

## Okanagan Basin Water Board Meeting Agenda



**Okanagan Basin**  
WATER BOARD

**DATE:** Tuesday, October 4, 2022

**TIME:** 10:00 a.m. to 12:00 p.m.

**PLACE:** Online

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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 September 9, 2022 held at Okanagan Regional Library. (page 1)

5. **STAFF REPORTS**

5.1 Executive Director Report (page 4) (resolutions required)

5.1.1 2023 OBWB meeting schedule for approval

5.1.2 Signing Authority memo

5.2 Policy and Planning Director Report (page 9)

5.3 Water Stewardship Director Report (page 11)

5.4 Deputy Administrator Report (page 20) (resolution required)

5.5 Office and Grants Manager Report (page 23)

5.6 Communications Director Report (page 24)

6. **NEW AND UNFINISHED BUSINESS**

6.1 2023 WCQI Grant Program (page 29) (resolution required)

7. **NEXT MEETING**

7.1 The next meeting of the Okanagan Basin Water Board will be **Tuesday, January 10, 2023, at 10 a.m. ONLINE**

8. **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. From time-to-time, 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](mailto: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 SEPTEMBER 9, 2022, OKANAGAN REGIONAL LIBRARY - KELOWNA DOWNTOWN BRANCH  
1380 ELLIS ST., KELOWNA, B.C.**

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**PRESENT**

Chair Sue McKortoff	Regional District Okanagan-Similkameen
Vice-Chair Cindy Fortin	Regional District Central Okanagan
Director Victor Cumming	Regional District North Okanagan
Director Rick Fairbairn	Regional District North Okanagan
Alt. Director Christine Fraser	Regional District North Okanagan
Director Bob Hrasko	Water Supply Association of B.C.
Alt. Director Jeremy Fyke	Okanagan Water Stewardship Council (OWSC)

**REGRETS**

Director to be appointed	Okanagan Nation Alliance (ONA)
Director Colin Basran	Regional District Central Okanagan
Director James Baker	Regional District Central Okanagan
Director Doug Holmes	Regional District Okanagan-Similkameen
Director Rick Knodel	Regional District Okanagan-Similkameen
Caitlyn Glasser	ONA Technical Staff

**STAFF**

Anna Warwick Sears	Executive Director
Nelson Jatel	Water Stewardship Director
James Littley	Deputy Administrator
Kellie Garcia	Policy and Planning Director
Carolina Restrepo-Tamayo	Office and Grants Manager

**1. CALL MEETING TO ORDER**

Chair McKortoff called the meeting to order at 12:50 p.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**

**3. APPROVAL OF AGENDA**

***"THAT the agenda of the regular meeting of the Okanagan Basin Water Board of Sept. 9, 2022 be approved."***

**CARRIED**

**4. ADOPTION OF MINUTES**

4.1 Minutes of the Regular Meeting of the Okanagan Basin Water Board of July 5, 2022 held online.

***"THAT the minutes of the regular meeting of the Okanagan Basin Water Board on July 5, 2022 held online be approved."***

**CARRIED****5. STAFF REPORTS****5.1 Executive Director Report**

Dr. Sears discussed the post-election board schedule and explained that it is unlikely that OBWB directors will be appointed in time for a December meeting. She suggested that the board hold a meeting on the second Tuesday in January to avoid having an extended time between meetings, while still giving staff time to prepare the agenda package and send it out after the holidays.

***“THAT the January OBWB meeting be held on January 10, 2022.”***

**CARRIED**

Dr. Sears told the board that as of August 17, 2022, all three Okanagan regional districts have approved our request to make the OBWB's Water Management Program an ongoing function of the organization.

She gave an overview of recent changes and updates to the organizational structure in the office, including updates to several job titles to reflect actual activities and responsibilities.

Dr. Sears explained that in June she made a submission to the B.C. Budget Consultation that included three points. Their report was released on August 11, 2022. The committee directly supported two out of the three points in their summary recommendations:

Recommendation 96. Implement 24/7 inspection facilities at all major border crossings to inspect vessels for quagga mussels and other invasive species.

Recommendation 103. Provide \$75 million in sustained funding to the BC Watershed Security Fund.

Although the committee did not make a recommendation directly related to the third point around the need for funding a review of the Okanagan Lake Regulation System and Operating Plan, the summary of the report section stated: *“While reflecting on the presentation by the Okanagan Basin Water Board, Members felt that the group effectively demonstrated the risks to lives and the economy of not ensuring that BC's dam infrastructure is up to date to deal with severe weather events”* (page 50). More generally, the OBWB's request could be accommodated under the following:

Recommendation 85. Provide urgent and substantive investment into climate adaptation, mitigation, and prevention strategies with a view to reduce the worst impacts of climate change.

Dr. Sears reminded directors about the Osoyoos Lake Water Science Forum to be held on October 27 to 29. The forum will be hosted in partnership with the Osoyoos Indian Band and the Okanagan Nation Alliance, with particular emphasis on bridging Western and Indigenous approaches to water and watershed management. More details about the event such as: agenda, venues, hotels info. and much more can be found at: <https://www.obwb.ca/olwsf/>. OBWB directors should let staff know if they plan to attend.

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

**CARRIED****5.1.1 Tracking Measures Report**

Dr. Sears explained that this is the third year of applying tracking measures for our annual report. The measures continue to be a mix of quantitative and qualitative data.

***“THAT the 2022 - Tracking Progress towards the Goals of the 2020 Strategic Plan report be received.”***

**CARRIED**

## **6. NEW & UNFINISHED BUSINESS**

### **6.1 Purchasing Policy Update Memo**

Dr. Sears provided an overview of recent updates to the OBWB purchasing policy. The policy is structured to fit existing guidelines and best practices, consistent with those of the regional districts and other local governments. It was structured with the help of Andy Brennan, of Interior Purchasing, who is a consultant to local governments across B.C.

***“THAT the OBWB adopt the updated 2022 OBWB Purchasing Policy as presented by staff.”***

**CARRIED**

### **6.2 Budget Features Memo – Proposed Budget for 2023 – 2024**

Dr. Sears presented the budget for 2023-2024. She explained that the overall OBWB requisition is \$3,833,982, up from the 2022-23 requisition of \$3,693,017. In total, this is equivalent to 3.0 cents/\$1,000 assessment, down from 3.8 cents/\$1,000 assessment because of increased property values. The budget includes a new 0.5 FTE communications position, a four-month casual milfoil operator for the summer of 2023, and funds to accommodate renewal of milfoil control permits and equipment.

***“THAT the OBWB adopt the 2023-2024 budget as presented.”***

**CARRIED**

## **7. NEXT MEETING**

**7.1** The next meeting of the Okanagan Basin Water Board will be held Tuesday, October 4, 2022 at 10:00 a.m., online.

## **8 ADJOURNMENT**

***“THAT there being no further business, the regular meeting of the Okanagan Basin Water Board of September 9, 2022 be adjourned at 1:27 p.m.”***

**CARRIED**

Certified Correct:		
Chair		Executive Director

## MEMORANDUM

Okanagan Basin Water Board  
Regular meeting  
October 4, 2022  
Agenda No: 5.1

To: OBWB Directors  
From: Anna Warwick Sears  
Date: September 28, 2022  
Subject: Executive Director Report

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### OBWB 2023 Meeting Schedule

I've provided an attachment with the proposed OBWB meeting schedule for 2023. Please note:

- I've included the "normal" location rotation between regional district board rooms, but we also have the option to meet on Zoom.
- We are holding the September meeting on a Friday, in expectation that we will have an in-person public meeting – and we have better attendance on that day.
- There is one cancelled date (July) because of conflicts related to an adjacent holiday.
- This also shows other significant dates for board approvals on the calendar, including grant awards, and approval of the annual audited financial statements.

**Recommended motion: *That the OBWB adopts the 2023 meeting schedule as presented.***

### Update to Signing Authority Memo

The attached signing authority memo needs to be updated to reflect the new signing approval limits in the purchasing policy approved by the board at the September board meeting.

**Recommended motion: *That the OBWB adopts the updated signing authority memo as presented.***

### Weather Report – the water year ahead

Hydrologists use the term 'water year' to describe the water supply year from October 1 – September 30. In this way of viewing it, the year begins with the development of the snowpack, increasing through the winter until freshet, followed by the irrigation season which mostly wraps up in September. It's a particularly good way of thinking about the year in the Okanagan, because so much of our supplies depend on the snowpack.

One of the biggest factors is the El Niño/Southern oscillation (ENSO). The forecast this year is for La Niña conditions to continue through the autumn, decreasing to a 54% chance of La Niña in January – March 2023. This will be the third La Niña winter, and it is unusual for La Niña conditions to continue for this extended length of time. La Niña winters in the Okanagan are typically associated with greater-than normal amounts of precipitation and below normal temperatures. The following is an excellent post from the U.S. government Climate.gov website about the potential (or not!) affect of climate change on ENSO: <https://www.climate.gov/news-features/blogs/enso/enso-and-climate-change-what-does-new-ipcc-report-say>.

### Board Meeting Schedule for 2023

Month	Date	Location	Notes
January	Tuesday, Jan 10	ONLINE or RDCO TBD, Kelowna	Election of Chair & Vice Chair Shifted to second Tuesday to avoid conflicts with holiday schedules
February	Tuesday, Feb 7	ONLINE or RDCO TBD, Kelowna	
March	Tuesday, March 7	ONLINE or RDOS TBD, Penticton	
April	Tuesday, April 4	ONLINE or RDNO TBD, Coldstream	WCQI grant approvals
May	Tuesday, May 2	ONLINE or RDCO TBD, Kelowna	Joint OBWB/Stewardship Council meeting
June	Tuesday, June 6	ONLINE or RDOS TBD, Penticton	Adopt audited financial statements
July	Tuesday, July 4	<b>Cancelled</b>	Avoiding day after Canada Day STAT
August	Tuesday, August 1	ONLINE or RDNO TBD, Coldstream	
September	<b>Friday</b> , September 8	ONLINE or TBD location in Kelowna	Annual Public Meeting/OBWB regular meeting
October	Tuesday, October 3	ONLINE or RDOS TBD, Penticton	
November	Tuesday, November 7	ONLINE or RDCO TBD, Kelowna	First opportunity to adopt 2024-25 OBWB budget
December	Tuesday, December 5	ONLINE or RDCO TBD, Kelowna	Adopt 2024-25 OBWB Budget

TBD = To be determined.

## MEMORANDUM

Okanagan Basin Water Board  
Regular meeting  
October 4, 2022  
Agenda No: 5.1.2

To: OBWB Directors  
From: Anna Warwick Sears  
Date: October 4, 2022  
Subject: Updating Signing Authority

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**Recommendation:** That the OBWB adopt the following resolution.

*"WHEREAS it is desirable for the Okanagan Basin Water Board (the "Board" or "OBWB") to authorize certain of its officers to, inter alia, approve payments and contracts, deposit and receive cheques and electronic fund transfers, and obtain and deliver from the Board's bankers, copies of all or any stocks and bonds; NOW THEREFORE, the Board hereby enacts as follows:*

**Cheques/Orders to Pay (i.e. Wires):**

1. The cheque signing officers for the OBWB are:
  - a. Any one of the Directors of the Board; and
  - b. One of the following: Chief Administrative Officer, Regional District of Central Okanagan (RDCO); Director of Financial Services, RDCO; Executive Director, OBWB.
2. All cheques/orders to pay over \$35,000 must be signed by two original signatures. Cheques of \$35,000 or less can be signed electronically.

**Electronic Funds Transfer (EFTs) via transfer generated by Regional District Central Okanagan staff:**

3. For all EFTs:
  - a. Secure online banking procedures must be used.
  - b. The creator of the transfer cannot be the approver.
4. Payroll:
  - c. Documentation and all EFTs prepared by RDCO staff will be signed off and approved by any one of the following: Chair, OBWB; Vice-Chair, OBWB; Executive Director, OBWB; Chief Administrative Officer, RDCO; Director of Financial Services, RDCO; Finance Manager, RDCO.



5. Regular Accounts Payable:

- d. For transfers within vendor payments of \$35,000 or less each, documentation will be signed off and EFTs will be approved online by one of the following: Chair, OBWB; Vice-Chair, OBWB; Executive Director, OBWB; Chief Administrative Officer, RDCO; Director of Financial Services, RDCO; Finance Manager, RDCO.
- e. For transfers with vendor payments over \$35,000, documentation will be signed off by: Any one of the Directors of the OBWB; and one of the following: Chief Administrative Officer, RDCO; Director of Financial Services, RDCO; Executive Director, OBWB. EFTs will be approved online for release by any one of the following: Chair, OBWB; Vice-Chair, OBWB; Chief Administrative Officer, RDCO; Director of Financial Services, RDCO; Executive Director, OBWB; Finance Manager, RDCO.

Government Remittances (i.e., Source deductions, CRA, WCB, GST, PST, etc...)

- 6. RDCO Finance staff are required to file information online with regards to periodic reporting and required remittances on behalf of the OBWB. Payment is made on filing the report, at which time the government entity is authorized by RDCO Finance staff to withdraw the amount owing or deposit any refund into the OBWB account.
  - a. The RDCO Finance staff person filing the report is to provide a copy of the report with the balance to be paid/refunded and obtain the signature of the Executive Director of the OBWB or the Finance Manager of the RDCO.

Other Transfers:

- 7. The Finance Manager, RDCO and the Executive Director, OBWB are authorized to transfer funds between all OBWB bank accounts (including transfer of investments to and from the OBWB bank accounts).

And Furthermore:

- 8. That this resolution be communicated to the Bank and remain in force until written notice of change is given to the bank manager of the branch of the Bank at which the account of the Board is kept and receipt of such notice duly acknowledged in writing.
- 9. And that the Chair, OBWB; the OBWB Directors appointed to the Board by the RDCO; and the Executive Director, OBWB; have authority to sign contracts approved by the Okanagan Basin Water Board."
- 10. This resolution shall take effect on the 4th day of October, 2022.

***"That the Signing Authority Resolution be approved as presented."***

## MEMORANDUM

Okanagan Basin Water Board  
Regular meeting  
October 4, 2022  
Agenda No: 5.2

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

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### Drought Planning and Response

The Thompson Okanagan Drought Response Team met every two weeks between May and September this year. The season started out well, with normal or above average flows in most streams and normal aquifer levels. August was hot and dry; so streamflows began to decline and water temperatures increased throughout the region. The drought level for the Okanagan was raised to Level 1 with some sub-basins raised to Level 2 (Shuttleworth, Vaseux, Shingle, and Inkaneep creeks). Conditions continued to be dry and warm throughout September, so the team is keeping a close eye on things and will continue to meet into October.

Ms. Jackson and I have been working together with the drought communications sub-committee to prepare a primer for the media that is intended to help address the miscommunication and misunderstandings around drought declarations in B.C. Unfortunately, no universally applicable tool is available for measuring drought so various agencies have created definitions and indicators to measure and define the extent and severity of drought based on criteria significant to the agency's mandate. Three drought classification systems are used in B.C.: **Stages** enacted by local water suppliers, **Levels** put in place by the B.C. Government, and **Ratings** declared by the Canadian Drought Monitor. Geographical areas can have overlapping drought classifications at the same time – which may not seem to logically correspond. The primer explains the indicators/criteria used to determine the different drought declarations and provides links to important information sources for each. It also highlights the three different kinds of drought: meteorological (lack of precipitation), hydrological (reduced streamflows, or lake or groundwater levels), and agricultural (lack of soil moisture).

### Source Water Protection

On October 11, Heather Larratt and I will be giving a presentation to the Drinking Water Leadership Council at a webinar hosted by B.C. Ministry of Health. The presentation will focus on the OBWB's Source Water Protection Toolkit and webinar series. The council is comprised of representatives from the province's ministries of Health, Land Water and Resource Stewardship, Environment, Forests, and Municipal Affairs, and staff from the Health Authorities. We are looking forward to talking to this diverse group of drinking water managers, regulators, medical health officers, policymakers, and engineers, and are working hard to create an interesting and engaging presentation that will make them think about how they can contribute to source protection in their various roles.

I also continue to get inquiries about the toolkit and webinars from other organizations. For example, this month I had a meeting with an Instructor from Yukon University who is tasked with creating a course on source water protection for the university and wanted to use the toolkit as a starting point.

### **Beaver Lake Watershed Management Plan**

For several months now, I have been working with the District of Lake Country to develop a water management plan for the Beaver Lake watershed, which includes Ellison Lake, and Upper and Middle Vernon Creek. Middle Vernon Creek provides spawning habitat for approximately 75% of the total kokanee population of Wood Lake. In 2021, the district was ordered by Fisheries and Oceans Canada to release water from storage held in Beaver Lake reservoir to increase flows in Middle Vernon Creek during spawning time. This summer, they were asked by the Government of B.C. to voluntarily release water from the reservoir to help the fish. These reactive measures are not sustainable. Extensive technical knowledge exists for the area, but until now there has been no attempt at writing a coordinated plan on how to respond to low flows in the system, among other issues. With that in mind, the district is working collaboratively with senior government regulators, the Okanagan Indian Band and Okanagan Nation Alliance, local landowners and user groups, local governments, agriculture, and other partners to create a watershed management plan.

### **Groundwater Protection Companion Guide**

I have been updating the OBWB's 2009 Groundwater Bylaws Toolkit. Rather than create another standalone resource, I am simplifying, shortening, and repackaging the document as a companion guide to the Source Water Protection (SWP) Toolkit. The guide will mainly provide a groundwater lens to Tool 3 of the SWP Toolkit: Policies, plans and bylaws. It will include sample groundwater policy and bylaw language that can be tailored by local governments to each unique area and provide case studies that highlight leadership and best practices in groundwater protection.

### **Planning Guides Database**

Over the summer, I worked with CivicInfo BC to review and update the [Planning Guides](#) library. The database includes about 110 resources that provide legal mechanisms, innovative policies, and best practices that can help communities adapt to climate change, protect green infrastructure, and carry out sustainable land and water use practices. The OBWB should continue to promote the library to communities and add new resources as they are published.

## MEMORANDUM

Okanagan Basin Water Board  
Regular meeting  
October 4, 2022  
Agenda No: 5.3

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

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### Okanagan Water Stewardship Council

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

WSC committees support a focused forum to advance several priorities set by the council. The council has seven committees: *Policy, Water and Climate, Alluvial Fans, Wetlands, Agriculture Water, Water Quality*, and one standing committee: *Source Protection*. The committee chairs meet monthly to discuss progress and cross-cutting issues as well as inform the guest speaker selection process.

Our guest speaker at last month's meeting was Dr. **Cassidy Rankine**, from the international company, Planet.com. Cassidy presented how "daily satellite imagery is changing how we manage water." Planet.com supplies daily satellite data helping clients and partners understand the physical world and act. Like new drone technology, these remote sensing tools provide several new and exciting sources of information to enhance watershed management. The council meeting was well-attended with lots of great discussion and networking.

Our next council meeting is scheduled for Thursday, October 13<sup>th</sup> from 1 – 4:30 p.m. and will be held at the Kelowna Capri Hotel. Lunch will be served at noon. Our guest speaker, attending in person, is **Dr. Jeffery McDonnell**, Professor of Hydrology and Associate Director of the Global Institute for Water Security at the University of Saskatchewan. Over the past 30 years, McDonnell's work has focused on field-based runoff process descriptions around the world, leading to new measurement techniques and a new understanding of the dominant controls of rainfall-runoff behavior. He is the author of about 350 papers and the co-edited Elsevier text "isotope Tracers in Catchment Hydrology." His work focuses on rainfall-runoff processes and tracing the catchment water cycle. He will be presenting "*Watershed Runoff Processes: Things we still don't know.*"

Board members are encouraged to attend and take part.

**Okanagan Flood Risk Mapping project**

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 Okanagan Flood Risk Mapping project will produce digital maps to support flood planning and adaptation, customized to support all levels of government. This project is being developed by the IBI Group and is currently behind schedule due to several IBI Group technical and human resource issues. A draft report is expected to be delivered this month, with project completion and completed risk map layers for the Okanagan delivered in October.

Okanagan flood hazard maps were completed in 2020 and identified area that may be covered by water or show where the water reaches during a specific flood event. This project will update the existing flood depth and hazard maps with risk and vulnerability information. Flood hazard maps are critical tools that can help us show potential risks with associated damages and mitigate flood impacts. This risk assessment will consider social, cultural, economic, and environmental consequences to communities during a potential flood event. Flood maps offer many advantages to Okanagan communities, they:



Provide a foundation for land use planning and government decision-making.



Support emergency management practices.



Enable flood mitigation activities like adding dikes or other infrastructure, including modernizing the Okanagan Lake regulation system. This project is one of 18 identified priority areas of research within the OLRs study.

OLRS Study link: <https://www.obwb.ca/lakelevelmanagement/>



Empower citizens and property owners to make informed decisions related to flood risk.

The new flood map layers will be added to the OBWB's flood website: [www.OkanaganFloodStory.ca](http://www.OkanaganFloodStory.ca).



### **OBWB Hydrometric Service**

Hydrometric information is fundamental to the planning, operation, and management of water. Several activities that depend on hydrometric data include water resource planning, water licensing, regulation development and control, assessment of the impact of operational policy, allocation of flow, fish management, environmental flow and critical flow management, and contingency planning including drought. Operational hydrometric stations dropped to 24 stations in the early 2000s from a height of 154 stations in the early 1980s. This reduced level of hydrometric stations was identified as inadequate for operational needs and water security in the Okanagan (Dobson 2008).

The goal of this OBWB service, which started in 2021, is to develop and manage an adequate hydrometric information network for the valley. Information about the OBWB's hydrometric service is available online at

<https://www.obwb.ca/hydrometrics/>.

Environment and Climate Change Canada (ECCC) and ONA staff and project partners were busy throughout September installing new hydrometric stations, and collecting and managing hydrometric data, with a continued focus on collecting high-flow data measurements across the Okanagan.

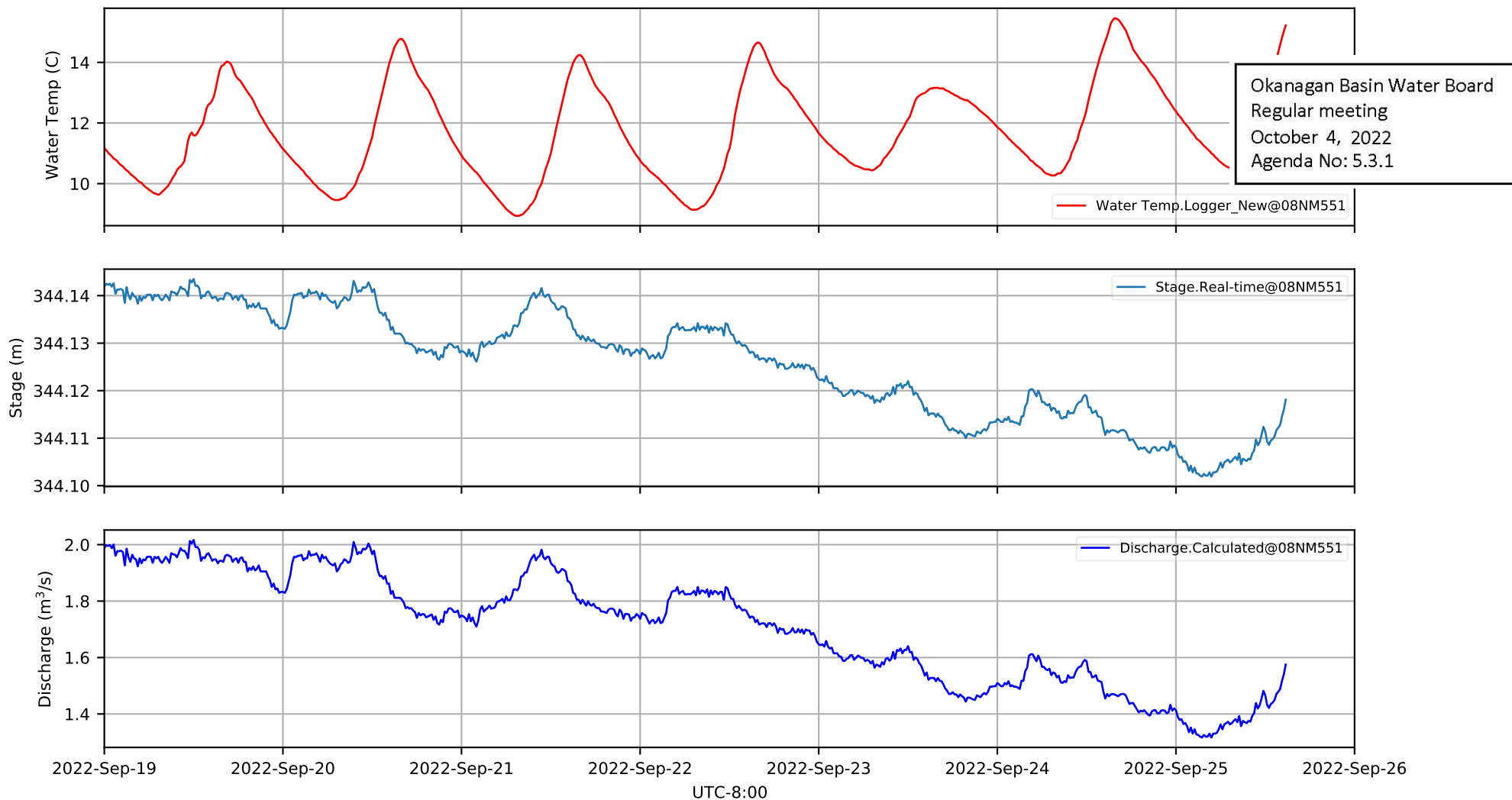
Data collected by OBWB/ONA hydrometric stations is posted on the B.C. government water data websites, supplying public access to the data. The province's real-time water data tool can be found online here: <https://www2.gov.bc.ca/gov/content/environment/air-land-water/water/water-science-data/water-data-tools/real-time-water-data-reporting>.



Pearson Creek (08NM172). Activated on May 21, 2021.  
Photo courtesy ECCC.

Examples of NEW real-time hydrometric station data (week of September 19<sup>th</sup>) collected by the ONAFD team and published by the province are attached.

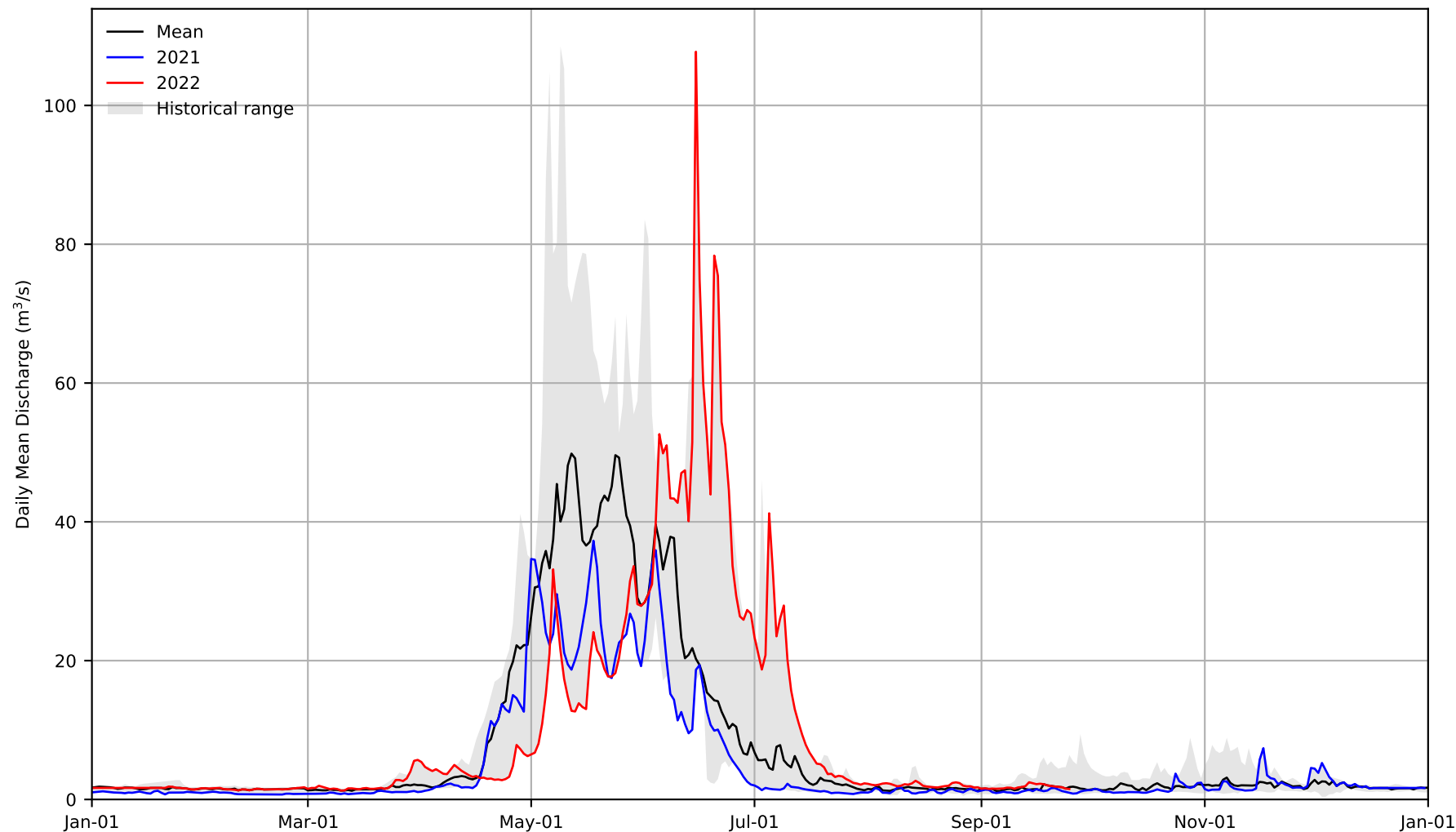
# Mission Creek above Gordon Drive



Recent Stage and Discharge  
Site: 08NM551  
Date created: 2022-09-26 08:05:20

Disclaimer: The near real-time information presented in this report is preliminary and has been generated automatically with limited verification and review. The information should be used with caution. Subsequent quality assurance and verification procedures may result in differences between the currently displayed data and final published data. Discharge values are based on the active rating curve and may be inaccurate. Discharge values will be revised for final publication following detailed review.

# Mission Creek above Gordon Drive

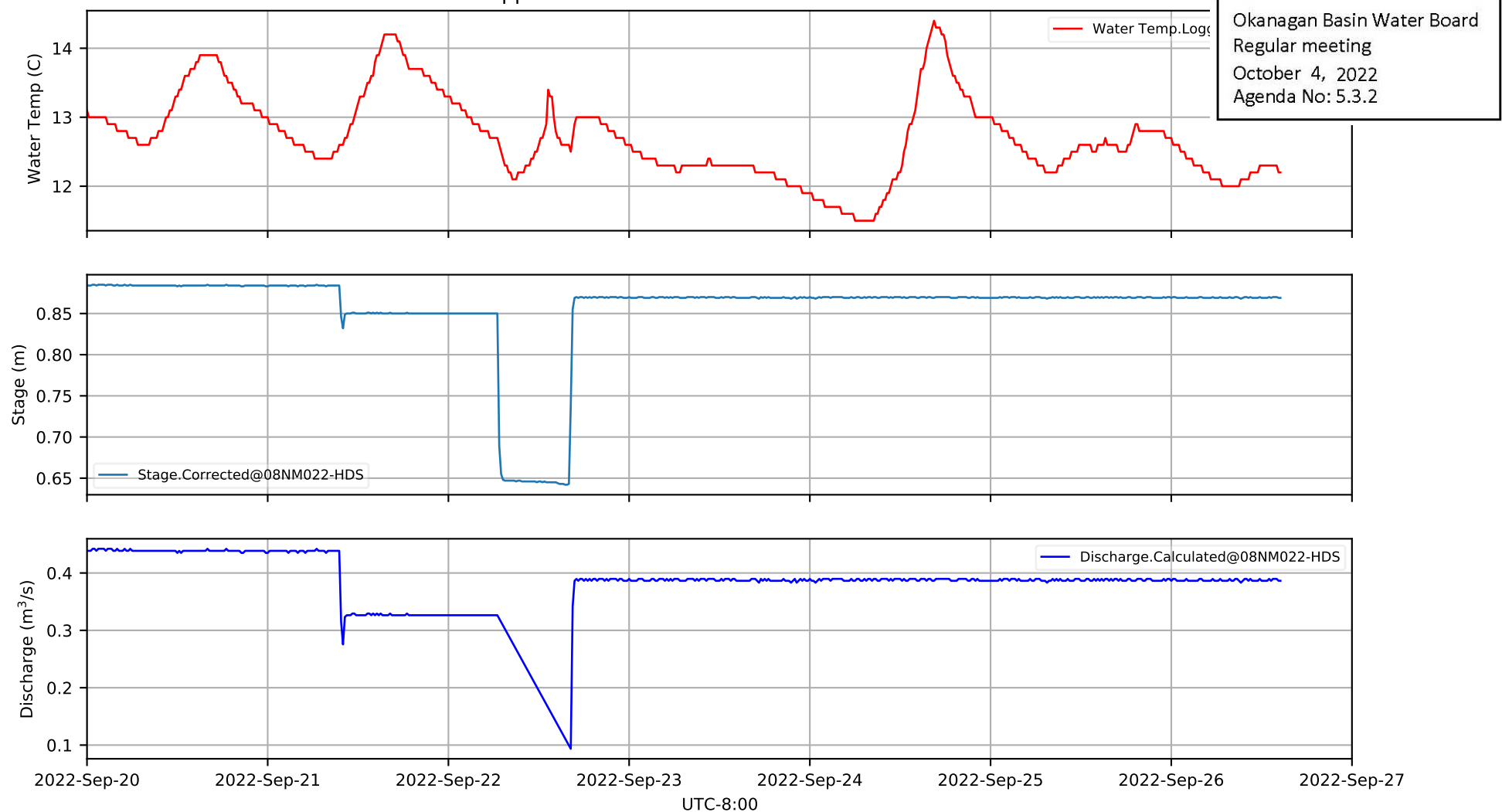


Historical Mean Daily Discharge  
 Site: 08NM551  
 Date created: 2022-09-26 08:05:20

Disclaimer: The near real-time information presented in this report is preliminary and has been generated automatically with limited verification and review. The information should be used with caution. Subsequent quality assurance and verification procedures may result in differences between the currently displayed data and final published data. Discharge values are based on the active rating curve and may be inaccurate. Discharge values will be revised for final publication following detailed review.



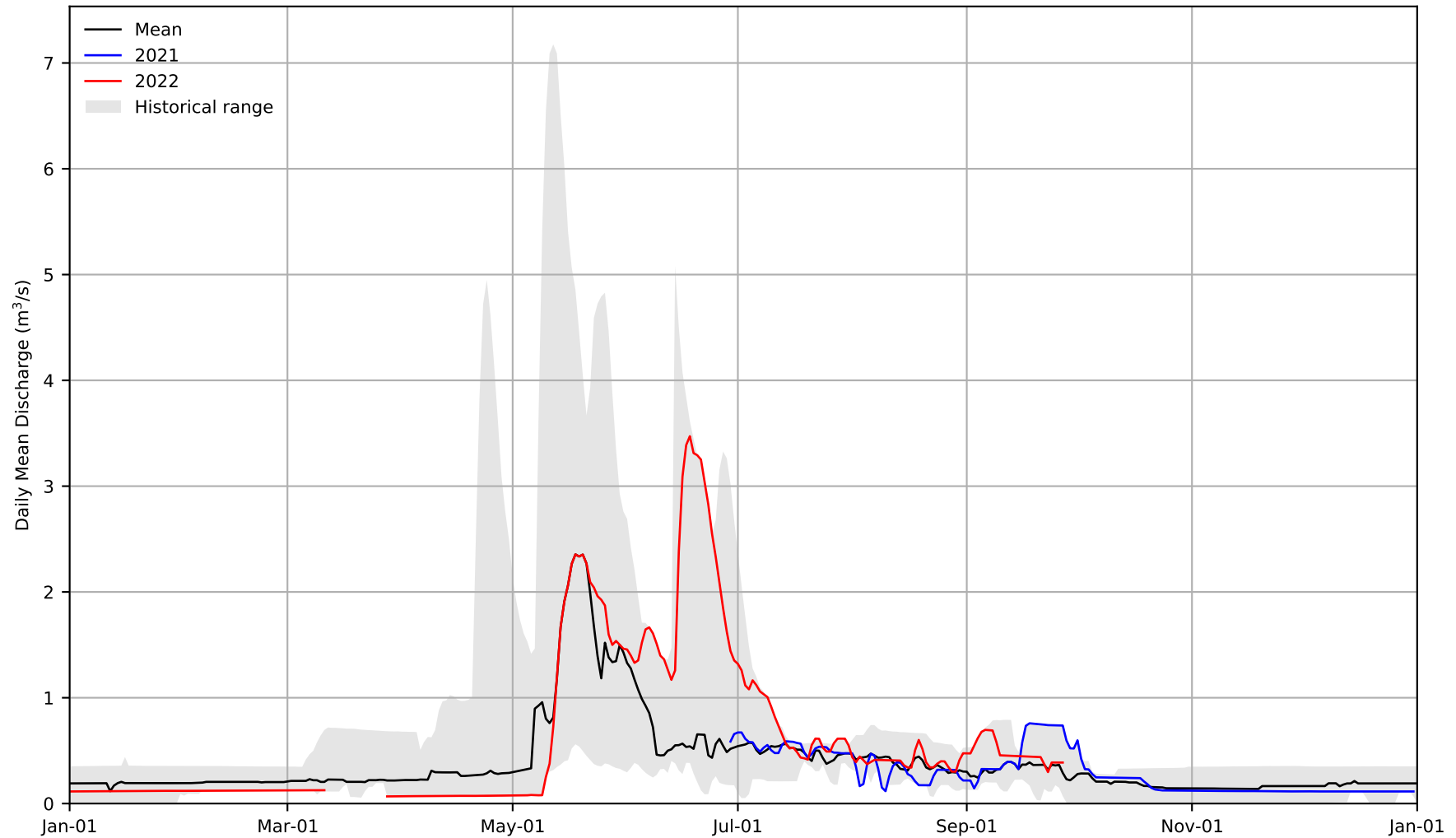
# Upper Vernon Creek below Swalwell Lake



Recent Water Temp, Stage and Discharge  
Site: 08NM022-HDS  
Date created: 2022-09-27 05:05:02

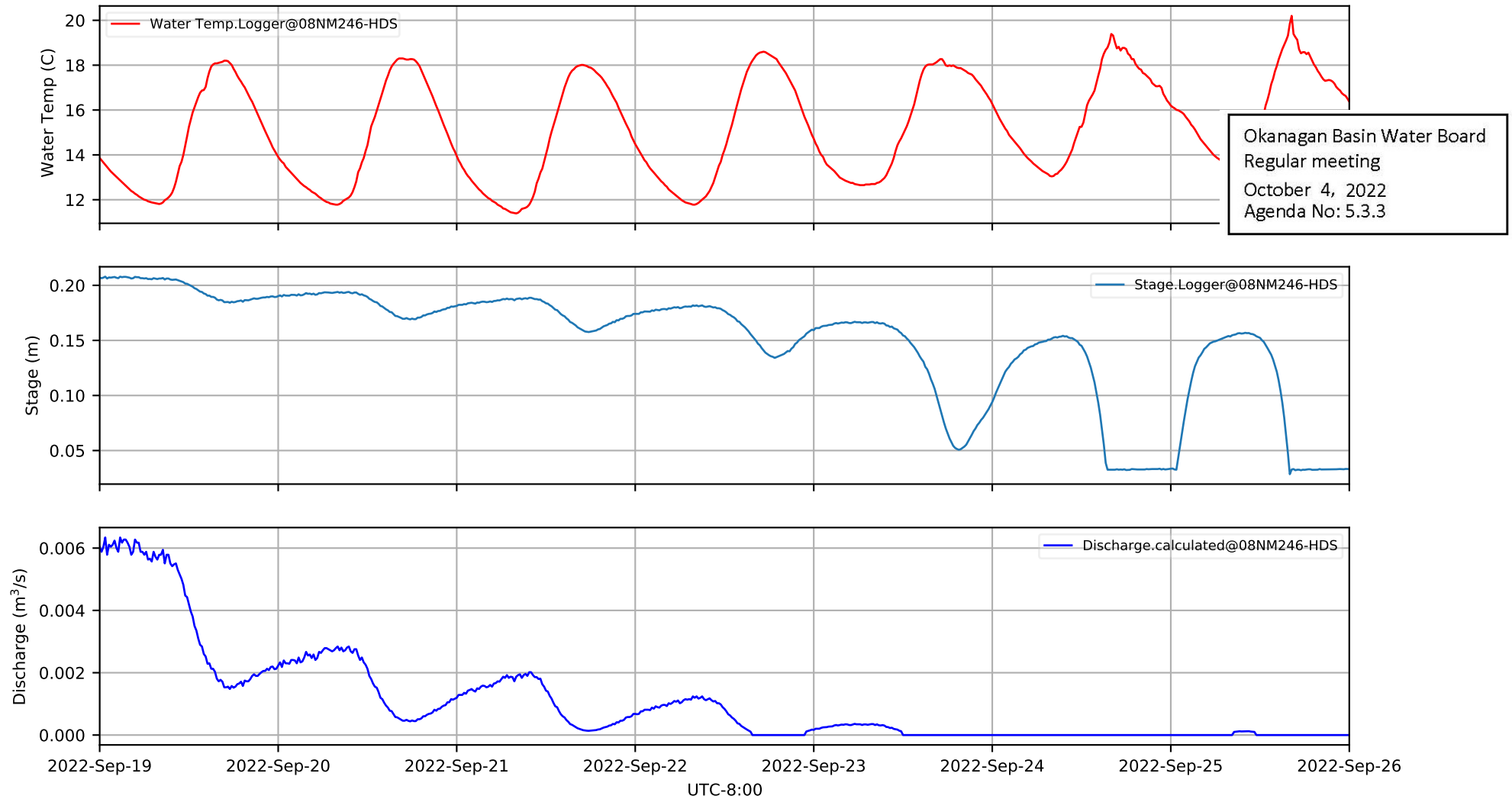
Disclaimer: The near real-time information presented in this report is preliminary and has been generated automatically with limited verification and review. The information should be used with caution. Subsequent quality assurance and verification procedures may result in differences between the currently displayed data and final published data. Discharge values are based on the active rating curve and may be inaccurate. Discharge values will be revised for final publication following detailed review.

# Upper Vernon Creek below Swalwell Lake



Historical Mean Daily Discharge  
 Site: 08NM022-HDS  
 Date created: 2022-09-27 05:05:02

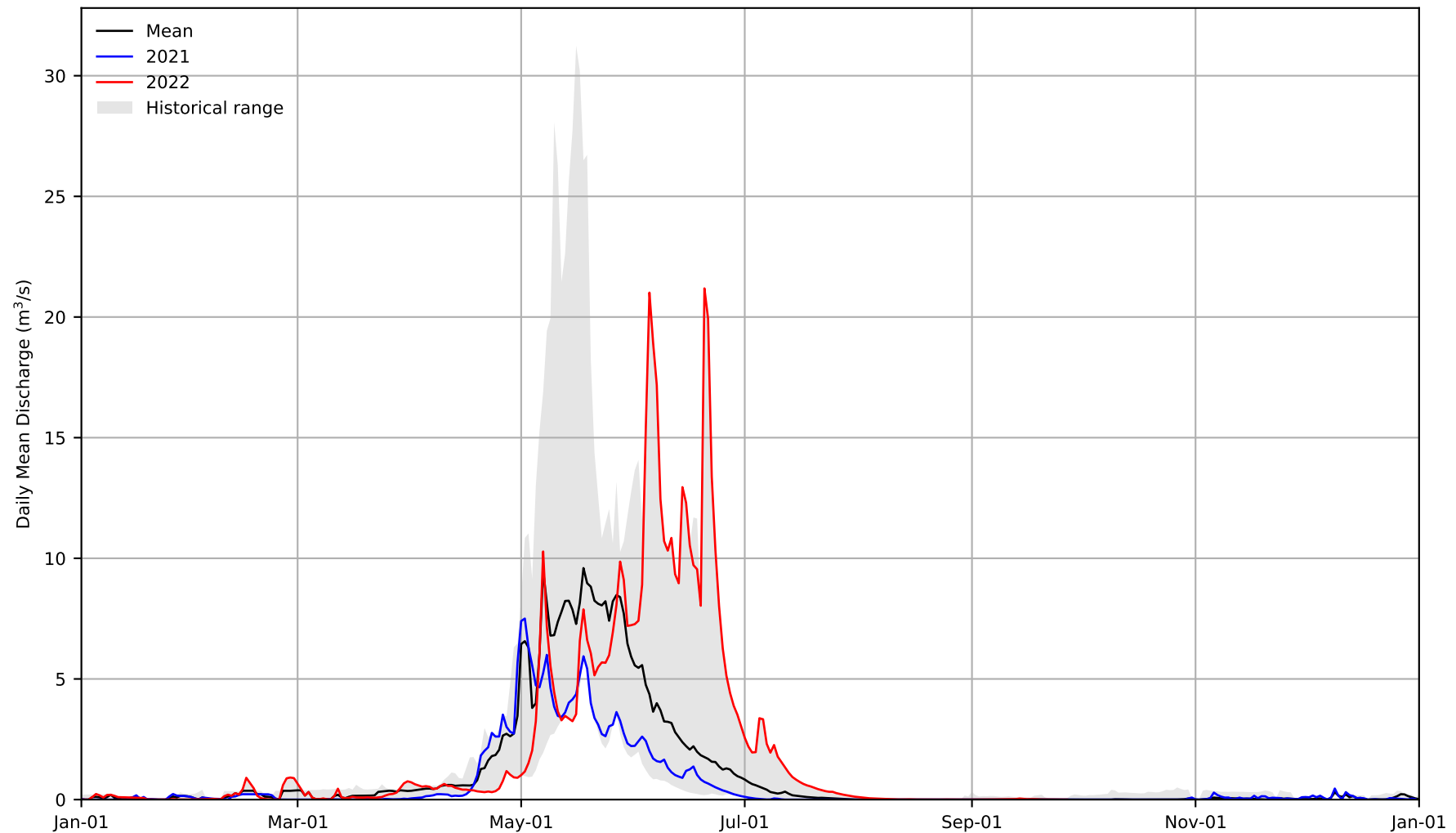
# Vaseux Creek near the Mouth



Recent Water Temp, Stage and Discharge  
Site: 08NM246-HDS  
Date created: 2022-09-26 08:05:07

Disclaimer: The near real-time information presented in this report is preliminary and has been generated automatically with limited verification and review. The information should be used with caution. Subsequent quality assurance and verification procedures may result in differences between the currently displayed data and final published data. Discharge values are based on the active rating curve and may be inaccurate. Discharge values will be revised for final publication following detailed review.

# Vaseux Creek near the Mouth



Historical Mean Daily Discharge  
 Site: 08NM246-HDS  
 Date created: 2022-09-26 08:05:07

## MEMORANDUM

Okanagan Basin Water Board  
Regular meeting  
Oct. 4, 2022  
Agenda No: 5.4

To: OBWB Directors  
From: James Littley  
Date: Sept. 28, 2022  
Subject: Deputy Administrator Report

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### Invasive Mussel Prevention

In July, I attended the Pacific NorthWest Economic Region Invasive Species Working Group sessions for invasive mussels. Presentations included updates from Manitoba, Saskatchewan, Alberta, B.C., and Yukon, as well as Alaska, Washington, Idaho, and Montana. All the states and provinces reported staffing shortages during this summer's inspection period, meaning that station hours and locations had to be reduced across the region.

One theme that emerged from the states was that a significant portion of their funding for inspection stations and ongoing monitoring was provided by the U.S. federal government. In Washington State, the federal contribution was \$1.1 million, with the State contributing a further \$850,000. In contrast, B.C. and Saskatchewan received very little Canadian federal funding, while Alberta, Yukon and Manitoba received none.

One presenter, Jeff Long from the Province of Manitoba declared, "The battle to save waters in Western Canada now starts at the western shore of Lake Manitoba." In 2021, environmental DNA testing found 14 veligers (mussel larvae) in 4,000 L of water. As of July 2022, they found 8,000 veligers in 1,000 L of water. That means in one year the number of larvae detected increased 2,285 times. There was also an announcement of a new mussel detection in the Black Hills in South Dakota, less than 100 km from the Montana border. Although South Dakota has had invasive mussels for years, they continue to spread west.

In more positive news, after an initial mussel detection in Montana in 2016, the Tiber reservoirs and other reservoirs in the state have now been declared mussel-free after five years of negative testing. The testing included environmental DNA samples which can detect cellular material shed by organisms into an environment. Still, Montana inspectors intercepted 37 mussel fouled boats by July 25<sup>th</sup> this summer, showing a high level of risk from eastern and southern states.

Out of all the jurisdictions reporting, B.C. has the highest budget and one of the most robust inspection station regimes in the Pacific Northwest. While the overall budget for the B.C. Invasive Mussel Defence Program has been shrinking in recent years, the province has increased its dedicated funding for this program. The gap comes from industry partners who are funding less or not at all. I have requested an update from provincial staff on this and several other issues, and I will provide a further verbal update at the board meeting.

### **Vaseux Lake Milfoil Harvesting**

Last summer (2021), we began the process of applying for permits to harvest milfoil in Vaseux Lake, but the lake level conditions made it impossible for us to launch our equipment at the undeveloped boat launch. This summer, with lake levels at an optimal level, we applied for and received all permits, and were able to spend 10 operating days on Vaseux Lake, removing approximately 30 machine loads (87 tons) of milfoil. We will continue to apply for the necessary permissions to treat Vaseux Lake in future years.

### **Milfoil Harvester RFP**

The 2023-2027 Milfoil Equipment Asset Replacement Plan was approved by all three regional districts this summer. The plan allocated \$250,000 each to purchase a new milfoil harvester in 2023, and a second in 2024. One of our current harvesters, manufactured in 1978 is now in need of a significant repair estimated to cost \$20,000. To avoid this costly repair, we planned to issue an RFP as soon as possible to procure the first new harvester by July 2023. However, in the last two weeks, staff have found an alternative amphibious harvester which is capable of launching itself, moving up the beach to drop weeds on dry land, and positioning the operators cab low on the machine to move under the bridge in Osoyoos. The amphibious machine would solve many of the significant issues with access and lake levels that we are increasingly facing today, including some costs associated with those issues. As it is driven by propellers on the stern and not paddlewheels, it is also capable of fitting into narrower areas between docks and at marinas. The machine only uses one conveyor belt to collect and offload the weeds, leaving it with more capacity to hold weeds while making it shorter in length than our current harvesters.

While the amphibious harvester would seem to better serve our long-term program needs, the quoted cost is substantially higher than expected. It is also unclear whether it is or could be registered by Transport Canada as it is manufactured in Germany, and there are other outstanding questions which would need to be addressed before making a recommendation. There may also be other suppliers for similar equipment which would come to light through an RFP process.

As the new harvesting equipment is intended to last for 35 years, and as the purchase of an amphibious harvester would require OBWB to defer other equipment purchases within the Asset Replacement Plan, I am recommending that the board defer the purchase of any new harvesting equipment until staff can provide further information and a recommendation. Should the board approve this recommendation, we will proceed with repairing the existing harvester.

**Recommendation:** THAT the Board defers the purchase of a new milfoil harvester to provide staff time to gather information and make an updated recommendation.

### **Sewerage Facilities Assistance RFP**

As part of the ongoing comprehensive review of the Sewerage Facilities Assistance (SFA) Grant Program, we have released a request for proposals (RFP) for a contractor to provide a report for each municipality and regional district in the Okanagan including the following information:

1. A review of existing bylaws pertaining to the OBWB one-hectare policy, including a comparison for sufficiency and clarity of the bylaw;
2. A review of variances granted contrary to the one-hectare policy during council approvals for the past five years (2017 – 2021), and in each case, whether parcels smaller than one hectare were created;
3. A mapset showing the following layers:
  - a. Sewered areas;
  - b. Unsewered areas; and
  - c. Lots which existed prior to 1978 which currently are unsewered.
4. Findings or recommendations that the consultant considers would contribute to the broader SFA program review, including:

- a. Recommendations to clarify intent, rules and procedures of the 'One-Hectare' policy to assist local governments in dealing with public inquiries;
- b. A calculation of the eligible area remaining for the SFA grant program, to increase the understanding of the financial liabilities for the OBWB in the future; and
- c. Recommendations on what improvements could be made to the program, considering benefits and limitations of changing the program, including the financial risks.

This information will illustrate areas that are still eligible for funding under the current SFA Terms of Reference, areas that may be eligible under different terms of reference, and the effectiveness of the existing One-Hectare Policy.

The contractor's report will be used by the Technical Advisory Committee for the broader program review process, and to make a final report and recommendations to the board. The deadline for proposals is October 20<sup>th</sup>, 2022, with all services completed by March 31, 2023. The project has a budget of \$45,000 approved for this purpose within the current fiscal year. Because the contract must be awarded prior to the next board meeting in January, we are seeking approval for the Executive Director to issue the contract following a full RFP process, consistent with our purchasing policy.

**Recommendation:** THAT the Board authorizes the Executive Director, following a full RFP process, to contract for the services outlined above to support the SFA Program Comprehensive Review to a maximum of \$45,000 plus GST.

## MEMORANDUM

Okanagan Basin Water Board  
Regular meeting  
October 4, 2022  
Agenda No: 5.5

To: OBWB Directors  
From: Carolina Restrepo Tamayo  
Date: September 27, 2022  
Subject: Office and Grants Manager Report

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### Osoyoos Lake Water Science Forum:

Title and theme: Nk'Mip (Osoyoos Lake) - The Heart of the Watershed - Bridging Indigenous and Western approaches to Knowledge, Science and Management. The conference is taking place this month from October 27<sup>th</sup> -29<sup>th</sup> in Osoyoos s̓wìws, and will be facilitated by Kelly Terbasket and Aaron Derrickson.

The event will feature:

- Welcoming reception at Nk'Mip Desert Cultural Centre
- Guided field tours: Nk'mip Desert Centre, klilx'w (Spotted Lake), s̓wìws (formerly Haynes Point) Provincial Park
- WaterWays exhibit at Osoyoos & District Museum and Archives
- Posters highlighting current local water research; Presentations & discussion at Sonora Centre

Topics of the conference include:

- How is Nk'Mip (Osoyoos Lake) managed
- What does Indigenous knowledge tell us about lake health & management?
- Climate change impacts
- Watershed influences
- Fisheries restoration
- Water quality
- Climate change

For registration and more information, you can go to the forum website at: <https://www.obwb.ca/olwsf/>



## MEMORANDUM

Okanagan Basin Water Board  
Regular meeting  
October 4, 2022  
Agenda No: 5.6

To: OBWB Directors  
From: Corinne Jackson  
Date: Sept. 28, 2022  
Subject: Communications Director Report

### “Make Water Work” 2022

Since my last update on July 5, the Make Water Work (valley-wide residential outdoor water conservation campaign) fully launched with various advertising throughout the Okanagan and support from a growing partnership. Although the campaign is mostly active in the summer, early fall continues to be an important time to message water conservation as people continue to run irrigation, as farmers still need to water late-harvest crops, and as fish return to local streams to spawn. Also, given the campaign’s effort to promote appropriate WaterWise landscaping and fall being the best time to plant, we are continuing to work with the Okanagan Xeriscape Association and our garden centre partners to promote the Make Water Work Plant Collection (low-water, climate appropriate choices). As cooler weather sets in and people begin to turn off their irrigation, we will begin to wind the campaign up.

It has been great to see excellent collaboration this year, with several of the partners using the various tools we provided – from garden centres with their MWW Plant Collection signage, to local government partners using provided social media posts, and more.

Since the OBWB’s annual meeting and the announcement of City of Armstrong as our 2022 Make Water Work Community Champion, we have also awarded two Okanagan residents, Randy Goncalves of Kelowna and Don Brain from Osoyoos, each with a \$500 gift certificate for a WaterWise yard upgrade. (Photos below.)

I will be gathering feedback from partners in the next couple of weeks and, as with past years, we will provide a full report on the campaign at our next board meeting.



City of Armstrong Mayor Chris Pieper (left) poses with his community’s Make Water Work Champion certificate along with fellow Okanagan mayors, Christine Fraser of Township of Spallumcheen, District of Lake Country’s James Baker, Osoyoos’ Sue McKortoff, City of Vernon’s Victor Cumming and



Photo left: Make Water Work winner Randy Goncalves of Kelowna (right) with Make Water Work partners Carmen Walisser of Better Earth Gardens Kelowna and Ed Hoppe with City of Kelowna. Photo right: Don Brain of Osoyoos (right) with Surinder Sandhu of Sandhu Greenhouses & Nursery and Casey Brouwer with Town of Osoyoos.



Photo left: OXA's Sigrie Kendrick conducting Make Water Work outreach at Nicholas Alexander Home & Garden.

Bottom left: Nicholas Alexander staff with Make Water Work material.

Bottom right: Swan Lake Market & Garden staff showing off Make Water Work Plant Collection sample.





## **“Don’t Move A Mussel” 2022**

Although we use any appropriate opportunity and time of year to promote awareness regarding invasive zebra and quagga mussels, the water recreation season (May long-weekend to September long-weekend) is when our Don’t Move A Mussel campaign is most active. This summer included advertising throughout the valley, and providing support and materials to the Okanagan and Similkameen Invasive Species Society (OASISS) to conduct public outreach on our behalf.

Early results indicate a successful summer with an increase from last year in the number of people reached – both through our advertising and through OASISS. Also, most recent water testing suggests no mussels have been introduced into Okanagan waters this summer. A full wrap up report on the campaign will be provided at the next board meeting.



Photo top left: OASISS staff conducting Don’t Move A Mussel outreach at Peachland Farmer’s Market.

Top right: Visitors to Lake Country Farmer’s Market with Don’t Move A Mussel postcards with a message to visitors to stop at inspection stations along their route and to clean, drain, dry watercraft.

Bottom left: Amanda Huston, winner of our Don’t Move A Mussel Prize Pack, perfect for boating and the beach.

### Other Communication Initiatives

Additional communications projects this summer included work on the OBWB's **Annual Report "Renewing Connections,"** now posted on our website at [https://bit.ly/OBWB\\_AnnualReport2022](https://bit.ly/OBWB_AnnualReport2022).

I have also been working with Ms. Garcia and the Province of B.C.'s Thompson Okanagan Drought Response Team – communications sub-committee on a **media drought primer** and graphic, helping explain the difference between local government, provincial and federal drought messages. I have also been working with Ms. Restrepo on the **Osoyoos Lake Water Science Forum**, including the website, advertising, news release, and social media.

On Aug. 16, Dr. Sears and I attended the opening of the **West Kelowna Xeriscape Spirit Square Garden** at 2569 May St. The garden was developed with support from several partners, including the OBWB-OkWaterWise. Learn more about the project and find photos at <https://okanaganxeriscape.org/about-us/spirit-square-garden/>.

Finally, **UBCO's School of Education Co-Curricular-Making Project**, aimed at helping Okanagan teachers de-colonize and Indigenize curriculum, much of it through a water-lens, had its first on-the-land gathering this week at Bertram Creek Regional Park, marking the start of Year 2. We have been invited to be a collaborator on this five-year project. This week's gathering included a water ceremony led by local syilx elders.

### Summary of OBWB-Related News Coverage

June 30	"It's all new as Osoyoos Museum nears completion with planned fall exhibit with Water Board," <i>Times Chronicle</i>
June 30	"Summerland adopts future-focussed Water Master Plan," <i>Penticton Western News</i> , <i>Keremeos Review</i>
July 2	"Okanagan Basin Water Board report foresees Goldilocks summer - not too hot, not too cold," <i>Castanet.net</i>
July 8	" <a href="#">B.C. 's invasive mussel defence program intercepts 5 contaminated boats from Ontario</a> ," <i>Global Okanagan</i> , <i>C-Fox</i>
July 9	" <a href="#">'Largest ever decontamination' - B.C. crews track down mussel-infested barge from eastern Canada</a> ," <i>Global Okanagan</i>
July 11	"Water briefs - Mussel inspection program sidelines 5 B.C.-bound watercraft," <i>Kelowna Capital News</i> , <i>Keremeos Review</i> , <i>Penticton Western News</i> , <i>Lake Country Calendar</i>
July 14	"Campaign to keep invasive mussels out of local lakes continues," <i>Castanet.net</i>
July 17	"Canada's largest marine dredging company brought thousands of invasive mussels into B.C." <i>InfoNews.ca</i>
July 19	"Okanagan Basin Water Board rain barrel program on hold due to costs," <i>Castanet.net</i>
July 20	" <a href="#">Completed repairs on Summerland's Isintok Dam important to district's water supply in face of climate change</a> ," <i>Castanet.net</i>
July 21	"Summerland reservoir upgrade completed under budget," <i>Kelowna Capital News</i> , <i>Vernon Morning Star</i> , <i>Summerland Review</i>
July 21	"Keep making Water Work for the victory," <i>Okanagan Advertiser</i>
July 21	"Big push to stop invasive mussels at the border," <i>Times Chronicle</i>
Aug. 8	" <a href="#">Aridity map shows valley as top concern</a> ," <i>Kelowna Daily Courier</i>
Aug. 9	" <a href="#">Milfoil attack launched on Vaseux Lake</a> ," <i>Penticton Herald</i>

- Aug. 10 "Milfoil harvesting to return on Vaseux Lake after years of persistent pressure," *Castanet.net*
- Aug. 10 "South Okanagan lake ready for easy use again after 30 years," *Summerland Review, Vernon Morning Star, Golden Star*
- Aug. 10 "This South Okanagan lake is open for recreational use again," *InfoNews.ca*
- Aug. 16 "Educational xeriscape garden springs up in West Kelowna," *Kelowna Capital News, Lake Country Calendar*
- Aug. 17 "Osoyoos Lake water society hosts public education event to keep lake invasive mussel free," *Castanet.net*
- Aug. 21 "OBWB share important lessons with public," *Times Chronicle*
- Aug. 26 "Town of Oliver lifts all water restrictions," *Castanet.net*
- Sept. 2 "On the front lines of the invasive mussel war," *Times Chronicle*
- Sept. 15 "[Milfoil infestation continues to plague Okanagan watershed](#)," *Kelowna Capital News, Vernon Morning Star, Penticton Western News, Summerland Review*
- Sept. 16 "Armstrong mayor named 'Make Water Work' champion," *VernonMatters.ca*
- Sept. 18 "[Armstrong crowned water champion for fifth time](#)," *Kelowna Capital News, West K News, Vernon Morning Star, Salmon Arm Observer, Revelsoke Review, The Golden Star*
- Sept. 19 "Okanagan water efforts celebrated," *Water Canada*
- Sept. 24 "Area director speaks out against subdivision and wastewater concerns," *Times Chronicle*
- Sept. 24 "Gardening with nature column: Perennials are better planted in fall, not spring," *Castanet.net*
- Sept. 24 "[Okanagan Water Board bracing for the effects of climate change](#)," *Summerland Review, Kelowna Capital News, Salmon Arm Observer, The Golden Star*

#### **Upcoming Presentations**

- Oct. 11 "Collaborative Source Water Protection in the Okanagan Basin," to B.C. Ministry of Health's Drinking Water Leadership Team – Kellie Garcia and Heather Larratt
- Oct. 18 "Climate change and Okanagan Lake Level Management," to the Kelowna Roundtable – Anna Warwick Sears
- Nov. 4 "Climate change and Okanagan Lake Level Management," to the Water Supply Association of B.C. – Anna Warwick Sears

## MEMORANDUM

Okanagan Basin Water Board  
Regular meeting  
October 4, 2022  
Agenda No: 6.1

To: OBWB Directors  
From: Carolina Restrepo Tamayo, Office and Grants Manager  
Date: September 27, 2022  
Subject: **Water Conservation and Quality Improvement Grants Program 2023**

The Water Conservation and Quality Improvement (WCQI) Grant Program provides between \$3,000 and \$30,000 in funding to local governments, improvement districts and non-profits for projects in the Okanagan basin which conserve water or improve water quality. The program has been running since 2006. This year, the call for applications will go out in late November, with the application deadline set for Friday, Feb. 24 at 4 p.m. As part of the approval process for these grants, the board is asked to approve an annual theme for 2023, review the process and scoring criteria, and make a resolution of approval, as laid out below.

### Process

The process for awarding grants is:

1. Board approves scoring criteria and annual theme;
2. Applicants receive letters of support from local government based on that government's water-related objectives, community values and other normal considerations;
3. Staff review the applications independently based on board-approved scoring criteria;
4. Staff meet to determine recommendations based on individual assessments; and
5. Recommendations are forwarded to the board for approval. Board discussion and voting on grant awards should occur as any other regular business, with input from all directors. Board may award, not award, or alter funding within project and program limitations.

### Scoring Criteria

The basic, weighted criteria of the grant program are included in the program guide for all applicants:	
20 points	Outcome for water quality or conservation
20	Basin-wide benefit
15	Method appropriate for objectives
15	Budget and timeline
10	Use and promotion of best practices

10	Collaboration
10	Quality of Proposal
<b>100*</b>	
<b>*Up to 10 bonus points can be awarded based on board-approved annual themes</b>	

#### Annual Theme

Each year, as part of the approved scoring criteria, the board approves an annual theme or themes, for staff to prioritize during the application review process. This allows the board to pre-determine which type of projects should receive bonus points, while also meeting the regular criteria of the grant program. Last year's theme was "Water Security" with the awarding of up to 10 bonus points for projects that reduce source water pollution, protect or restore municipal natural assets that provide water quality or quantity benefits, or reduce the occurrence of water advisories in drinking water systems.

This year, staff recommend the theme of "**From data to action for community resilience,**" awarding up to 10 bonus points for projects that directly use existing data, such as hydrometric data, LiDAR, topobathymetry, and water quality data to develop water sustainability projects.

**Recommendation:** *THAT the process and scoring criteria for the grant competition be approved as outlined; AND THAT for the 2023-2024 WCQI grant competition, 10 bonus points will be awarded for projects in any category that apply data toward actions for community resilience.*