

This plan was developed, and should be reviewed annually by asking the following questions:

- What is the current and desired or targeted level of service?
- What service and asset risks need to be prioritized and managed?
- What assets are owned by the OBWB and where are they?
- What are the depreciated and replacement value of those assets
- What are the conditions (physical, demand/capacity and functionality) and expected remaining life of those assets?
- When will repair, upgrade, or replacement be required?
- Which assets can or should be retired?
- Which new assets may be required and when?

Milfoil Control Program

The milfoil control program treats more than 50 linear km of shoreline in the Okanagan. The program uses large aquatic rototillers to de-root the plant during the winter, and large aquatic harvesters to cut and remove plant material during the summer. All maintenance and the majority of equipment transport is done by staff, with OBWB equipment keeping costs down. Due to this efficiency and dedicated maintenance, our machines have far surpassed the useful lifespans listed by the B.C. Ministry of Finance, with the average age of OBWB assets being 27.5 years old. The original milfoil control program, established in 1973, was a partnership between the B.C. Ministry of Environment (MOE) and the OBWB. Initially, the province bore much of the cost for capital purchases. In 1999 the province cancelled its participation in the program and since then, all costs have been borne solely by the OBWB.



Diagnosing governance network attributes of a Canadian watershed organization, Jatel, Nelson R. 2022 – Pre-publication

All property owners in the Okanagan pay into the milfoil control program, which prioritizes treatment for public beaches over any other infested area. Areas adjacent to private property – the lowest priority – have typically also been treated, free of charge, as our operational timelines allowed us to treat identified infested areas. In the past few years, the level of service near private property has been reduced, mainly due to development along the shorelines near urban areas, which reduces our ability to transfer the harvested weeds to land. There have also been increased calls for treatment in new areas as human expansion along our shorelines continues. While the priority for treatment is on public beach areas, OBWB also recognizes that all the water in our lakes is publicly accessible. This is why we have consistently treated as much milfoil as possible in different areas, regardless of adjacent land use.

Level of Service

What is the current and desired or targeted level of service?

The target level of service is to continue treatment at public beaches, boat launches, marinas, and high-traffic areas throughout the five mainstem lakes (Wood, Kalamalka, Okanagan, Skaha and Osoyoos¹), while maintaining our ability to respond to milfoil outbreaks in lower-priority areas.

Service and Asset Risks

What service and asset risks need to be prioritized and managed?

Service Risks: People are settling into new areas of lakefront in the valley, while local governments improve lakefront parks and beach areas. This has reduced access to sites which we have historically used for the program. We also face a risk from the unknown effects of climate change, and its implications for milfoil growth, and the effectiveness of our treatments. Finally, the Okanagan Lake Regulation System review is a risk to our operational scheduling as we struggle with lake-level changes, restricting access for our equipment.

Asset risks: Much of our aging equipment has been replaced over the last 5 years, with a few major pieces of equipment now well past their extended lifespan and requiring replacement. Further, new service risks, outlined above, may necessitate new types of equipment to assist with the launching and recovery of machines, and with transferring the weeds to shore for disposal.

Research and Development

As shown in the graph above, the province had significant start-up costs related to R&D and capital purchases to find effective methods for milfoil control in the late 1970s and early 1980s. With the increasing service and asset risks listed above, some of these 50-year-old control methods will need to be updated and supplemented. This plan allocates funds each year that may be used for research, including lab testing and computer modelling, and development, including proof of concepts, scalable models, and new equipment purchases.

¹ The addition of Vaseux Lake for summer harvesting, and a pilot for potential future rototilling are being pursued for both environmental and economic reasons.

State of existing assets

Milfoil Assets	Year	Age	MOF Lifespan*	OBWB Lifespan*	Remaining	Accum. Amort.	Replacement Cost	Current Condition
Rototiller - MRV	1990	32	25	35	3	\$0	\$600,000	Good
Rototiller - Red	2004	18	25	35	17	\$0	\$400,000	Good
Rototiller - Blue	1984	38	25	35	N/A	N/A	N/A	Replaced ²
Rototiller - Orange	2017	5	25	35	30	\$340,000	\$400,000	Very Good
Harvester - Long	1978	44	25	35	0	\$7,701.01	\$250,000	Poor
Harvester - Short	1978	44	25	35	0	\$7,701.23	\$250,000	Poor
Shallow-water Cultivator	1997	25	10	30	11	\$10,430	\$40,000	Good
Aluminum Boat w Trailer	1977	45	25	35	0	\$0	\$66,500	Good
Crane Truck	2021	1	10	20	19	\$250,000	\$275,000	New
Boom Truck	1994	28	10	20	N/A	N/A	N/A	Replaced ³
Crane	1985	42	10	20	N/A	N/A	N/A	Replaced
Trailer - Large	2020	2	10	30	28	\$53,570	\$65,000	Very Good
Trailer - Large	2014	8	10	30	22	\$42,560	\$65,000	Very Good
Trailer - Small	1978	44	10	30	N/A	N/A	N/A	Moderate ⁴
Trailer - Small	1978	44	10	30	N/A	N/A	N/A	Moderate
Pickup Truck	2014	8	7	10	2	\$19,029	\$50,000	Good ⁵
Pickup Truck	2021	1	7	8	7	\$42,800	\$50,000	New
Pickup Truck	2021	1	7	8	7	\$42,800	\$50,000	New
Pickup Truck	2021	1	7	8	7	\$42,800	\$50,000	New
OBWB Car	2015	6	7	10	4	\$19,250	\$45,000	Good
Shop Building	2006	16	40	40	24	\$66,182	\$300,000	Very Good

***MOF Lifespan** – BC Ministry of Finance useful life of tangible capital assets (MOF Tangible Capital Asset Procedures).

***OBWB Lifespan** – Estimated useful lifespan within the OBWB milfoil control program.

Replaced in past 5 - year plan (not yet disposed)
Acquired under previous 5 - year plan
To be replaced under current plan

Asset replacement schedule – 5-Years

Replacement Milfoil Assets	Year needed (Starting April 1 st) *	Cost with inflation**	Age at replacement	OBWB Lifespan	Years past lifespan	Lifespan at replacement
Harvester	2023	\$250,000	45	35	10	128%
Harvester	2023	\$250,000	45	35	10	128%
Aluminum Boat with Trailer	2026	\$76,310	49	35	14	140%
OBWB Car	2026	\$51,639	11	10	1	110%
R&D and equipment	Annually (2023 – 2027)	\$50,000	N/A	N/A	N/A	N/A

* Replacement Schedule based on OBWB Lifespan, not on Ministry of Finance Lifespan. **Assumes 3.5% Annual inflation from 2022.

² The Blue rototiller was replaced in 2017 and will be auctioned for disposal.

³ Boom Truck and crane was replaced in 2021 and will be auctioned for disposal.

⁴ These trailers have been replaced, but are still being used on site at the shop for machine storage.

⁵ 2014 Pickup is used as a spare and fitted with a snow plough for shop use.

Milfoil Equipment Reserve Planning

OBWB has made significant progress in asset management and replacement over the last five years. This plan takes into account a 3.5% average annual inflation rate, which should be adjusted for true inflation as part of the annual review. The allocation allows for a predictable tax requisition, which is the goal of this plan.

Equipment Reserve Allocation Table – 3.5% Annual Inflation

Fiscal Year (Starting April 1st)	Equipment Costs Including R&D	Add to Reserve:	Reserve Balance*
2021	N/A	N/A	\$685,562
2022	\$261,630	\$50,000	\$479,932
2023	\$50,000	\$25,000	\$448,932
2024	\$550,000	\$150,000	\$48,932
2025	\$50,000	\$150,000	\$148,932
2026	\$50,000	\$150,000	\$248,932
2027	\$177,949	\$150,000	\$220,983

*Reserve balance is projected forward from actual at year-end for 2021.

Specialized Asset Descriptions

Rototillers

The rototillers are a floating barge powered by a diesel engine, which operates hydraulic pumps. The pumps feed paddlewheels for propulsion, and operate large mechanical arms with a rotating rototiller-style head. The head can be lowered into the water to de-root milfoil from the lake substrate.

MRV

The MRV rototiller is our largest machine at around 6.7 gross tonnes and measuring 10.7m in length and 4.18m in width. Because of the weight and size, the MRV is the only machine in the fleet that requires an external hauler. The MRV is only used in Okanagan Lake, which has launch sites large enough to accommodate it. The current MRV was built in 1990 and has an anticipated lifespan of 35 years.

Rototiller – Blue and Red

The blue and red rototillers are similar, smaller rototillers at around 3.5 gross tonnes and measuring 7.7m in length and just over 3m in width. The Blue and Red rototillers are capable of being used in all Okanagan Lakes with suitable launch sites, and can be transported and launched using internal OBWB equipment. The Blue machine was built in 1984, and the red in 2004. Each has an anticipated lifespan of 35 years.

Shallow-Water Cultivator

The shallow-water cultivator is a tractor with rubber tracks which can be partially submerged in water about 1m deep. The tractor drags an spring-loaded harrow, with arrow-head blades which till the substrate in shallow areas, de-rooting milfoil. This machine was manufactured in 1997, but has had significant recent upgrades. The shallow-water cultivator has an anticipated lifespan of 30 years.

Harvesters

The aquatic weed harvesters are floating-paddlewheel-driven barges which have three conveyor sections. The front conveyor section is mounted on a frame which can be lowered approximately 2m into the water, where reciprocating blades at the front edge and sides cut milfoil below the water. Once cut, the front conveyor lifts the milfoil, allowing water to drain back through the metal belting into the lake. The milfoil is conveyed onto the second conveyor section, in the belly of the machine. This belly conveyor acts as the storage area for cut milfoil, and conveys the load to the final offloading conveyor. The final conveyor lifts the load out of the belly, and can dump a pile of milfoil on dry land for removal by the boom truck. The current harvesters were both manufactured in 1978 and have surpassed their expected lifespan of 35 years.

Haul Truck and Crane

The haul truck is a multi-function flatbed truck with a forward mounted crane. The truck is used to haul the trailers, carrying any of the OBWB machines, except the MRV rototiller. The crane is used to disassemble the paddlewheels from the machines, reducing the width to transport. During milfoil removal from dump sites, a clamshell is fit to the crane, allowing the operator to pick up the pile, and load a container on the truck. The flatbed then tilts at the dump site, allowing the container to offload the milfoil.

Future R&D Equipment

Future equipment to be considered for R&D could include:

- new or re-designed de-rooting processes to mitigate environmental hazards and increase efficacy;
- equipment to assist machine launching operations to overcome lake level constraints;
- equipment to facilitate weed transfer to shore, accounting for increasing constraints;
- processes for reducing biomass volume for shore transfers; and
- others as dictated by emerging technology and technical advice.

MEMORANDUM

Okanagan Basin Water Board
Regular meeting
May 3, 2022
Agenda No: 6.4

File No. 0550.04

To: OBWB Directors
From: Kellie Garcia
Date: April 27, 2022
Subject: Policy and Planning Specialist Report

Okanagan Collaborative Source Water Protection Project

We wrapped up the source water protection project this month after two years of work. The aim of the project was to facilitate a more collaborative and consistent approach to source water protection by providing information and guidance to water suppliers, building awareness about source water protection, and facilitating knowledge-sharing between communities. Funding for the project was provided by the B.C. Ministry of Municipal Affairs, Interior Health Authority, City of Kelowna, City of West Kelowna, and the Healthy Watersheds Initiative. The project achieved many successes, which I summarize below.

The project brought together a 45-member technical advisory committee of provincial regulators, health agencies, water suppliers, natural resource managers, and planners to discuss source water protection issues, solutions and priorities and lead the development of a toolkit, website (www.sourcewaterprotectiontoolkit.ca), and webinar series. Larratt Aquatic Consulting led the research and writing of the toolkit.

The toolkit provides solutions to typical barriers to source protection and clarifies the source protection planning process, to save water suppliers time and money and help them satisfy regulatory requirements. It explains how communities can use their jurisdiction to protect water sources, provides ideas on how to secure long-term funding, talks about how to build awareness and gain support for source water protection activities, and describes how to best carry out water monitoring and reporting. About 35 case studies from a variety of B.C. watersheds are included in the toolkit – enabling communities to learn from others.

The webinar series included nine, one-hour sessions and featured 33 speakers. Some 182 individuals attended one or more of the webinars, representing a variety of B.C., Ontario, Quebec, Alberta, and U.S. organizations. Webinar recordings are available on our YouTube channel (<https://youtu.be/oUlycPatxtU>).

Between November 2021 and April 2022, I gave 15 presentations to Okanagan city councils and regional boards. The purpose of the presentations was to discuss the challenges and barriers facing source water protection and describe how the toolkit can help local governments better protect drinking water quality.

Larratt Aquatic Consulting piloted the toolkit through the City of Penticton's source protection planning process. Their final report describes how the toolkit was applied during the planning process, highlights sections of the toolkit that were most beneficial and what areas could be improved, and summarizes other learnings and recommendations gained through the pilot project.

In September 2021, the OBWB received additional funding from the Healthy Watersheds Initiative with a request to use it for an Indigenous-led project focused on habitat restoration. The *k'əmcnitkʷ* Floodplain Re-engagement Project, led by the En'owkin Centre with partners Okanagan Nation Alliance and Penticton Indian Band, was chosen. The project re-engages historical floodplain and riparian area along the Okanagan River in Penticton to aid in the recovery of at-risk populations of fish, birds, and reptiles, as well as many species of cultural significance to *syilx* people.

The funding was used by the En'owkin Centre to conduct community and volunteer restoration work through the planting of potted indigenous trees and shrubs from the En'owkin Centre nursery to the project site; collecting, processing, and planting indigenous plant seeds at the project site; and hosting K-12 student class visits and community volunteer events. Six Indigenous people were hired to support the work. I worked with the En'owkin Centre's ECommunity Program Manager to organize a tour of the *k'əmcnitkʷ* floodplain re-engagement project site in October 2021. We had a great day, hearing presentations and walking the site with an Indigenous Knowledge Keeper and En'owkin Centre staff. About 40 people attended the event.

Ms. Jackson and I also worked with the ECommunity Program Manager to create an educational source water protection poster to be featured at the project site. The poster will be used by En'owkin Centre staff as a teaching resource for school and community site visits. I also worked with Ms. Jackson to write an article about the source water protection toolkit for the BC Water & Waste Association's Watermark magazine, a publication that delivers articles about new research, projects, and resources within the water sector in both the B.C. and Yukon regions. The article should be released soon, in the Spring edition of the magazine.

While this project is complete, work on source water protection must go on. The OBWB can continue promoting the toolkit and supporting its use by local governments, help cultivate relationships between the many organizations involved in source water protection, and support science, research and policy that leads to better source water protection in the valley.

Improving Lake Level Management in the Okanagan

As you are aware, a report commissioned by the OBWB and the Government of B.C. in 2021 provides a road map for modernizing mainstem lake level management in the Okanagan. The 'Plan of Study' report was developed through review of historical and recent scientific and engineering work, in consultation with an advisory group of federal, Indigenous, provincial, and local governments with responsibility for Okanagan water. The report calls for 17 studies to be completed over approximately seven years to feed information into a final plan on how to proceed in a coordinated and well-thought-out manner.

I have started sifting through the report and thinking about how the studies can be completed and by whom and created a webpage (www.obwb.ca/lakelevelmanagement/) to track and report on progress. At least four studies are already underway and four more should be in progress by the end of this year. I will be getting the advisory group back together soon to get input on the studies and talk about an appropriate process to move things forward.

MEMORANDUM

Okanagan Basin Water Board
Regular meeting
May 3, 2022
Agenda No: 6.5

To: OBWB Directors
From: Carolina Restrepo Tamayo
Date: April 26, 2022
Subject: **Special Projects Coordinator Report**

During April, I have been working in the following projects/events:

- Osoyoos Lake Water Science Forum 2022
- Boats and supporting facilities in the Okanagan: impacts and solutions workshop
- Coordination of the WCQI grant program

Osoyoos Lake Water Science Forum (OLWSF) 2022

- The new date for the conference is confirmed for October 27-29, 2022
- Venues, hotels and other logistical changes have been confirmed for the new date
- Facilitation planning has been progressing according to plan
- Program is confirmed and right now we are in the process of re-confirming with all the speakers the new dates for their presentations
- Website and registration will be updated in mid-May, and registration will open in June
- Poster submission will be extended
- Forum committees will meet before the summer begins to confirm

Boats and supporting facilities in the Okanagan: impacts and Solutions workshop

Ms. Garcia and I have begun planning a workshop to discuss the impacts of boating and supporting facilities (e.g. docks, marinas, moorage) on Okanagan mainstem lakes. The workshop will be held June 22, 9 a.m. to 3 p.m. at Manteo Resort. The event will also provide opportunities to collaborate to identify solutions and create a list of potential actions.

The audience for the event includes:

- Okanagan local governments
- Okanagan Nation Alliance, WFN, PIB, OIB, OKIB
- Provincial and federal government
- Consultants
- Boating industry representatives (sellers, storage)
- Boating clubs (yacht clubs, etc.), dock builders
- Academia (UBC Okanagan, Okanagan College)
- Conservation/non-profit groups (e.g. Living Lakes)

The event will be feature three main segments:

1. Understanding impacts, concerns, and challenges: short presentations from First Nations, experts in Water Quality, Wildlife, Fish and Habitat and Invasive Species, local and senior

- governments, and sharing of attendee perspectives.
2. Field tour: walking tour in small groups guided by experts to look at impacts and mitigation efforts.
 3. Taking action: discuss potential actions and next steps.

Registration for this event will open in early May.

WCQI grant program:

During the month of April, all 15 grant recipients for the 2022-2023 were notified of their awards and received a Contribution Agreement where they officially accept their obligations with the grant program and decide how the grant money will be disbursed. The signed agreements are to be returned before May 15.

Grant recipients for 2021 who have completed their projects have now provided final reports which are available in our database [here](#). This includes:

- Establishing a Syilx framework to implement Environmental Flow needs by ONA
- Vaseaux Lake Water Monitoring by Vaseaux Lake Stewardship Association
- Follow the Water by RDOS and En'owkin Center
- Okanagan Lake Responsibility Planning Initiative by OCCP
- Water Quality Assurance during the Restoration of VDS Section in Okanagan Falls by Penticton Indian Band
- Groundwater - Stream Exchange on alluvial fans of the Okanagan Lake by ONA
- North Vernon Natural Park Westland Restoration and Community Engagement by OSSS
- Mitigating the Impacts of Motorized Boating on Water Quality by OCCP
- Spallumcheen Cultural Ecological Outreach by BC Small Wetlands Association

MEMORANDUM

Okanagan Basin Water Board
Regular meeting
May 3, 2022
Agenda No: 6.6

File No. 0550.04

To: OBWB Directors
From: Corinne Jackson
Date: April 27, 2022
Subject: **Communications Director Report**

“Make Water Work” and “Don’t Move A Mussel” 2022

Work is well underway for the annual launch of our Make Water Work campaign. We’re excited to have both City of West Kelowna and Westbank First Nation join us as full partners in the campaign this year. I have had several conversations with Habit Creations regarding the campaign and am already reviewing creative, including billboards, buses, social media, and more. This year, based on public interest, we have decided to expand our Make Water Work Plant Collection messaging to profile the native plants in the collection. This week I’m meeting with the local government/utility partners to discuss a few of the tactics, including the launch. Garden Centre partners throughout the valley are also looking forward to a busy year.

I have reviewed the strategy for Don’t Move A Mussel and expect to be reviewing creative for the campaign in the next week or two. In addition to working with the Okanagan and Similkameen Invasive Species Society to extend the reach of the DMM campaign, I have had a few organizations reach out, interested in joining with us to promote invasive mussel prevention. In speaking with these groups, there appears to be growing recognition that Okanagan Lake, and other valley-bottom lakes, are central to tourism in the valley. With this summer expected to be busy with water recreation on lakes, there is growing interest in helping protect local waters.

Okanagan Water Education Projects

I was invited to present April 25 at **School District 67 (Okanagan Skaha)’s 25 Professional Development Day** on the *“Our Relationship with Water in the Okanagan - Explorations in Outdoor Education to Support the B.C. Curriculum”* education guides. I co-presented with UBC Okanagan (UBCO) School of Education’s Jenny Laminger who was part of the team that helped develop the guides. The presentation was well-received and a number of teachers have been reaching out for hard copies of the materials.

On April 12, UBCO’s School of Education had its final online reflection meeting for Year 1 of its **Education-led Co-Curricular-Making project**, aimed at helping Okanagan teachers de-colonize and Indigenize curriculum. As noted previously, water is central to this work and we have been invited to participate as a collaborator. A final “on-the-land” gathering for this year is planned for May 6. The theme is “Water’s

Teachings: Who We Are/Who We Can Be” and will include presentations by Syilx Elders and Knowledge Keepers.

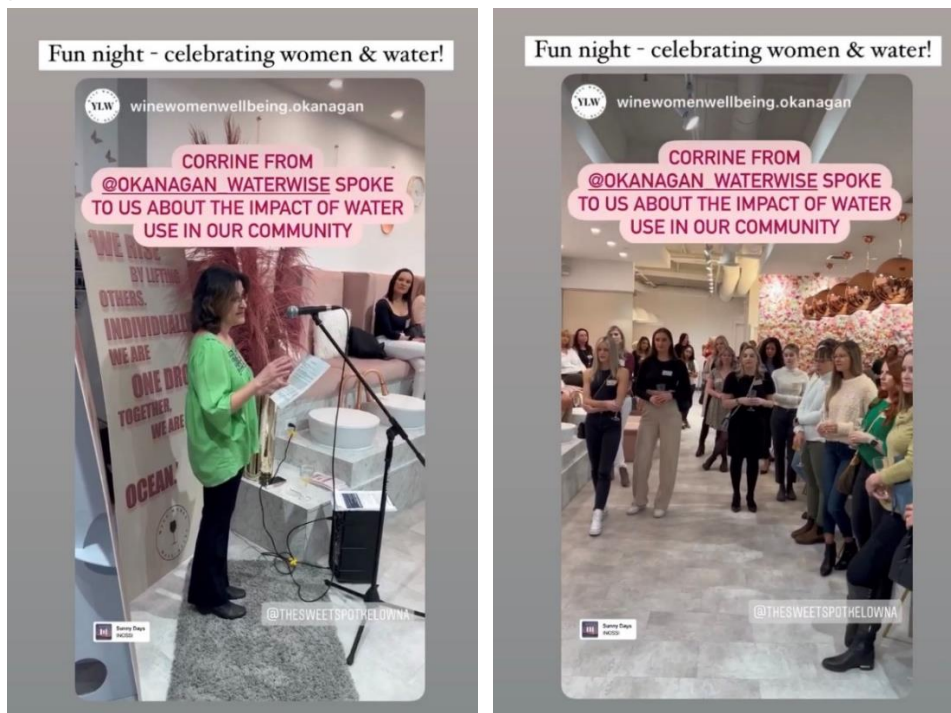
As an extension of the OBWB’s Source Water Protection Toolkit Project, I worked with Ms. Garcia and Ms. Christensen to develop a **“Choose Your Watershed” source water protection poster** as a public outreach and education piece. Similar to “choose your own adventure” books, the poster invites people to choose their watershed and illustrates how various actions in different parts of a watershed can harm or protect water quality. The four-foot tall poster will be set up at the site of the *k’əmcnitkw* Floodplain Re-engagement Project (located along the Okanagan River channel in Penticton). The poster will also be made available on our Okanagan WaterWise website as a resource for educators. Images of the two-part poster is provided at the end of this memo.

Other communication initiatives

The last couple of months have been busy with various external communications activities including developing and sending **news releases** regarding the board’s invasive mussel letter to the province and the federal government, and the results of our 2022 Water Conservation Quality Improvement Grant program. I have also responded to a number of media requests.

I also assisted Freshwater Life – Seven In the Ocean with their news release, backgrounder and communications roll-out regarding their **Microplastics Okanagan** phase 1 study results.

We held our annual **OBWB-OkWaterWise UN World Water Day event** on March 16 which included a screening of “*CBC The Fifth Estate’s Come Hell... B.C. Under Water*” and a panel discussion. A video of the event is posted on our YouTube channel at https://youtu.be/PHXGw_GPmn0. Also, as part of World Water Day events, we were invited to speak at **Wine, Women and Well-Being** to bring attention to Okanagan water issues and share ideas on what attendees could do to help protect water. A couple photos from the event are provided below.



Since my last memo in March, there have been a number of news stories related to the work of the OBWB. A summary of some of these is provided below.

Summary of OBWB-Related News Media

March 2	“Okanagan Nation Alliance given louder voice on water management in the Valley,” <i>Castanet.net</i>
March 3	“Okanagan Nation gets equal water voting rights,” <i>Times Chronicle</i>
March 3	“Penticton eligible for 5th seat on RDOS board,” <i>Penticton Herald</i>
March 4	“Okanagan Basin Water Board presses province for stronger action on invasive mussels,” <i>Castanet.net</i>
March 9	“Water board warns of unwalkable beaches if mussels aren't stopped,” <i>Castanet.net</i>
March 10	“Mussels you don t want to see on the beach,” <i>AM1150</i>
March 10	“VIDEO - Provincial government urged to step up its defence against invasive mussels,” <i>KelownaNow.com, KamloopsNow.com</i>
March 10	“When COVID 19 travel restrictions drop mussel concerns pick up on Okanagan Lake,” <i>Global Okanagan</i>
March 14	“Vernon council to consider official community plan changes to address flood plain development,” <i>Castanet.net</i>
March 15	“Combating invasive mussels on lake,” <i>Penticton Herald</i>
March 15	“Floodplain development will be sent back for provincial and water board input,” <i>Castanet.net</i>
March 15	“Panel discussion on November floods,” <i>Penticton Herald</i>
March 16	“Vernon completes floodplain maps considers development regulation,” <i>Global Okanagan</i>
March 17	“UN WWD Panel - Westbank First Nation principles applied to forest harvest practices,” <i>Kelowna Capital News</i>
March 18	“OBWB asks province to enforce its Invasive Mussel Defence Program,” <i>Peachland View</i>
March 19	“UN WWD Panel - Vernon not waiting for climate change catastrophe,” <i>Vernon Morning Star, Lake Country Calendar</i>
March 20	“UN WWD Panel - ‘Flooding inevitable if building beside Okanagan waterways:’ fisheries biologist,” <i>Kelowna Capital News, Vernon Morning Star, Penticton Western News, West K News, Lake Country Calendar, Salmon Arm Observer, Summerland Review, Keremeos Review, Similkameen Spotlight</i>
March 20	“OBWB wants province to up its Invasive Mussel Defence,” <i>Times Chronicle</i>
March 21	“Campus Life Column: Community collaboration studies microplastics in Okanagan Lake,” <i>Castanet.net</i>
March 21	“Warning issued about microplastics found in Okanagan Lake,” <i>InfoNews.ca</i>
March 21	“Microplastics found in Okanagan Lake, researchers say,” <i>Global Okanagan</i>
March 21	“Microplastics found in Okanagan Lake,” <i>Kelowna Daily Courier, Penticton Herald</i>
March 21	“Relatively low levels of microplastics detected in Okanagan Lake Kelowna wastewater_” <i>Castanet.net</i>
March 23	“Research reveals presence of microplastics in Okanagan Lake,” <i>KelownaNow.com</i>
March 25	“Hydrometric Data Water Resource Management,” <i>Water & Wastes Digest</i>
March 30	“Water board floats idea of ban on uninspected out of province boats,” <i>Kelowna Daily Courier</i>
March 31	“BCs environment minister says mandatory inspections of boats for invasive mussels not being pursued,” <i>Castanet.net</i>

March 31	"Okanagan Basin Water Board pushes province for action on invasive mussels," <i>Kelowna Capital News, Vernon Morning Star, Penticton Western News, West K News, Lake Country Calendar, Salmon Arm Observer, Sicamous Eagle Valley News, Summerland Review, Keremeos Review, Similkameen Spotlight</i>
April 1	"Okanagan Basin Water Board cites conflicting mandates for lack of watershed security," <i>Castanet.net</i>
April 5	"Province rejects mandatory watercraft invasive mussel inspections," <i>Kelowna Capital News, Vernon Morning Star, Penticton Western News, West K News, Lake Country Calendar, Salmon Arm Observer, Sicamous Eagle Valley News, Summerland Review</i>
April 7	"Invasive Species Society warns of new insect pests and common plants to watch for," <i>Castanet.net</i>
April 9	"Okanagan water board asks for more federal funding to fight invasive mussels," <i>Global Okanagan</i>
April 9	"Okanagan Water Board looks to feds to stop invasive mussels advance," <i>Castanet.net</i>
April 11	"Enviro group hosting Earth Day discussion," <i>Penticton Herald</i>
April 16	"Federal muscle needed to fight invasive mussels," <i>News Post</i>
April 18	"Okanagan Basin Water Board says cooperation vital to protecting drinking water," <i>Vernon Morning Star, Kelowna Capital News, West K News, Penticton Western News, Lake Country Calendar</i>
April 22	"Water Protection Projects in the Okanagan," <i>AM1150</i>
April 24	"Okanagan water protection projects to benefit Kelowna," <i>Castanet</i>
April 24	"Okanagan communities soak up water grants," <i>Vernon Morning Star, Summerland Review, Penticton Western News</i>
April 25	"Water restrictions begin May 1 in Penticton," <i>Penticton Western News</i>
April 25	"Water sampling to assess health of Deep Creek in Spallumcheen," <i>Castanet.net</i>

Recent Presentations

March 7	"Get to know the Okanagan Basin Water Board," to BC Institute of Agrologists – Anna Warwick Sears, Kellie Garcia, Nelson Jatel
March 8	"Okanagan Sustainable Water Issues," to UBCO Sustainability graduate studies class – Anna Warwick Sears
March 15	"Update on OBWB and Q&A," to West Kelowna Council - Anna Warwick Sears
March 15	"Organizing for Nature," to Environmental Funders Canada – James Littlely
March 16	"UN World Water Day 'Come Hell... B.C. Under Water' screening and panel," – Anna Warwick Sears, Corinne Jackson
March 17	"Water - Central to Life in the Okanagan... wine, women and well-being," to Wine, Women, Well-Being – Corinne Jackson
April 4	"Source Water Protection Toolkit," to Township of Spallumcheen Council – Kellie Garcia
April 14	"Source Water Protection Toolkit," to RDCO Board – Kellie Garcia
April 19	"Okanagan Lake Management and Climate Adaptation," to Vernon All Saints Church – Anna Warwick Sears
April 25	"Dip Your Toes into Okanagan Water Education - Intro to 'Our Relationship with Water in the Okanagan' Guides," to School District 67 (Penticton-Skaha) Professional Day – Corinne Jackson

choose your WATERSHED

All living things depend on clean water to survive, but human activities can harm water.
Knowing what these are, you can *choose* to protect water.





WaterWise Tips to Protect Okanagan Drinking Water

The water of the Okanagan watershed is all connected – from the snow and water that collects in the hills, to the streams and lakes in the valley bottom, to the water that flows unseen, under our feet in aquifers.

We are all part of “One valley. One water.”

HELP KEEP WATER CLEAN:

1

MAINTAIN HEALTHY FORESTS

WHY? Forests hold water, allowing for slower snow melt which can prevent flooding. The snow and water also help prevent wildfires.

2

STAY ON TRAILS WHEN RECREATING AROUND WATERWAYS

WHY? Recreational activities in the watershed can muddy waters and add pollutants to reservoirs and streams.

3

PROTECT NATIVE VEGETATION ALONG WATERWAYS

WHY? Removing and damaging vegetation along waterways can cause sediments to enter the water, increasing treatment costs, and can create the difference between safe drinking water straight from the tap vs. a boil water advisory.

4

USE COMPOST AS A NATURAL FERTILIZER & PREVENT IT FROM RUNNING OFF YOUR PROPERTY

WHY? Chemical fertilizers, oil and grease, road salt, and other pollutants can run off our properties and contribute to invasive milfoil growth and algae blooms.

5

IF YOU HAVE A SEPTIC SYSTEM, MAKE SURE TO PROPERLY MAINTAIN IT. GET IT PUMPED & INSPECTED BY A PROFESSIONAL EVERY 3 TO 5 YEARS

WHY? Wastewater from leaking septic tanks can pollute groundwater and make its way into waterways.

6

ALWAYS PACK OUT WHAT YOU BRING IN TO BEACHES, WHEN HIKING AND CAMPING

WHY? Garbage, such as cigarette butts, plastic bottle lids, drinking straws, and bottle caps, left on beaches or near waterways will pollute water.

7

PREVENT OIL AND GREASE, AND OTHER POLLUTANTS FROM ENTERING STORM DRAINS. DIVERT STORMWATER INTO VEGETATED SWALES TO FILTER POLLUTANTS

WHY? Storm drains flow directly into streams and lakes, carrying pollutants from our yards, driveways and parking lots.

8

WHEN BOATING, MAKE SURE TO PLAY IN THE DEEPEST PART OF THE LAKE

WHY? Boating near the shoreline churns up sediment which can affect drinking water and water for wildlife. The wake can also damage sensitive shoreline habitat and disturb bird nests.

9

HELP PROTECT THE OKANAGAN'S FLOODPLAINS, RIPARIAN AND WETLAND AREAS.

WHY? Almost 90% of the Okanagan's low elevation wetlands have been lost to development and invasive species, and are increasingly under pressure from climate change. But, these spaces are also important as natural filters – removing excess sediment and nutrients. They absorb carbon, helping address climate change, and produce oxygen. They are also critical habitat for wildlife and plants.

Resources



Slow It, Spread It, Sink It! An Okanagan Homeowner's Guide to Using Water as a Resource



Okanagan Lakeshore Living Guide



Source Water Protection Toolkit



Our Relationship with Water in the Okanagan – Education Guides

Learn More!

Find tips to protect Okanagan water at
www.OkWaterWise.ca
and www.OBWB.ca



Funding support for this project was provided by the Government of British Columbia's Healthy Watersheds Initiative, delivered by the Real Estate Foundation of BC and Watersheds BC.



District of Sicamous

446 Main Street
PO Box 219
Sicamous, BC
V0E 2V0

T: 250 836 2477
F: 250 836 4314
E: info@sicamous.ca
sicamous.ca



April 7, 2022

Okanagan Basin Water Board
Regular meeting
May 3, 2022
Agenda No: 7.1

BC Minister of Environment and Climate Change Strategy
PO Box 9047 Stn Prov Gov
Victoria, BC V8W 9E2
ENV.minister@gov.bc.ca

DELIVERED ELECTRONICALLY

Re: Invasive Mussel Defense Program

The District of Sicamous implores the Ministry to not only continue, but to increase the funding for the Invasive Mussel Defense Program and prioritize enforcement of watercraft inspections at the BC Provincial border.

The Okanagan Basin Water Board (OBWB) communicated a list of calls to action to stop zebra and quagga mussels from infesting B.C. waterways (enclosed). We strongly support these actions and the continued funding for this vital program.

The OBWB's six recommendations include:

1. *Maintain IMDP core program funding at 2021 levels of minimum \$3.5 million per year, adjusted for inflation going forward.*
2. *Introduce "pull-the-plug" legislation, requiring all watercraft to remove drain plugs prior to travelling on B.C. roads.*
3. *Review and update B.C.'s 2014 Early Detection, Rapid Response (EDRR) Plan for invasive mussels, and provide a window for public consultation prior to final publishing.*
4. *Provide toolkits and resources for local governments to conduct vulnerability assessments and put in place mitigation measures like retrofitting in-water infrastructure.*
5. *Introduce legislation to require all out-of-province watercraft to be inspected prior to being launched in B.C. waters.*
6. *Provide additional funding to invasive species groups in high-risk regions for monitoring, outreach and education.*

Increased funding and enforcement is necessary to avoid the dire consequences should invasive mussels enter our waterways. An infestation will affect our drinking water, our eco system, local businesses, and the tourism business that Sicamous depends on.

Local municipalities have taken up the call to educate residents and visitors to “Clean, Drain and Dry” watercraft when leaving our lakes and rivers but we rely on the Province to enforce the protection of our waters from invasive species with the use of border inspection sites.

We call upon on the Minister of Environment and Climate Change Strategy to reconsider the long-term consequences of reducing funding for watercraft inspections. We must make the effort to prevent invasion of our water resources.

Regards,

DISTRICT OF SICAMOUS

A handwritten signature in black ink, appearing to read "Terry Rysz", written in a cursive style.

Terry Rysz, Mayor

cc: MP Mel Arnold
MLA Greg Kylo
Shuswap Watershed Council
UBCM Member Municipalities
First Nations Communities
Okanagan Basin Water Board

Enclosure.

March 9, 2022

NEWS RELEASE

WATER BOARD CALLS FOR STRONGER MUSSEL PROTECTION AS COVID TRAVEL RESTRICTIONS EASE

Kelowna, B.C. – As boating season quickly approaches and COVID-19 travel restrictions ease, the Okanagan Basin Water Board is calling on the province to bolster its Invasive Mussel Defence Program (IMDP) in preparation for what is expected to be a busy tourist season. Today, the local government agency sent a letter to B.C.'s Minister of Environment and Climate Change, George Heyman, with a list of six calls to action.

"Since 2015, the IMDP has prevented 137 infested watercraft from entering provincial waters by conducting more than 220,000 inspections. Many of the infested watercraft were headed to high-risk Okanagan waters. Still, gaps remain in prevention," the letter reads.

For one, there are still motorists with watercraft who are failing to stop at mandatory, open inspection stations. Given that inspectors snagged 17 zebra and/or quagga mussel-fouled watercraft this summer during times when the stations were open, it raises the question as to how many more come in outside of inspection hours.

Also, a review of last summer's provincial mussel inspection numbers indicates that, for the second year in a row, the Okanagan is the top destination for these watercraft. This year, eight of the 17 infested watercraft were headed to our valley.

"If we are B.C.'s #1 destination for incoming mussel-infested watercraft, and we are encouraging tourism, we need to be better prepared," explains Sue McKortoff, Chair of the Water Board (OBWB) and Mayor of the border-town of Osoyoos.

Watercraft purchases have increased in the last couple of years, on both sides of the border, as people were staying closer to home. Now with the border opening up, it's expected more people will be coming with their water toys, increasing the chances of invasive mussels being introduced to B.C. waters.

The OBWB's six recommendations include:

1. Maintain IMDP core program funding at 2021 levels of minimum \$3.5 million per year, adjusted for inflation going forward.
2. Introduce "pull-the-plug" legislation, requiring all watercraft to remove drain plugs prior to travelling on B.C. roads.
3. Review and update B.C.'s 2014 Early Detection, Rapid Response (EDRR) Plan for invasive mussels, and provide a window for public consultation prior to final publishing.
4. Provide toolkits and resources for local governments to conduct vulnerability assessments and put in place mitigation measures like retrofitting in-water infrastructure.
5. Introduce legislation to require all out-of-province watercraft to be inspected prior to being launched in B.C. waters.
6. Provide additional funding to invasive species groups in high-risk regions for monitoring, outreach and education.

"A 2013 OBWB study found the cost of an infestation to our region would be at least \$42 mill. annually to manage," the OBWB letter states. "As such, we remain committed to protecting B.C. waters and supporting provincial efforts. This commitment has included delivery of our 'Don't Move A Mussel' campaign, promoting

the clean, drain, dry message, and valued at more than \$996,000 to date, and another \$266,000 in funding over that time provided to the Okanagan and Similkameen Invasive Species Society to conduct direct boater outreach and more.”

“If invasive mussels arrived here, it’s not just people who drive boats who will be affected. It will affect everyone,” cautioned McKortoff. The mussels will become a recurring maintenance expense for in-lake infrastructure such as water lines, docks, and bridges. They will affect water quality and harm aquatic ecosystems. Plus, when the mussels were introduced to Lake Winnipeg, it took only two years for the molluscs to reproduce in such numbers that beaches became foul-smelling and un-walkable, she added. “Can you imagine not taking your kids or grandkids to the beach in summer?”

Please find attached, the OBWB’s letter to the province with recommendations.

For more information on zebra and quagga mussels, the risks to the Okanagan, and how to prevent their spread, please visit www.DontMoveAMussel.ca.

-30-

MEDIA CONTACT: Corinne Jackson, OBWB – Communications Director
Office: 250-469-6271
Cell: 250-718-7249
E-mail: Corinne.Jackson@obwb.ca

Hon. George Heyman
B.C. Minister of Environment and Climate Change Strategy
PO Box 9360 Stn Prov Govt
Victoria, B.C. V8W 9M2

March 9, 2022

Re: Calls to Action for Invasive Mussel Prevention

Dear Minister Heyman,

Thank you for your correspondence of April 7th, 2021, responding to our continued calls for action to prevent the spread of invasive zebra and quagga mussels into B.C. As the boating season quickly approaches, I am writing again on behalf of the Okanagan Basin Water Board (OBWB) to call for continued support and proper resourcing of the province's Invasive Mussel Defence Program (IMDP), recognizing the significant cost if invasive mussels became established here.

The OBWB acknowledges the significant improvements in the province's IMDP and its work with counterparts in neighbouring jurisdictions over the past seven years. Since 2015, the IMDP has prevented 137 infested watercraft from entering provincial waters by conducting more than 220,000 inspections. Many of the infested watercraft were headed to high-risk Okanagan waters. Still, gaps remain in prevention, and other significant issues remain for limiting the spread and damage should an infestation occur in any part of the province. We urge you to consider the following priority actions to enhance the protection of B.C. waters.

1. Maintain IMDP core program funding at 2021 levels of minimum \$3.5 million per year, adjusted for inflation going forward.

The IMDP has become the first line of defense to protect provincial waters, but the program's budget allocation has changed annually, and has been dependent on a number of non-government funders, including Fortis BC which has not renewed its original funding agreement. This program is important to the environment and economy of the province and should have stable, predictable annual funding.

2. Introduce "pull-the-plug" legislation, requiring all watercraft to remove drain plugs prior to travelling on B.C. roads.

We understand that the province is pursuing this legislation as part of updates to the Wildlife Act. We strongly support this action and urge you to prioritize it as another boating season is quickly approaching.

3. Review and update B.C.'s Early Detection, Rapid Response (EDRR) Plan for invasive mussels, and provide a window for public consultation prior to final publishing.

The EDRR is an important document that provides direction on how to rapidly detect and respond to a new infestation of invasive mussels. We believe it is important to consult with the public, and especially local and regional invasive species groups to understand where there may be gaps in the plan, or where more detail may be needed, beyond what is provided by the provincial inter-ministry working group. Complex watersheds, like the Columbia, the Okanagan and the Fraser would also be better protected with further planning for

containment and long-term management strategies, beyond what little is considered in the current version of the EDRR. Local consultation could provide support for developing those plans.

4. Provide toolkits and resources for local governments to conduct vulnerability assessments and put in place mitigation measures like retrofitting in-water infrastructure.

In your reply to our previous call for this action, you stated that “this has not been something that local governments have been asking for, individually or through UBCM,” and that it “will be considered for the future, but not considered as an immediate priority.” The OBWB is a local government agency, a partnership of three regional districts, and provides services to 12 municipalities and works with Okanagan First Nations. Part of our mandate is “to present proposals and recommendations to appropriate agencies, being municipalities or governments, according to jurisdiction and responsibility.” We will work with local governments to support this call to action and work to have it brought forward to UBCM.

We have extensive experience providing technical and scientific support to local governments, including in the form of toolkits and guides, and are a service partner with CivicInfoBC, providing the Planning Guides resource database. The OBWB could provide project management and coordination in partnership with provincial staff to develop a local government guide to vulnerability assessments and mitigation measures for invasive mussels. We would welcome an opportunity to discuss this further.

5. Introduce legislation to require all out-of-province watercraft to be inspected prior to being launched in B.C. waters.

OBWB first made this call to action in May 2016 and has called for it again every year since. While we recognize that boat registration and safety are regulated at the federal level, the province does have the authority to regulate activities on provincial waters, similar to motor vessel restrictions on certain lakes as outlined in the fishing regulations. Alternatively, the province could call on the federal government to regulate watercraft in B.C., under their authority in the Fisheries Act, Aquatic Invasive Species Regulations 43 (1), or through the Canada Shipping Act, providing extra tools to protect B.C. waters beyond the current scope of the Invasive Mussel Defence Program.

Analysis of provincial inspection numbers suggests a 30% chance in any given year that a non-compliant, motorized watercraft will be carrying invasive mussels. This only accounts for watercraft that were recorded failing to stop at open inspection stations and does not include any craft that may have entered outside of inspection station hours. In 2021 this accounted for more than 580 motorized watercraft, and more than 3,500 non-motorized watercraft. This is an important gap we feel has not been given due consideration over the past six years.

6. Provide additional funding to invasive species groups in high-risk regions for monitoring, outreach and education.

Current funding for ongoing water monitoring, administered through the Habitat Conservation Trust Fund, is set to expire after the 2022 season. Part of this funding was provided by the federal government over a three-year term. We would strongly support any provincial request for federal funding to continue this program, as well as federal or provincial funding to regional invasive species groups to continue or expand their outreach and education campaigns. These non-profit groups provide a significant service to their regions, but often struggle with operational costs, and the time required to apply for funding. Ongoing, direct funding would enhance their ability to monitor, engage and educate, bolstering provincial efforts.

A 2013 OBWB study found the cost of an infestation to our region would be at least \$42 mill. annually to manage. As such, we remain committed to protecting B.C. waters and supporting provincial efforts. This

commitment has included delivery of our “[Don’t Move A Mussel](#)” campaign, promoting the clean, drain, dry message, and valued at more than \$996,000 to date, and another \$266,000 in funding provided to the Okanagan and Similkameen Invasive Species Society to conduct direct boater outreach and more.

We look forward to hearing from you, and supporting the enhanced efforts noted above to keep B.C. waters free from invasive mussels.

Sincerely,

A handwritten signature in black ink that reads "Sue McKortoff". The signature is written in a cursive, flowing style.

Sue McKortoff, Chair
Okanagan Basin Water Board

CC:

- Hon. Josie Osborne, B.C. Minister of Land, Water and Resource Stewardship
- 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