

## Okanagan Basin Water Board Meeting Agenda



**Okanagan Basin**  
WATER BOARD

**DATE:** Friday, September 8, 2023

**TIME:** 12 p.m. – 2 p.m.

**PLACE:** Rotary Centre for the Arts  
421 Cawston Ave.  
Kelowna, B.C.

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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 August 1, 2023 held at the Regional District of North Okanagan (page 1)

5. **STAFF REPORTS**

5.1 Executive Director Report (page 7)

5.1.1 Briefing note for Federal Budget Consultation

5.2 Deputy Administrator Report (page 12)

5.3 Water Stewardship Director Report (page 14)

5.4 Communications Director Report (page 16)

5.4.1 Okanagan Drought Bulletin, Aug. 4, 2023 – Level 4 drought

5.4.2 Okanagan Drought Bulletin, Aug. 17, 2023 – Level 5 drought

6. **IN-CAMERA**

6.1 In-camera session (under sec. 90(1)(k) of the Community Charter)

7. **NEXT MEETING**

7.1 The next meeting of the Okanagan Basin Water Board will be Tuesday, Oct. 3 from 10 a.m. – 2 p.m., at the Regional District of Okanagan-Similkameen.

8. **ADJOURNMENT**

**MINUTES OF A REGULAR MEETING OF THE OKANAGAN BASIN WATER BOARD  
HELD AUGUST 1, 2023 AT REGIONAL DISTRICT OF NORTH OKANAGAN,  
9848 ABERDEEN RD., COLDSTREAM**

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**PRESENT**

Vice-Chair Blair Ireland	Regional District Central Okanagan
Director Victor Cumming	Regional District North Okanagan
Director Rick Fairbairn	Regional District North Okanagan
Alt. Director Bob Fleming	Regional District North Okanagan
Director Wayne Carson	Regional District Central Okanagan
Alt. Director Adrienne Fedrigo	Regional District Okanagan-Similkameen
Alt. Director Subrina Monteith	Regional District Okanagan-Similkameen
Director Bob Hrasko	Water Supply Association of B.C.
Director Jeremy Fyke	Okanagan Water Stewardship Council (OWSC)

**REGRETS**

Chair Sue McKortoff	Regional District Okanagan-Similkameen
Director Tim Lezard	Okanagan Nation Alliance (ONA)
Director Charlie Hodge	Regional District Central Okanagan
Director Charlie Hodge	Regional District Central Okanagan

**GUESTS**

Mathew Keast	City of Vernon
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**STAFF**

Anna Warwick Sears	Executive Director
Nelson Jatel	Water Stewardship Director
Corinne Jackson	Communications Director
James Littlely	Deputy Administrator
Kellie Garcia	Policy and Planning Director
Sandra Schira	Climate Indicators Intern
Amanda Burnett	Communications Coordinator

**1. CALL MEETING TO ORDER**

Vice-Chair Ireland called the meeting to order at 10:17 a.m.

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

**2. APPROVAL OF AGENDA**

***"THAT the agenda of the regular meeting of the Okanagan Basin Water Board of August 1, 2023 be approved."***

**CARRIED**

**3. ADOPTION OF MINUTES**

3.1 Minutes of the Regular Meeting of the Okanagan Basin Water Board of June 6, 2023, held online.

***"THAT the minutes of the regular meeting of the Okanagan Basin Water Board on June 6, 2023, held online, be approved."***

**CARRIED**

**4. DELEGATION**

- 4.1 Mathew Keast, City of Vernon Water Resources Engineer, presenting on Vernon Creek Naturalization through Polson Park, funded in part with OBWB WCQI grant

Dr. Sears introduced Mr. Keast who provided an overview of the Vernon Creek naturalization project in Polson Park, funded in part through an OBWB Water Conservation and Quality Improvement grant.

The project began in response to local flooding, and staff are now developing a master plan for the creek. Planning will include public consultation this year and next, and Phase 1 work is expected to begin in summer 2024 at Hwy 97 along Vernon Creek in Polson Park. Phase 2 will include development of multiuse paths and crossings.

Initial discussions have included a number of municipal departments, as well as B.C. Ministry of Forests regarding riparian habitat, the federal Department of Fisheries and Oceans regarding fish, and local First Nations regarding archeological artifacts found in the area, Mr. Keast noted.

Once work is ready to begin, naturalization will be the first step, including removal of concrete barriers, adding riparian planting, and reengaging the floodplain, he added. The naturalization will complement work by the Okanagan Indian Band and Okanagan Nation Alliance to bring sockeye and chinook back into the system and improve conditions for kokanee and Rainbow Trout.

In response to questions, Mr. Keast explained that although the channeling was done to address flooding, it was designed to a one in 100-year event standard. With climate change, the city is seeing higher and more intense flows and the channeling is no longer working, he said.

Dir. Cumming noted that OKIB members have talked about having family living in the area and that the project will have profound impact. The habitat improvements will not only address flooding, but also bring fish back and provide additional ecosystem benefits.

**5. STAFF REPORTS**

- 5.1 Executive Director Report

Dr. Sears told the board about OBWB staff changes, noting Ms. Garcia is leaving to work with the agricultural community to launch something similar to the Water Board's technical advisory body, the Okanagan Water Stewardship Council, but for agriculture. Sandra Shira will become full-time Water Science Coordinator and Amanda Burnett has joined the team as a half-time Communications Coordinator.

The OBWB's annual meeting will be held Friday, Sept. 8, 9 a.m. to noon, and will be followed by an abbreviated regular board meeting. Staff are working on the annual report and a tracking measures update.

Dr. Sears will conduct a clinic at the Union of BC Municipalities (UBCM)'s September conference. The session will look at how to build safely in floodplains, using local government planning policies and bylaws. District of Squamish and City of Vernon staff are among the co-presenters.

In response to a meeting with Kelowna MLA Renee Merrifield, staff are planning a community workshop to address water issues along Mission Creek, including flooding, fire concerns and more.

Dr. Sears provided a brief update on an Indigenous Engagement Institute she attended which looked at bringing First Nations laws alongside the colonial legal system to address various issues. Staff also participated in a couple of syilx language workshops, she added.

Finally, an outside consultant is being hired to review staff compensation for the 2024-25 budget year.

***“THAT the Executive Director’s Report, dated July 26, 2023, be received.”***

**CARRIED**

## 5.2 Deputy Administrator Report

Mr. Littley updated the board on discussions at the July Pacific NorthWest Economic Region Invasive Species Working Group annual meeting, including interest in the OBWB’s mussel vulnerability toolkit which is in development.

The board discussed the province’s recent invasive mussel economic report, the current state of the inspection program, mapping that shows the level of risk to Okanagan waterways and potential calls for action.

***“THAT the OBWB send an open letter to B.C.’s Minister of Environment and Climate Change Strategy, Minister of Water, Land and Resource Stewardship, Minister of Energy, Mines and Low Carbon Innovation, and copy Okanagan MLAs, MPs, local governments, ISCBC, OASISS, the Shuswap Watershed Council, and other partners, with updated calls to action including the following:***

- 1. Commit funding to the IMDP of no less than \$4 million per year (all sources), indexed to inflation for at least 10 years.***
- 2. Provide enhanced support to recruit and retain provincial Auxiliary Conservation Officers and other staff as needed to 2019 levels of 64 inspectors annually to ensure sufficient staffing for the IMDP.***
- 3. Commit to introducing “pull-the-plug” legislation to be in effect prior to the 2024 boating season.***
- 4. Update the provincial Early Detection, Rapid Response Plan, including a round of consultation with partner organizations prior to finalization.***
- 5. Introduce a provincially-led process to create long-term response, containment and control plans in regions at high risk of introduction from water-based tourism, and high risk of infestation from water chemistry, including the Okanagan, Shuswap and Kootenay Regions, working with regional partners.***

**CARRIED**

There was some discussion about partnerships in invasive mussel prevention, including with Okanagan Nation Alliance. Concern regarding floatplanes moving from one water body to another was also raised. OBWB directors noted that the focus of the UBCM resource breakfast on Fri., Sept. 22 is on water, and that the mussel issue should be raised in a coordinated way with the B.C. Minister of Water, Land and Resource Stewardship who will be in attendance.

The board was briefed on a City of Vernon grant application to the OBWB’s Sewerage Facilities Assistance Grant Program for a sewer extension in the Okanagan Landing area.

***“THAT Sewage Facilities Application for the City of Vernon - Okanagan Landing 2021 sewer extensions project be approved as presented.***

**CARRIED**

***“THAT the Deputy Administrator’s Report, dated July 24, 2023, be received.”***

**CARRIED**

### 5.3 Water Stewardship Director Report

Dr. Jatel told the board about a presentation at the June 6 OWSC meeting by Dr. Pete Millard, General Manager of Science at Manaaki Wheuna Landcare Research, speaking on “Waiti: How Aotearoa, New Zealand is Dealing with Water Quality and Other Environmental Issues.” This month Erin Vieira, representing Shuswap Watershed Council will be speaking. Dr. Fyke added that the council is creating work plans with four committees: Policy, Agricultural Irrigation and Environmental Flow Needs, Water Quality, and Organizational Readiness.

Directors were also briefed on a recent workshop looking at new technology that will help the OBWB’s Hydrometric Service Program collect data safely in high flow periods. It will also be able to determine environmental flow needs (EFNs) and critical flow needs at various life stages for kokanee and Rainbow Trout. Work is being done to also provide this information for sockeye and chinook. This information can then help develop appropriate water management strategies.

***“THAT the Water Stewardship Director’s Report, dated July 24, 2023, be received.”***

**CARRIED**

### 5.4 Policy and Planning Director Report

Ms. Garcia provided an update on meetings with the province’s Thompson Okanagan Regional Drought Response Team, noting the Okanagan is currently in Level 3 drought (of 5) as of July 6. It was noted that drought levels are different than local water suppliers’ water restriction stages which depend on water availability and other factors. Many utilities are in stage 1 restrictions, while others are moving to higher restriction stages, she added. Drought Bulletins with information on current water supplies and concerns were sent out in June and July to water suppliers, elected officials, media and others. Currently there is growing concern for Shuttleworth, Inkaneep and Vaseux Creeks which are very low and do not receive water through upland storage.

Work is also being done to update the Okanagan Flood Story website, Ms. Garcia added.

***“THAT the Policy and Planning Director’s Report, dated July 25, 2023, be received.”***

**CARRIED**

### 5.5 Climate Indicators Intern Report

Ms. Schira gave an update on her climate indicators research, explaining that she requires at least 30 years of data, but some communities have 100 which is helpful. Looking at the data, there is a clear trend that shows the Okanagan is getting warmer across all locations studied (Vernon, Kelowna and Penticton) and all seasons. Cold events still happen and can be extreme but you can see a shift to warmer, she added.

Summer average temperatures in these communities are showing a 1-degree increase (some years it’s higher, sometimes lower, but the average is 1 degree). The number of days where the temperature was above 30C has increased, especially in the last 10 years, she added. At one time, Kelowna would see an average of 25 days above 30C, but now it experiences 35 days above

30C. There is a clear pattern since 2000, Ms. Schira concluded noting this data can help determine infrastructure needs, EFNs and more.

***“THAT the Climate Indicators Intern’s Report, dated July 25, 2023, be received.”***  
**CARRIED**

## 6.5 Communications Director Report

Ms. Jackson gave an update on communication efforts to help address the current drought including the Make Water Work campaign, as well as ads on TV and radio, encouraging residents to follow local watering restrictions and find conservation tips at [www.MakeWaterWork.ca](http://www.MakeWaterWork.ca). Support is also being provided for public drought forums being organized by the province and RDOS in Oliver, Keremeos and Princeton, and potentially in Kelowna and Vernon.

We have a contract in place with the Okanagan Xeriscape Association and they have been doing outreach with our garden centre partners, encouraging WaterWise purchases, including those on the Make Water Work Plant Collection list. In response to questions, Ms. Jackson said that the list will be revised to also note FireSmart plants.

Work this summer has also focussed on the Don’t Move A Mussel campaign, raising awareness for invasive mussels and prevention of their spread into Okanagan waters. The website ([www.DontMoveAMussel.ca](http://www.DontMoveAMussel.ca)) has been updated. Billboard, radio and digital advertising is running, and a number of outreach materials have been created, including rack cards, posters, mussel-muscle shirts, dry bags and more. The materials are being distributed by the Okanagan Similkameen Invasive Species Society as part of our contract with them to do invasive mussel public outreach.

***“THAT the Communications Director’s Report, dated July 26, 2023, be received.”***  
**CARRIED**

## 6. CORRESPONDENCE

- 6.1 OBWB letter to B.C. Ministers Cullen and Heyman regarding Potential Economic Impacts of Zebra and Quagga Mussels in B.C.
- 6.2 OBWB letter to B.C. Ministers Kahlon and Kang, regarding sewage pollution risks from the B.C. Homes for People action plan
- 6.3 RDOS letter from Christopher Garrish, Senior Manager of Planning to OBWB regarding one-hectare policy for the Sewerage Facilities Assistance Grant Program
- 6.4 Response letter from Ministers Cullen and Heyman

In discussing the correspondence, Dr. Sears explained that OBWB staff are working on updating the SFA grants program, adding that she understands the pressure to densify on properties with septic. The review will include what powers communities have to act and new technology will be looked at as part of the update.

***“THAT the correspondence be received.”***

**CARRIED**

## 7. NEXT MEETING

- 7.1 The next meeting of the Okanagan Basin Water Board will be an abbreviated meeting on Friday, Sept. 8 at 12 noon, following our annual meeting at Rotary Centre for the Arts in Kelowna.

## 8. ADJOURNMENT

***"THAT there being no further business, the regular meeting of the Okanagan Basin Water Board of Aug. 1, 2023 be adjourned at 1:30 p.m."***

**CARRIED**

Certified Correct:		
Chair		Executive Director



## MEMORANDUM

Okanagan Basin Water Board  
Regular meeting  
September 8, 2023  
Agenda No: 5.1

To: OBWB Directors  
From: Anna Warwick Sears  
Date: August 29, 2023  
Subject: Executive Director Report

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### **Abbreviated Regular Meeting**

Each September, we hold an abbreviated regular meeting after the public Annual Meeting. As a result of time constraints, I have limited staff reports to those with more urgent updates. Full staff reports will resume at our October meeting.

### **Annual Report and Tracking Measures**

The OBWB's 2023 Annual report will be distributed at our Annual Meeting, the morning of September 8<sup>th</sup>. I will do a presentation of the highlights of the report. Directors will receive a copy of the 2023 Tracking Measures internal report via separate email before the meeting.

### **UBCM Flood Clinic**

I will be leading a clinic at UBCM titled: Building Housing (Safely) in Floodplains, looking at the different planning and policy tools available for local governments who have no choice but to build in floodplains (most of B.C.). Because it's only a 15 minute timeslot, I will have three speakers, covering a range of scenarios. Kristina Anderson, with the Regional District of Kootenay Boundary will share case studies from that regional district as well as the City of Grand Forks. Mark Dowhaniuk will share the "mid-sized municipality" case study of the City of Vernon's flood bylaw. David Roulston, from the District of Squamish, will share the planning approaches for building in a river floodplain and an area affected by sea level rise. The clinic will be from 7:30–8:15 a.m. on Wednesday, September 20<sup>th</sup>.

### **Proposed Workshop on Mission Creek**

OBWB staff are continuing to develop plans for a workshop on the Challenges and Opportunities for Mission Creek, in partnership with Kelowna MLA Renee Merrifield. We are working toward a tentative date of December 1<sup>st</sup>, hoping to bring together a range of interested parties, including Joe Rich residents, water purveyors, farmers, Westbank First Nation, Okanagan Nation Alliance's Fisheries Department, Mission Creek Restoration Initiative, City of Kelowna, and residents and businesses along the creek. We will be reaching out in the coming weeks to determine the availability of participants. MLA Merrifield will be contributing toward meeting costs for the room, A/V, etc.

### **Transboundary Mining Conference**

I have been invited to attend a conference on transboundary mining issues on September 26–28, hosted by the Lower Similkameen Indian Band, and held in Osoyoos, B.C. It will include U.S. and



Canadian state and federal agency partners, and Indigenous representatives of Columbia River tribes and First Nations. Mining is mostly a water quality issue, that can potentially affect communities on both sides of the international boundary.

### **Provincial Budget Consultation**

Our three requests submitted (in writing and in person) to the Select Standing Committee on Finance and Government Services have been included in their final Report on the Budget 2024 Consultation.

- With respect to our recommendation to increase the Watershed Security Fund, there was only a line in the report stating, *“Members recognized that the Watershed Security Fund was recently introduced and funded at \$100 million and also noted that there may be opportunities to leverage additional investments.”*
- Many organizations joined our call for additional resources for the Invasive Mussel Defence Program. The committee’s final recommendations to Cabinet were quite high-level, addressing the threat of (all) invasive species by: **55 (a.) Implementing and enforcing invasive species regulatory tools; (b.) Funding prevention, early detection and rapid response.**
- With respect to the need to update Okanagan lake level management, the committee provided the following very specific recommendation: **66. Provide \$1 million per year funding for four years for the review of the Okanagan Lake Regulation System and Operating Plan.**

### **Federal Budget Consultation**

I submitted a recommendation to the federal government’s 2024 budget consultation process (see attached). For simplicity, I focused on a request for the Government of Canada to contribute to the B.C. Watershed Security Fund. Unless this fund is made larger, it will have very limited ability to improve watershed security in B.C., let alone the Okanagan.

### **OBWB Budget Preparation**

I’m beginning to prepare the OBWB’s 2025 Budget (for the fiscal year ending March 31, 2025). This will be presented to the Board for review and approval at our November 7<sup>th</sup> regular meeting. Per our Supplementary Letters Patent, the OBWB’s final budget must be approved by the Board no later than our December 5<sup>th</sup> board meeting.

### **Weather Report**

The province-wide drought continues, although most Okanagan purveyors have been able to manage their water supplies. The Okanagan Lake dam operator in Penticton has reduced outflows, and Okanagan River is running close to its 25<sup>th</sup> percentile of flows. Okanagan Lake is below its 25<sup>th</sup> percentile lake level (more than 75% of the time, the lake is higher at this date). Seasonal forecasts in the U.S. and Canada project a warmer than normal fall and winter. This is in part due to the continued El Niño conditions in the Pacific Ocean. The U.S. government website for Climate.gov, says that there is a 95 % chance of El Niño continuing through the winter, and an over 60% chance that it will be a strong event.



Okanagan Basin Water Board  
Regular meeting  
September 8, 2023  
Agenda No: 5.1.1

## Written Submission for the Pre-Budget Consultations in Advance of the 2024 Budget

By: The Okanagan Basin Water Board



Recommendation 1: That the Government of Canada make an investment of \$400 million to the B.C. Watershed Security Fund in Federal Budget 2024.

## Body of Submission

The Okanagan Basin Water Board (OBWB) represents valley-wide water interests of Okanagan communities. Established in 1970, the board is made up of elected officials from the three Okanagan regional districts, along with representatives from the Okanagan Nation Alliance, Water Supply Association of BC, and the Okanagan Water Stewardship Council – a cross-disciplinary body with interest in water issues, which includes local governments, agriculture agencies, conservation groups, academic institutions, and more. The Board's mandate is to identify water issues and local priorities, propose solutions, and participate financially in studies and projects to implement these solutions.

The B.C. Watershed Security Fund was announced on March 6, 2023, by the Province of B.C. and the First Nations Water Table, seeded with an initial \$100 million investment. In this submission, the OBWB supports the recommendation of the B.C. Watershed Security Coalition and other groups in B.C., similarly recommending that the Government of Canada invest \$400 million in this fund from the 2024 Federal Budget.

Watersheds are essential natural infrastructure for clean drinking water in B.C., and they have been neglected by most federal infrastructure funding programs. A Watershed Security Fund could support basic activities like selective logging and brush clearing to protect reservoirs, dams, and instrumentation from wildfires. It could support fencing and provision of alternative water supplies to keep cattle out of water sources. It could support restoration of streams to make them better fish habitat. The fund could also support creation of alternative recreation sites to keep polluting recreation activities away from reservoir lakes. It could support the decommissioning of orphaned and abandoned logging roads, which have been found to be a major source of pollution in our lakes and streams. We could write a very long list of the ways that B.C. watersheds need help to address the ways they have been impacted and exploited, without consideration of the essential services they provide.

Watersheds across B.C. share these needs, and the problems are being further exacerbated by climate change. Most of the communities in the B.C. interior, where much of the work must occur, are small and isolated, and have been historically underfunded. Watershed restoration is also an important part of our national process of reconciliation with First Nations, who's traditional and unceded territories have been damaged by resource extraction.

While we commend the Province of B.C.'s historic creation of a Watershed Security Fund, we recognize that the fund must be much larger to have a real impact of the health and restoration of watersheds across B.C. We strongly recommend that the Government of Canada look on this as an investment in drinking water infrastructure, and an investment to assist B.C. with climate adaptation. A \$400 million investment to the B.C. Watershed Security Fund, made now, will pay off for generations to come. This will be good for the Okanagan, good for B.C., and good for Canada.

## MEMORANDUM

Okanagan Basin Water Board  
Regular meeting  
Sept. 8, 2023  
Agenda No: 5.2

To: OBWB Directors  
From: James Littley  
Date: August 28, 2023  
Subject: Deputy Administrator Report

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### Invasive Mussel Progress to Date

At the August meeting, directors asked what progress has been made on invasive mussels, and whether OBWB calls to action have had an effect. Since 2012 when the OBWB became involved in this file, there have been significant steps taken by the province and federal governments to prevent invasive mussels from getting to western provinces, influenced by the advocacy of the OBWB. The following examples of actions taken to date show the continued importance of the board's work to keep Okanagan waters free of invasive mussels.

Inspection Stations: Since 2012, the province has gone from no inspections to a pilot program with roving inspections in 2015, to a full program with permanent, seasonal inspections. This effort required significant capital investment for equipment, developing a new program for mussel-detection dogs, and empowering auxiliary Conservation Officers through legislative change. The program has inspected more than 250,000 watercraft and has intercepted at least 158 mussel-fouled boats.

While the Invasive Mussel Defence Program (IMDP) has been highly successful to date, the program has had difficulties recruiting seasonal staff and the program budget has been reduced in recent years.

Legislative changes: In 2015 the Federal Aquatic Invasive Species (AIS) Regulations were updated, including changes as a direct result of feedback from OBWB. These updates made it illegal to import, possess, transport or release invasive mussels west of Ontario.

The province has also updated legislation since 2015 to provide more authority for Auxiliary Inspectors to stop and inspect watercraft and for Conservation Officers to issue tickets and to order decontaminations and quarantines of high-risk watercraft. They also made it mandatory for watercraft to stop at open inspection stations.

OBWB has repeatedly called on the province to introduce legislation to require all watercraft entering B.C. to report to an inspection station. Responses from the province have indicated that they are not pursuing this as a course of action. OBWB has since switched to call for "pull-the-plug" legislation, requiring all watercraft to remove the drain plug prior to travelling on roads. The province indicated that they are considering this legislative change.

Lake Monitoring: Since 2011, the province has been monitoring water bodies for invasive mussels, but since additional funding was announced in 2019, this effort has become more robust, including monitoring in most high-risk regions in B.C. Funding provided through the federal and provincial government, administered

through the Habitat Conservation Trust Foundation is given out to local invasive species groups to take water samples for lakes in their regions. The province then provides lab analysis for these samples.

Multi-partner coordination: The province has taken significant strides to improve coordination between ministries and with other jurisdictions since 2012. Internally, the province has an inter-ministry working group for invasive species. B.C. also partners with other western provinces and adjacent states to coordinate a “perimeter defence” strategy, receiving advance notice of high-risk watercraft headed for B.C. A shared database also provides up to date information on lake monitoring efforts throughout the Pacific Northwest. Provincial staff also participate regularly in other forums like the Pacific Northwest Economic Region Invasive Species Working Group, and Regional Invasive Species Organizations calls and meetings.

One of the more important advancements since 2015 is the partnership between the province and the Canada Border Services Agency (CBSA). The province holds training sessions for CBSA officers, and CBSA enforces the federal AIS regulations by alerting the province to high-risk watercraft for follow up. In some cases, CBSA will “seal” a boat so that the owner cannot legally launch it without follow up from the province.

Funding: Although funding has been inconsistent for this program, several annual calls to action by OBWB have been met by both federal and provincial funding. For example, the province now provides a portion of the annual IMDP budget as dedicated annual funding, rather than short-term or temporary funding. In 2018, the federal government allocated \$400,000 over 3 years to the Canadian Council on Invasive Species, and a further \$100,000 for research to predict the potential spread and ecological impact of invasive mussels in the Okanagan basin, partly in response to the calls to action from OBWB. OBWB should maintain a strong voice advocating for long-term sufficient funding for the IMDP, based on annual gap assessments.

Miscellaneous actions:

- Parks Canada has also limited access to some high-risk lakes in National Parks.
- Information about aquatic invasive species is also now included in the national boater safety course.
- The province has recently released an updated economic risk analysis for invasive mussels.
- Clean, Drain, Dry has been adopted nationally as a public behaviour and education message.

These advancements since 2012 have likely prevented an introduction of invasive mussels, given the 158 infested boats that have been intercepted entering B.C. It is important for OBWB to continue to advocate for the IMDP and other resources to prevent invasive mussels. While we are in a much stronger position than before 2015, annual gap analyses and calls to action by the board ensure that ministers and high-level provincial staff are reminded of the importance of this effort.

Milfoil Control Program

Summer harvesting is now complete throughout the valley. The milfoil grew earlier than normal, but by the end of summer, public calls for treatment stopped. This is likely due to changing conditions from the fires.

I have also received an update from the manufacturer of the new amphibious harvester. They have started to receive parts and panels for the machine’s hull and will begin building the hull within the next two weeks.

Shop Repairs:

As part of the RDNO lease agreement renewal for the milfoil shop and yard, an inspector identified potential mold in the shop ceiling’s fibreglass insulation. Further testing showed that mold was present below the level of hazard for worker health and safety, but that the insulation should be replaced out of caution. The ceiling insulation has now been professionally removed and the shop sanitized against mold.

I have solicited bids for new closed-cell spray-in insulation with a fire-barrier which is a preferable product for the shop space and will mitigate future mold risk. This is a significant repair for the building but is part of our lease agreement for the RDNO-owned building.

## MEMORANDUM

Okanagan Basin Water Board  
Regular meeting  
September 8, 2023  
Agenda No: 5.3

To: OBWB Directors  
From: Nelson R. Jatel  
Date: August 29, 2023  
Subject: **Water Stewardship Director's Report**

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### **Okanagan Water Stewardship Council (OWSC)**

The next council meeting is set for Sept. 12th, from 12 – 4 p.m. Our agenda will primarily focus on strategic planning for the upcoming year and collaborative initiatives. Please review the agenda and related documents that will be communicated beforehand. Your active engagement will contribute to the meeting's success.

We're pleased to have Erin Vieira, the Fraser Basin Council's Associate Regional Manager for the Thompson Region, as our guest speaker. Representing the Shuswap Watershed Council, she'll discuss the benefits of information sharing and potential collaboration on shared challenges.

### **Environmental Flow Needs Conference, March 13 – 15, 2024**

Building on the 2018 EFN Conference's success, preparations for the EFN 2024 Conference, scheduled for March 13-15, are in full swing. EFNs pertain to the water flows essential for sustaining freshwater ecosystems and human livelihoods. The semi-arid climate of the Okanagan Valley, combined with its growing population, underscores the significance of understanding and prioritizing EFNs. This knowledge empowers local governments to make informed decisions about water allocation, balancing ecological sustainability with community needs. With climate change altering our environment, the role of EFNs in addressing drought effects and biodiversity conservation is increasingly vital. For a recap of the 2018 conference, visit [www.obwb.ca/efnconference](http://www.obwb.ca/efnconference). More details about the EFN 2024 Conference will soon be available at [www.EFN2024.ca](http://www.EFN2024.ca).

### **Okanagan Hydrometric (Stream Flow) Monitoring**

The Okanagan Hydrometric Program focuses on continuously monitoring water flow and levels in several Okanagan streams. This initiative is foundational for data-driven decision-making, especially given our region's unique semi-arid climate challenges.

During late summer and early fall, the Okanagan faces reduced water flows. This period sees a surge in agricultural water demand, contrasting with the stream flow and cold-water temperature requirements for spawning fish like Kokanee and Sockeye salmon, especially during droughts. Hydrometric data helps manage these flows, giving insights into water availability, and aiding in efficient water resource management. As climate change's impacts become more pronounced, this data becomes crucial for flood prediction and drought preparedness. Moreover, with Okanagan being a prominent agricultural hub, reliable hydrometric data ensures farmers make informed irrigation



decisions, optimizing crop yields while conserving water. These data also play a pivotal role in land-use decisions, infrastructure planning, and promoting sustainable practices among the community.

Our collaborative efforts with the Okanagan Nation Alliance, Water Survey Canada, and other project partners aim to enhance our hydrometric monitoring program. This ensures we remain at the forefront of sustainable water management in the Okanagan. An updated hydrograph of Mission Creek, which contributes up to 30% of the annual water into the Okanagan system, is presented in Figure 1. This reflects the mid-July rain events, a dry summer, and a faster-melting-than-normal snowpack from the previous spring.

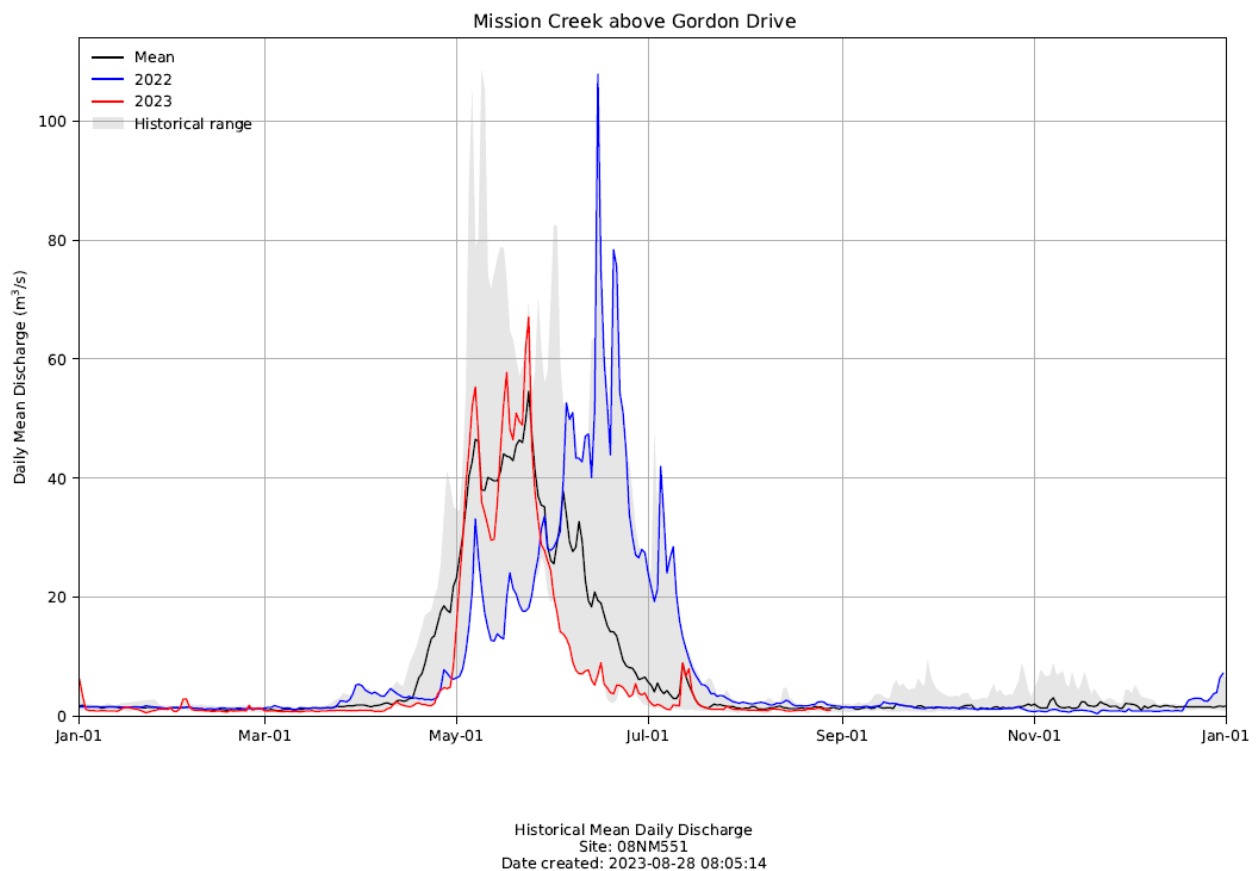


Figure 1. Updated hydrograph of Mission Creek (August 28, 2023).

## MEMORANDUM

Okanagan Basin Water Board  
Regular meeting  
Sept. 8, 2023  
Agenda No: 5.4

To: OBWB Directors  
From: Corinne Jackson  
Date: August 29, 2023  
Subject: Communications Director Report

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### Drought Communications & Make Water Work 2023

Since the last board meeting on Aug. 1, when Ms. Garcia and I provided updates on the drought, the valley's water situation has worsened.

OBWB staff have been attending weekly Thompson Okanagan Regional (TOR) Drought Team meetings throughout the summer. The team is made up of provincial staff, including fisheries biologists, ecosystems officers, hydrogeologists, hydrologists, agrologists, and district water officers, and advisors from Fisheries and Oceans Canada, Agriculture Canada, as well as staff with regional First Nations organizations, local governments and utilities. At each meeting, participants review precipitation levels, stream flows and stream temperatures, reservoir and groundwater levels, the upcoming forecast, and hear from local water utilities and First Nations about what they are seeing on the ground. Determination of drought levels are then discussed, as well as additional responses (e.g. regulatory action and communications).

Following the meeting on Aug. 2, and based on lack of precipitation, low stream flows, high water temperatures that can be lethal to fish, and sustained warm weather, the team agreed to move the Okanagan to Level 4, with Shingle/Shatford, Shuttleworth and Vaseux Creeks moved to Level 5.

And then on Aug. 16, even with some precipitation, a number of Okanagan hydrometric stations were showing low stream flows, with some indicating lowest recorded stream flows. This was reiterated by Okanagan Nation Alliance Fisheries Dept. staff who had been surveying local creeks. With low stream flows, high water temperatures and low precipitation in the forecast, it was decided to move the entire Okanagan to Level 5 drought. It was also noted that there had been discussions with licencees drawing water off Shuttleworth, Vaseux, Shingle, and Middle Vernon Creeks, and that Sec. 88 Fish Population Protection Orders, under B.C.'s Water Sustainability Act, were being developed.

Level 4 indicates "extremely dry" conditions where adverse impacts to socio-economic or ecosystem values are likely. Level 5 drought indicates "exceptionally dry" where impacts are almost certain.

In response to the increases in drought levels, Ms. Garcia and I developed and sent out a Level 4 Drought Bulletin on August 4, and a Level 5 Bulletin on Aug. 17. (See bulletins attached at the end of this report.) The bulletins are sent to local federal, provincial and municipal officials and water-related staff, Okanagan Water Stewardship Council members and media. They were also posted on our social media pages.

The purpose of the bulletin is to provide a valley-wide lens to the current water supply and help policy-makers make water management decisions and encourage agricultural users and residents to do their part to conserve.

It is important to note that local water restrictions (stages) are set using different indicators than provincial drought levels and federal drought ratings. (Learn more at <https://www.obwb.ca/drought-classification-systems-used-in-b.c./>). Whether a community moves to a higher restriction stage depends on several factors, including customer demand, infrastructure capacity, and local water supply conditions (e.g. reservoir storage), which can vary across the region.

Looking at water restrictions across the valley, a number of water purveyors remain in Normal or Stage 1 restrictions. However, since our last report to the board, the number of large utilities at Stage 2 or higher has expanded to eight. Armstrong, a number of Spallumcheen's Water Local Service Areas, Westbank First Nation, RDOS, Oliver and Osoyoos are now at Stage 2. RDCO and West Kelowna are at Stage 3.

In addition to putting out drought bulletins, I have been in regular contact with the Make Water Work (MWW) local government/utility committee members, taking a read on water conservation messaging and providing outreach materials for use.

We have drought-specific MWW ads running on local radio stations in the valley (you can hear it here: <https://tinyurl.com/2xfknpv6>), and on Global Okanagan (watch here: <https://www.youtube.com/watch?v=1Oerz9nIcBA>). We were also invited to do an interview with Global Okanagan about the drought and importance of conservation.

Last week, in consultation with local government partners, we launched a series of social media ads and posts in response to the devastating wildfires in the Central Okanagan, encouraging water conservation to ensure enough water and enough water pressure for firefighting. (See images below.)

Finally, we have also been posting on social media about the drought, encouraging people to go to [www.MakeWaterWork.ca](http://www.MakeWaterWork.ca) to find local water restrictions in the Okanagan, tips to conserve, and to consider changing their landscape to meet the changing climate.

The TOR Drought Team has its next meeting tomorrow, Aug. 30, and a further update will be provided at the Sept. 8 board meeting.

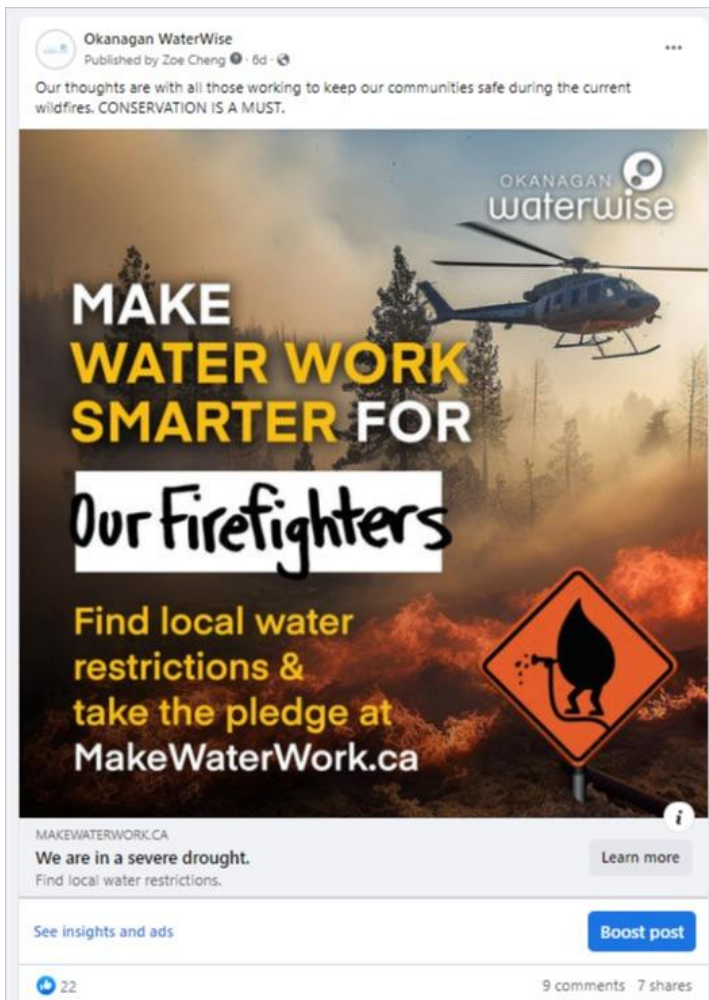


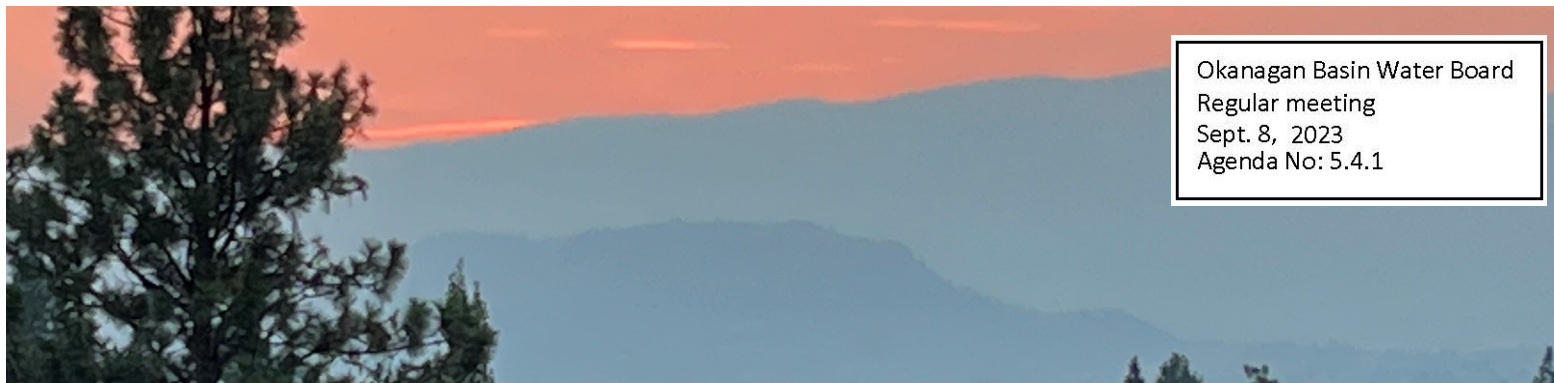
Image left top: Ad currently running on social media  
 Image left bottom: Social media graphic posted to OBWB's Okanagan WaterWise social media pages.





## OKANAGAN DROUGHT BULLETIN #2023-3

August 4, 2023



Okanagan Basin Water Board  
Regular meeting  
Sept. 8, 2023  
Agenda No: 5.4.1

### OKANAGAN REGION NOW IN DROUGHT LEVEL 4

Lack of precipitation, low streamflows, high water temperatures that can be lethal to fish, and sustained warm weather have prompted the Government of B.C. to move the Okanagan to Drought Level 4.

*While water systems that are supported by upland storage reservoirs and mainstem lakes are doing okay, many important fish-bearing streams in the Okanagan are flowing well below normal and several are completely dry. The forecast is for continued hot and dry weather in August, so it is unlikely that flows will improve without drastic conservation measures.*

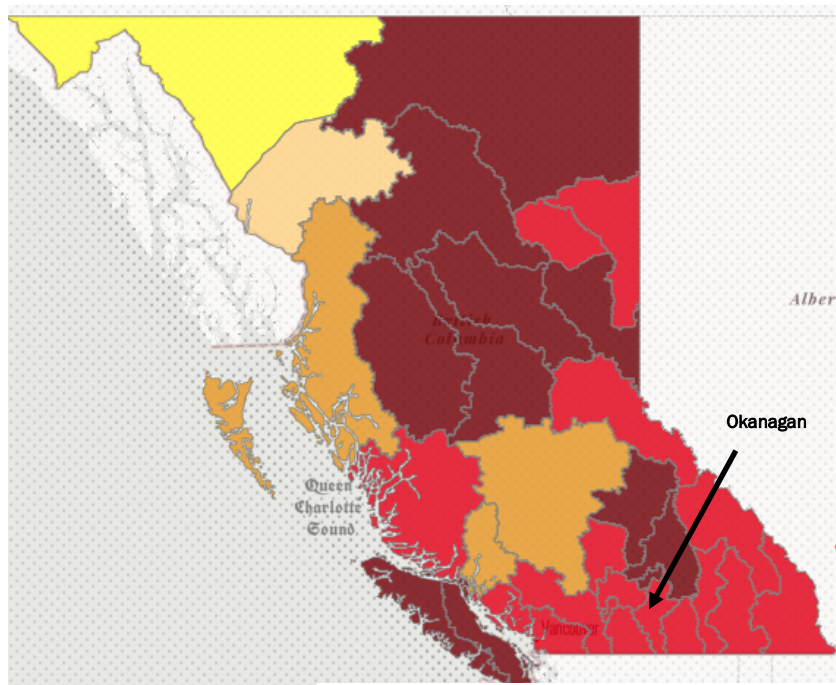
The B.C. Government is working with water licensees to ensure they reduce use, and is taking enforcement action where needed to protect the most sensitive areas. Water purveyors with upstream storage should closely follow their release schedule requirements to avoid low flows downstream. Flows in some streams can change rapidly during hot, dry conditions.

**Water conservation is everyone's responsibility.** People and businesses in affected areas should reduce water use wherever possible and observe all watering restrictions set by their water purveyor. We need to work together to make sure there is enough water for fish, agriculture, and fighting wildfires.

Please note, local water restrictions (**stages**) are set using different indicators than provincial drought **levels** and federal drought **ratings**. (Learn more at <https://www.obwb.ca/drought-classification-systems-used-in-b.c./>). Whether a community moves to a higher restriction stage depends on several factors, including customer demand, infrastructure capacity, and local water supply conditions (e.g. reservoir storage), which can vary across the region.

Provincial drought level map on August 3, 2023

Source: [BC Drought Information Portal](#)



British Columbia is experiencing severe drought levels and unprecedented drought conditions across the province. As of July 27, most of B.C.'s water basins have been elevated to "Extremely Dry" (Level 4) or "Exceptionally Dry" (Level 5).

Level	Conditions	Impacts
0	Non-Drought	There is sufficient water to meet socio-economic and ecosystem needs
1	Dry	Adverse impacts to socio-economic or ecosystem values are <b>rare</b>
2	Very Dry	Adverse impacts to socio-economic or ecosystem values are <b>unlikely</b>
3	Severely Dry	Adverse impacts to socio-economic or ecosystem values are <b>possible</b>
4	Extremely Dry	Adverse impacts to socio-economic or ecosystem values are <b>likely</b>
5	Exceptionally Dry	Adverse impacts to socio-economic or ecosystem values are <b>almost certain</b>

## WATER FOR FISH, FOOD PRODUCTION, AND FIREFIGHTING

Water is essential to fish and ecosystem health, food production, and fire suppression in the Okanagan.

The Okanagan is home to many fish species that are culturally important to the Syilx people, support a vibrant fishery, and are critical for healthy freshwater systems. Low water levels are occurring in several streams in the Okanagan and are resulting in fish kills (die-offs) due to stranding. Low oxygen and high water temperatures are also a threat. If conditions don't improve, fish will have a difficult or impossible time returning to their spawning areas this fall. By using water efficiently on our farms, in businesses, and in our yards now, we can help keep enough water in the streams for fish spawning later in the year.

Many crops in the Okanagan will still need water for the next couple of months. Hot and dry conditions make for thirsty plants! But good water management by farmers is possible, and is crucial in a year like this. Fix leaks, assess and improve your irrigation system, and adjust



your irrigation schedule to use water as efficiently as possible. See [www.obwb.ca/ag](http://www.obwb.ca/ag) for drought management resources created specifically for agriculture.

Water is also needed for fire suppression and protection, particularly during this year's extreme fire season. More than 1,500 fires have started in the province this year, and there are currently 348 active fires. Of these, 28 are in the Kamloops Fire Centre area, which includes the Okanagan, and four are wildfires of note (highly visible or pose a potential threat to public safety).

Everyone must use water efficiently and conserve what they can, ensuring enough for food production, fish spawning, ecosystem health, and firefighting.

## RESIDENTIAL WATER CONSERVATION

With the Okanagan now declared in Level 4 drought, as the valley begins to see streams going dry and with a forecast for continued hot, dry conditions, it is critical that we all do our part to conserve. Level 4 indicates that a region is "extremely dry" and adverse impacts to people, the economy, and/or the environment are likely.



To help residents do their part, the OBWB's Okanagan WaterWise outreach and education program is working with water utilities to deliver the Make Water Work campaign, tackling the 2<sup>nd</sup> largest use of all water in the Okanagan – outdoor residential use

in summer. It includes a website that encourages residents to pledge to conserve with a chance to win a \$500 WaterWise yard upgrade, and provides tried and true tips to maintain a beautiful yard while conserving water.

The pledges and tips include:

- Water between dusk and dawn.
- Water plants, not pavement.
- Never mow low. Let it grow.
- Tune up your irrigation system.
- Aerate the lawn and top dress with compost.
- Choose plants suitable to our dry climate.



To help with this last pledge, we developed the *Make Water Plant Collection* which includes 105 perennials, grasses, trees and shrubs that will do well in the Okanagan's dry climate. The collection is promoted at garden centres throughout the valley and we also work with irrigation companies to promote outdoor watering products that conserve. Local utilities have also been provided with a number of outreach tools too, including Make Water Work gardening gloves.

Visit [www.MakeWaterWork.ca](http://www.MakeWaterWork.ca) to find tips, the Make Water Work Plant Collection, watering restrictions and more.

Interested in becoming a Make Water Work partner? Contact Corinne Jackson at [corinne.jackson@obwb.ca](mailto:corinne.jackson@obwb.ca) or 250-469-6271 for more information.



## OKANAGAN DROUGHT BULLETIN #2023-4

August 17, 2023



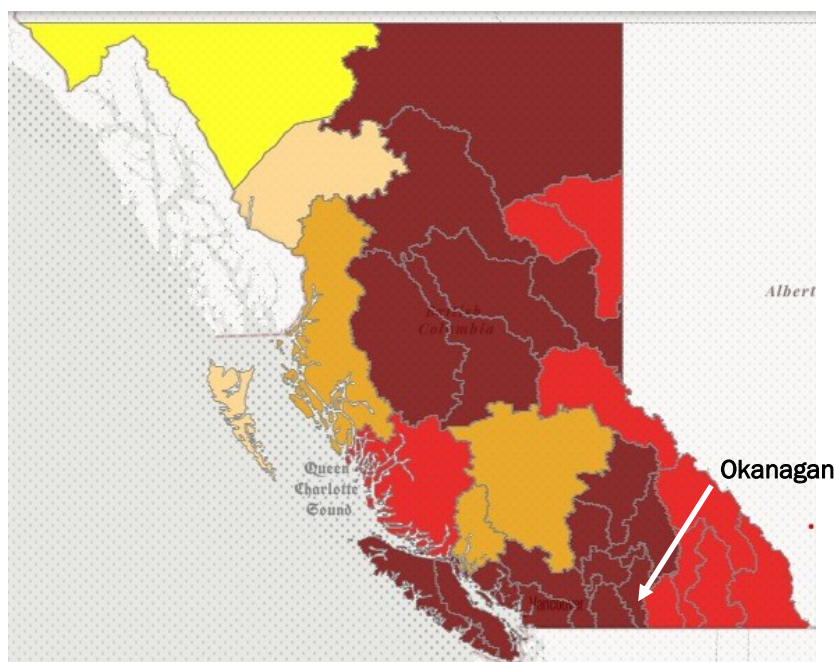
### OKANAGAN REGION IN DROUGHT LEVEL 5

Lack of rain, low streamflows, high water temperatures that can be lethal to fish, and sustained warm weather have prompted the Government of B.C. to move the Okanagan to Drought Level 5, where adverse impacts to socio-economic or ecosystem values are almost certain.

*Many important fish-bearing streams in the Okanagan are flowing at historical lows and several are completely dry. The forecast is for continued hot and dry weather in August, so it is unlikely that conditions will improve without drastic conservation measures.*

Provincial drought level map on August 17, 2023

Source: [BC Drought Information Portal](#)



The B.C. Government is working with water licensees to ensure they reduce use, and is taking enforcement action where needed to protect the most sensitive areas. Water purveyors with upstream storage should closely follow their release schedule requirements to avoid low flows downstream. Flows in some streams can change rapidly during hot, dry conditions.

**Water conservation is everyone's responsibility.** People and businesses in affected areas should reduce water use wherever possible and observe all watering restrictions set by their water utility. We need to work together to make sure there is enough water for fish, agriculture, and fighting wildfires.

Please note, local water restrictions (**stages**) are set using different indicators than provincial drought **levels** and federal drought **ratings**. (Learn more at <https://www.obwb.ca/drought-classification-systems-used-in-b.c./>). Whether a community moves to a higher restriction stage depends on several factors, including customer demand, infrastructure capacity, and local water supply conditions (e.g. reservoir storage), which can vary across the region.

British Columbia is experiencing severe drought levels and unprecedented drought conditions across the province. More than half of the province is in Level 5 drought, with an additional almost 30% of the province in Level 4.

Level	Conditions	Impacts
0	Non-Drought	There is sufficient water to meet socio-economic and ecosystem needs
1	Dry	Adverse impacts to socio-economic or ecosystem values are <b>rare</b>
2	Very Dry	Adverse impacts to socio-economic or ecosystem values are <b>unlikely</b>
3	Severely Dry	Adverse impacts to socio-economic or ecosystem values are <b>possible</b>
4	Extremely Dry	Adverse impacts to socio-economic or ecosystem values are <b>likely</b>
5	Exceptionally Dry	Adverse impacts to socio-economic or ecosystem values are <b>almost certain</b>



## DROUGHT RESPONSE — WE CAN ALL TAKE ACTION

### Government of B.C.

The Government of B.C. is responsible for drought response guided by their [Drought and Water Scarcity Response Plan](#).

When voluntary water conservation measures are not sufficient to meet all water user rights, protect critical environmental flows or the survival of a fish population, the *Water Sustainability Act* provides the Government of B.C. with the authority to regulate both stream water and groundwater. On August 16, Fish Population Protection Orders were put in place for Salmon River and Bessette Creek to maintain water levels for spawning salmon. 398 surface and groundwater licence holders were ordered to stop using water for forage crops to preserve water levels. With conditions as they are throughout the Thompson Okanagan region, more protection orders are likely.

### Indigenous communities



Shuttleworth Creek, Aug. 10,  
Courtesy Okanagan Nation  
Alliance

Indigenous communities are working hard to conserve, protect, restore, and enhance fish populations, reinvigorate traditional fisheries practices, and advocate for rights and title with respect to fisheries interests.

Staff are out in the field now, monitoring stream flows and temperatures, doing fish counts, advocating for better protection measures, and completing fish salvages, where needed.

### Local water suppliers

Local authorities implement water restrictions and other responses to water shortages according to their drought management plans and bylaws. Whether a community moves to a higher restriction stage depends on customer demand, infrastructure capacity, and local water supply conditions, which can vary across the region. Water suppliers also have an important role in educating their communities about water conservation.

Most of the large water suppliers in the Okanagan are supported by storage in the uplands or along the mainstem. Careful management of this storage can make the water last throughout the season even when it's dry. Many water suppliers have provincially regulated fishery flow requirements that they must meet in the downstream creeks and streams.

### Farmers and ranchers

Agriculture feeds our community and our economy, and requires water to do so. When it's hot and dry, crops and livestock need more water to survive. But good water management is essential right now, particularly in areas where water sources are not backed by storage. When streamflows become critically low, drastic measures need to be taken to make sure there is water available for fish and other aquatic life, helping protect the larger ecosystem it supports.

**Good water management will meet the crop's water needs while preventing water loss due to runoff, leaching, or drift.**

Visit [www.OBWB.ca/ag](http://www.OBWB.ca/ag) for tools and information about increasing water-use efficiency and responding to drought on the farm.



### Residents, tourists, and industry

The OBWB's Okanagan WaterWise program has stepped up drought communication through its valley-wide "Make Water Work" campaign, with TV ads (<https://youtu.be/OvPJFMa9d0c>), radio ads (<https://tinyurl.com/2xfknpv6>), and social media postings.



Additional conservation messaging is being delivered with wrapped vehicles, billboards, and by water utility and water-related business partners. Messaging touches on the importance of following local water restrictions,

ensuring enough water for what's most important: the fish, food crops, and firefighting.

The **Make Water Work** website at [www.MakeWaterWork.ca](http://www.MakeWaterWork.ca) remains an important source of up-to-date information for the Okanagan. Make Water Work partners are urged to encourage residents to visit the website for conservation tips, water restriction information, landscaping help and more.