

Okanagan Basin Water Board Meeting Agenda



Okanagan Basin
WATER BOARD

DATE: Tuesday, December 1, 2020

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

PLACE: *Online (see notation below)

1. CALL MEETING TO ORDER

1.1 Acknowledgement of First Nations Traditional Territory

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

2. INTRODUCTION OF LATE ITEMS

3. APPROVAL OF AGENDA

4. ADOPTION OF MINUTES

4.1 Minutes of the Regular Meeting of the Okanagan Basin Water Board of November 3, 2020 held online (page 1)

5. DELEGATIONS

5.1 Katie Pease, Program Manager, Sustainable Winegrowing BC, presenting on SWBC Certified, a newly launched sustainability certification program for the winegrowing industry in BC, and the future of water management in the industry.

6. STAFF REPORTS

6.1 Executive Director Report (page 7)

6.1.1 CWA consultation report

6.2 Water Stewardship Director Report (page 12)

6.3 Operations and Grants Manager Report (page 14) (resolutions required)

6.4 Communications Director Report (page 17)

6.4.1 Make Water Work 2020 wrap-up report (provided prior to the meeting)

6.4.2 Don't Move A Mussel 2020 wrap-up report (provided prior to the meeting)

6.5 Policy and Planning Specialist Report (page 22)

6.6 Special Projects Coordinator Report (page 24)

7. NEXT MEETING

7.1 The next meeting of the Okanagan Basin Water Board will be Tuesday, February 2, 2021 at 10 a.m. at location TBD.

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. Given the current situation with COVID-19, the board will be holding its meeting online. If you are interested in attending this online meeting, please contact our Communications Director Corinne Jackson at corinne.jackson@obwb.ca for further details. Thank you for your patience and understanding.

**MINUTES OF A REGULAR MEETING OF THE OKANAGAN BASIN WATER BOARD
HELD NOVEMBER 3, 2020, ONLINE
OKANAGAN, B.C.**

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
Director Bob Fleming	Regional District North Okanagan
Director James Baker	Regional District Central Okanagan
Director Colin Basran	Regional District Central Okanagan
Director Rick Knodel	Regional District Okanagan-Similkameen
Director Christopher Derickson	Okanagan Nation Alliance
Director Bob Hrasko	Water Supply Association of BC
Director Denise Neilsen	Okanagan Water Stewardship Council

STAFF

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

REGRETS

Director Toni Boot	Regional District Okanagan-Similkameen
Tessa Terbasket	Okanagan Nation Alliance, Technical Observer
Kellie Garcia	Planning Specialist

GUESTS

Andrew Gibbs	City of Kelowna Senior Project Manager
Linda Digby	Kelowna Museum Executive Director

1. CALL MEETING TO ORDER

Chair McKortoff called the meeting to order at 10:01 a.m.

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

2. APPROVAL OF AGENDA

Addition of item 6.3 Unfinished Business re: Rocky Mountain Ridged Mussels

“THAT the agenda of the regular meeting of the Okanagan Basin Water Board of Nov. 3, 2020 be approved as amended.”

CARRIED

Dir. Fortin joined the meeting at 10:02 a.m.

3. ADOPTION OF MINUTES

- 3.1 Minutes of the Regular Meeting of the Okanagan Basin Water Board of Oct. 6, 2020 held online.

Two amendments were noted.

“THAT the minutes of the regular meeting of the Okanagan Basin Water Board on Oct. 6, 2020 held online be approved as amended.”

CARRIED

4. DELEGATION

- 4.1 Andrew Gibbs, Senior Project Manager, City of Kelowna, presenting a virtual tour of the Laurel Packinghouse Indigenous Landscaping Garden

Mr. Gibbs provided an update on Laurel Square, an outdoor public park space, located next to the Laurel Packinghouse downtown. Design work started in 2016 as a capital project by the city and was done in partnership with Kelowna Museums. Construction began in 2019 but had some budget challenges. An OBWB Water Conservation and Quality Improvement Grant helped ensure the project was completed in 2020. The project was intended to address an underused area and create a more attractive and educational public space, Gibbs explained. The partnership with the museum, allowed for the telling of the history of the area – its orchards, irrigation. Today the space includes a seating area made to look like apple crates, a truck that helps illustrate the story of the Packinghouse, an interactive irrigation flume, and more.

Drs. Cumming and Derickson entered the meeting at 10:07 a.m.

Funding from the OBWB helped create a WaterWise, native plant demonstration garden. There is also a bug hotel to teach about the importance of pollinators, an interactive “Coddling Moths and Ladders” game. Partnership with Westbank First Nations also brought a local Indigenous focus to the project.

Ms. Digby added that the square is intended to invite curiosity and ignite discovery. Teacher and public feedback has been positive, she added. Additional work is underway to create an interpretive panel for the garden. Work is also underway to develop capstone project to take the project digital and take the story further.

Ms. Jackson noted that staff are developing Okanagan water-related and outdoor education guides for valley educators and invited further collaboration.

Board directors thanked Mr. Gibbs and Ms. Digby for the presentation and their work on the project.

Mr. Gibbs exited the meeting at 10:25 a.m.

5. STAFF REPORTS

- 5.1 Executive Director Report

Dr. Sears provided a proposed meeting schedule for 2021.

“THAT the OBWB adopts the 2021 meeting schedule as presented.”

CARRIED

Dr. Sears noted a meeting with the RDCO board on Oct. 8 about the Okanagan Lake Regulation

System and how it wants the OBWB to take the lead and work with local jurisdictions to advocate to the province for a review.

“THAT the OBWB work with member jurisdictions to advocate to the province to expedite all the necessary studies and consultation for a rigorous review of the management of the Okanagan Lake Regulation System.”

CARRIED

The board was told that staff have spoken with provincial officials who are interested and have funding to do a gap analysis. The OBWB has been asked to partner and manage the contract. After further review, it is recommended that the contract, under \$25,000, be awarded to Associated Environmental.

“THAT the OBWB offers in-kind support to the B.C. Ministry of Forests, Lands, Natural Resource Operations and Rural Development, by receiving funds, and holding and managing a consulting contract for a gap analysis of studies needed for review of the Okanagan Lake Regulation System management.”

CARRIED

“THAT the gap analysis project be direct awarded to Associated Environmental.”

**CARRIED with Dirs. Derickson, Neilsen,
Hrasko abstained**

Directors were updated on a letter sent to the B.C. Ministry of Environment and Climate Change Strategy with recommendations from the Water Stewardship Council on its climate adaptation strategy.

Dir. Baker entered the meeting at 10:37 a.m.

“THAT the Executive Director’s Report, dated Oct. 28, 2020, be received.”

CARRIED

5.2 Water Stewardship Director Report

Mr. Jatel provided a report on the October Water Stewardship Council meeting, a survey of members and resulting discussion regarding the council’s direction for the next few years.

The council’s agricultural irrigation committee met with staff from the B.C. Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNRORD) regarding groundwater licencing. FLNRORD staff will present to the whole council at its next meeting for a fuller discussion.

Mr. Jatel will be presenting on the Okanagan Flood Story mapping project at an Esri Canada workshop.

Work is also underway to migrate a number of OBWB websites, models and data to a new server. The old server has obsolete hardware and the new system will be more secure, the board was told.

“THAT the Water Stewardship Director’s Report, dated Oct. 28, 2020, be received.”

CARRIED

5.3 Operations and Grants Manager Report

Mr. Littley noted that staff were invited to a meeting to discuss aquatic invasive species and next steps to address the issue with MPs Mel Arnold, Tracy Gray and Dan Albas. Staff are awaiting the announcement of the B.C. cabinet before forwarding a call to action, addressing provincial aquatic invasive efforts.

The board suggested broadening the federal meeting to include all Okanagan MPs. Dr. Sears said she could take this request forward.

“THAT the OBWB encourage MP Mel Arnold to invite, and encourage, all Okanagan MPs to attend.”

CARRIED

The board was provided an update on the 2021-22 WCQI grant competition and theme.

“THAT for the 2021-2022 WCQI grant competition annual theme, the OBWB seeks projects in any category that address water security; AND THAT applications in these categories are prioritized for funding during staff review with the awarding of up to 10 extra points toward the total score; AND THAT the process and scoring criteria for the grant competition be approved as outlined.”

CARRIED

“THAT the Operations and Grants Manager Report, dated Oct. 28, 2020, be received.”

CARRIED

5.4 Communications Director Reports

Ms. Jackson gave an update on the OBWB's 50th anniversary online speaker series, noting the Oct. 22nd Bob Sandford presentation is now uploaded on the OBWB-Okanagan WaterWise YouTube channel. Mr. Seth Siegel will be presenting on Nov. 12 and that video will also be posted.

A telephone survey on Okanagan water was done in October and the results are now being compiled. The survey, similar to one the Water Board conducted in 2009 and 2014, will gauge valley residents' understanding around water issues and help inform OBWB water management efforts.

Ms. Jackson also provided an update on the development of new Okanagan water education guides for teachers in the valley. The guides meet the new B.C. curriculum guidelines, were developed with Syilx knowledge keepers to incorporate local Indigenous perspectives, and includes resources to explore outdoor education.

Communications support has also been provided to the 2021 Western Canada AquaHacking Challenge and various water-related events, including the Community Water Forum with UBCO and Okanagan Nation Alliance on Nov. 5.

“THAT the Communications Director's Report, dated Oct. 28, 2020, be received.”

CARRIED

5.5 Policy and Planning Specialist

Dr. Sears presented Ms. Garcia's memo, noting that she was attending a federal Okanagan Chinook Mitigation workshop scheduled at the same time as the board meeting.

“THAT the Policy and Planning Specialist’s Report, dated Oct. 28, 2020, be received.”
CARRIED

5.6 Special Projects Coordinator

Ms. Restrepo-Tamayo noted efforts are underway to recruit advisory committee members for the 2021 Western Canada AquaHacking Challenge. The committee will select and refine the water issues to be tackled by participating teams, assist with access to data for the teams, recommend potential mentors and judges, and promote the event.

Discussions are continuing regarding the Osoyoos Lake Water Science Forum, set for October 2021. However, organizers are also considering contingency plans, including a possible postponement, recognizing the importance of in-person attendance for at least some of the event and COVID-19 considerations.

Work is continuing to hold a Municipal Natural Assets Workshop for Okanagan local governments in late November. Details will be available soon.

“THAT the Special Projects Coordinator Report, dated Oct. 27, 2020, be received.”
CARRIED

6. **NEW AND UNFINISHED BUSINESS**

6.1 Budget Features Memo – Proposed Budget for 2021-2022

Dr. Sears presented the proposed budget, adding that the OBWB’s letters patent require the budget be passed by December. New this year is an improved hydrometric monitoring service, approved this fall by the board, that will support the province’s flood forecasting, and help communities prepare for freshet and potential drought.

“THAT the OBWB adopts the 2021-2022 budget as presented.”
CARRIED

6.2 RDNO Letter - request for support re: Wastewater Treatment Facility and ALC exclusion of land for spray irrigation

Dir. Fleming provided background on a joint application from RDNO, Spallumcheen and Okanagan Indian Band to the Agricultural Land Commission for an application to use reclaimed water for irrigating ag lands in the South Spallumcheen area. It’s part of a larger wastewater treatment plant project and effort to improve water quality in Swan Lake and area streams, improve water supply for ag irrigation and provide economic development through implementation of a community sewer system.

In response to questions, Dir. Fleming added that the application would allow for the treated wastewater to be extended for use on other nearby ag lands.

“THAT the OBWB send a letter of support for the RDNO, Spallumcheen and Okanagan Indian Band’s non-farm use permit to the Agricultural Land Commission.”
CARRIED

6.3 Rocky Mountain Ridged Mussels

Dir. Cumming explained to the board that Vernon has had issues installing a new water intake due to Rocky Mountain Ridged Mussels and asked if OBWB knows of the science behind the listing of the mussel as a species of concern. Staff offered to provide the report OBWB submitted as part of the review under Canada's Species at Risk Act. Dr. Sears offered to raise the issue at the upcoming meeting with Okanagan MPs.

7. **NEXT MEETING**

- 7.1 The next meeting of the Okanagan Basin Water Board will be held Tues. Dec. 1, 2020 at 10 a.m. at location TBD.

8. **ADJOURNMENT**

"THAT there being no further business, the regular meeting of the Okanagan Basin Water Board of Nov. 3, 2020 be adjourned at 11:51 p.m."

CARRIED

Certified Correct:		
Chair		Executive Director

MEMORANDUM

Okanagan Basin Water Board
Regular meeting
December 1, 2020
Agenda No: 6.1

To: OBWB Directors
From: Anna Warwick Sears
Date: November 25, 2020
Subject: **Executive Director Report**

COVID-19 Considerations:

With the recent increase in Covid-19 restrictions, OBWB office-based staff are mostly working from home for the time being, coming into the office as needed. We are really looking forward to the vaccine, when we can all share the office space again, but we are fortunate to be able to work remotely for most of our activities. The RDCO now has enhanced rules for mask wearing and other office protocols, and many of their staff are also working from home. Having fewer people in the building helps to reduce risks. Milfoil staff are observing COVID-19 safety protocols while moving equipment.

Flood Resilience Projects

As an outcome of the OBWB's discussions at the November board meeting, I have now secured a contract with the B.C. Ministry of Forests, Lands and Natural Resource Operations, titled: *Gap Analysis and Recommendations of studies needed to update the Okanagan Lake Regulation System and its Operating Plan*. This is the first step in the process to lay the groundwork for a review and potential revision to how the lake is managed. The province is funding the gap analysis, and the OBWB will manage the contract. The report is expected to be completed in March 2021, and it will lay out a plan of study on what is needed for the review.

It's likely that a number of technical studies, risk assessments, and modeling will be needed. This should help assess how lake operation changes will affect flood and drought risk, their respective economic impacts, as well as potential impacts to fisheries if changes are made or conversely, if the existing guidelines remain in place. We anticipate that there will need to be extensive collaboration with Okanagan Nation, and consultation with different sectors.

As discussed last month, we will be working with the Okanagan local governments to raise the awareness of this issue within the provincial government, and the need for ongoing funding to do the work. The task of reviewing the lake operations and making changes is a provincial responsibility, but there is much that the OBWB and our local partners can do to assist. I will be presenting again to the RDCO board on December 7th, and collecting letters of support from local governments throughout the valley.

Canada Water Agency Consultation

The Okanagan Water Stewardship Council's Policy Committee assisted me this month with preparing a response to the federal government's consultation questions about the Canada Water Agency. I have attached a copy of the Questions and Answers as submitted. They are not on OBWB letterhead, because of the online submission format.

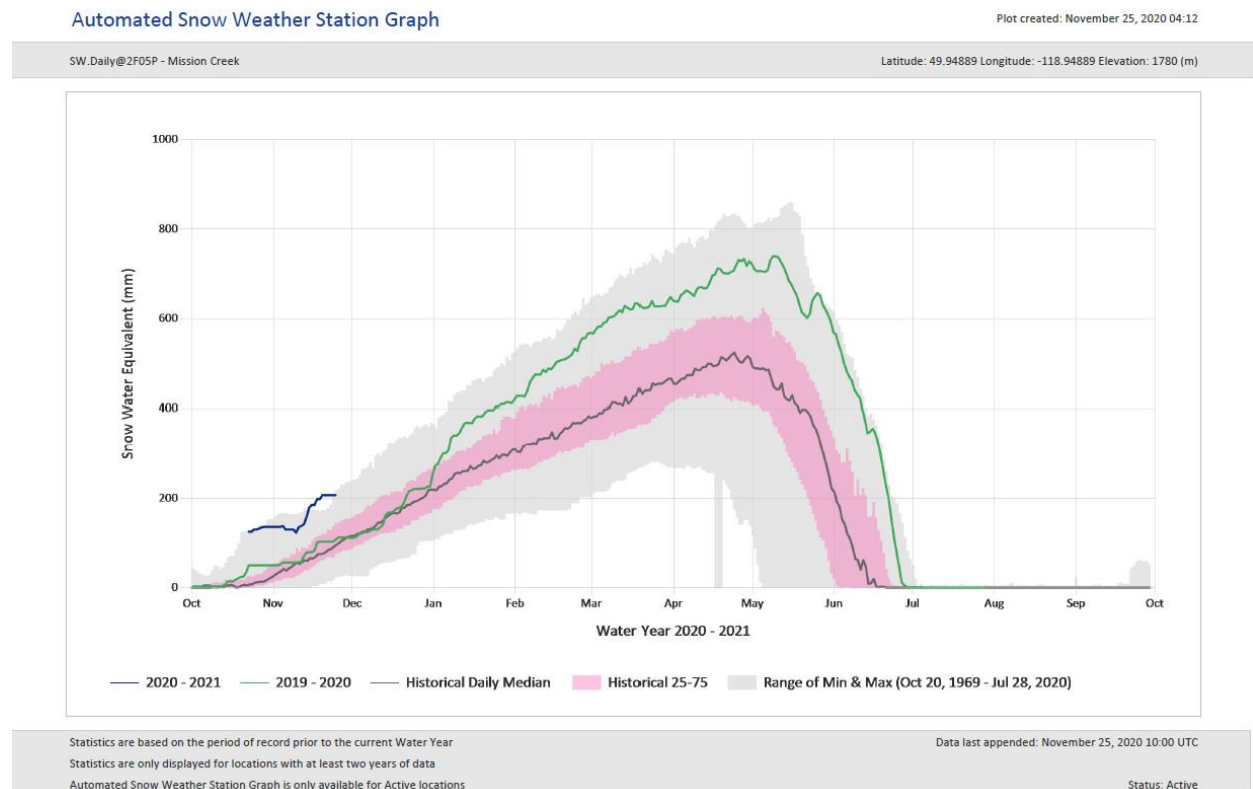
Aquatic Invasive Species meetings

James Littley and I were invited to two meetings this past month, to discuss the discovery of invasive freshwater clams in Shuswap Lake. The first meeting was organized by MP Mel Arnold, and included MP's Tracy Gray and Dan Albas, along with CSRD Director for Electoral Area C, Paul Demenok, and several local staff people working on the problem. MP Arnold will continue to push for better aquatic invasive species protections in Ottawa, and Mr. Littley and I agreed to work with the local Shuswap AIS staff. The second meeting was with these staff, and we discussed issues around a lack of a rapid response plan for invasive freshwater clams. We agreed that it was a "dress rehearsal" of sorts for invasive mussels. As a group, we will review the rapid response plan that the province developed for invasive mussels, and may consider developing a more detailed vulnerability assessment and response plan for the Okanagan-Shuswap region.

Weather Report

We continue to have moderate La Nina conditions, looking ahead for the winter. Forecasters are predicting a cold, snowy winter in Interior B.C. Good for skiers and the snow pack, and already well above normal.

Mission Creek Snow Pillow – November 25, 2020



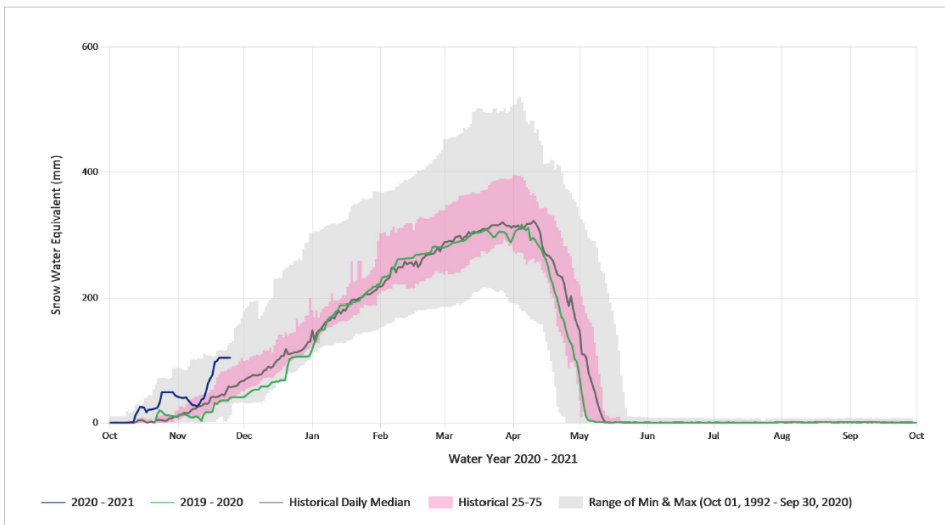
Brenda Mines Snow Pillow – November 25, 2020

Automated Snow Weather Station Graph

Plot created: November 25, 2020 04:14

SW.Daily@2F18P - Brenda Mine

Latitude: 49.862361 Longitude: -119.982111 Elevation: 1460 (m)



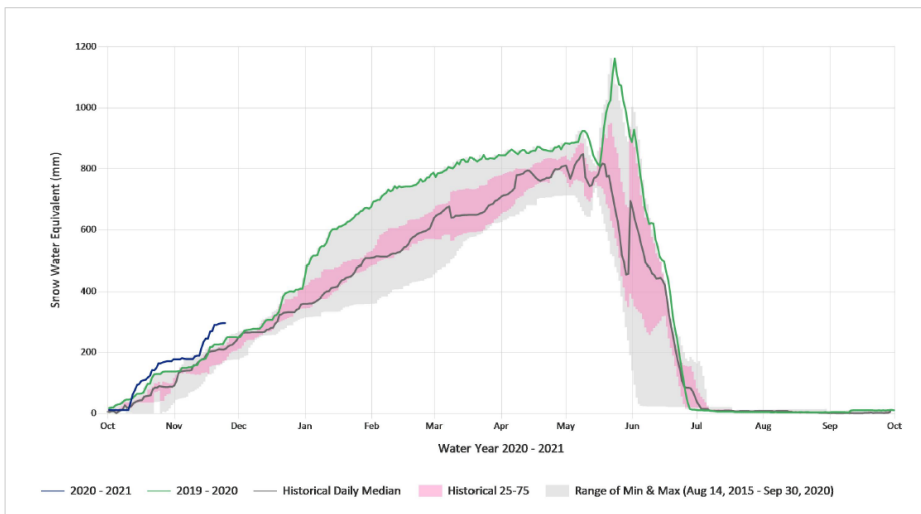
Silver Star Snow Pillow – November 25, 2020 *(Note there are very few years of data at this site, so the historical ranges are more erratic and less comparable.)*

Automated Snow Weather Station Graph

Plot created: November 25, 2020 04:13

SW.Daily@2F10P - Silver Star Mountain

Latitude: 50.37136 Longitude: -119.0621 Elevation: 1840 (m)



OBWB's Canada Water Agency Consultation Response – November 13, 2020

Question 1: What are the most pressing fresh water challenges nationally, and in your region of Canada?

Nationally, the most pressing challenge is:

- The lack of a national water policy which will guarantee a safe and reliable water supply to Canadians and protect the natural environment. This is increasingly important considering the nature and impacts of water-related crises (floods and droughts) and social upheaval likely to be generated by climate change.

Regionally the most pressing issues are:

- Changing of timing and quantity of flow throughout the year as it relates to changes in climate and changes in land use and environmental flow requirements.
- Effective management (during both times of water scarcity and during high water levels) of water use conflicts amongst large water users (municipal, agricultural, large industry/commercial) and the provision of environmental flow needs.
- Okanagan-Osoyoos Lake level management system. Okanagan lake levels are controlled by a series of dams. How this is managed impacts important stages of fish life cycles, flooding and drought.
- Management and surveillance of invasive aquatic species.
- Drinking water source protection, including the need to reduce pollutants related to resource development in upper watersheds, and nitrate contamination of drinking water aquifers from over application of nutrients on agricultural lands.
- Loss of wetlands, riparian buffers, and aquatic habitat.
- Urbanization – population growth and infrastructure. Impervious surfaces, storm and wastewater management.

Question 2: What in your opinion are the essential science, data, policy, and program gaps that need to be filled in relation to these fresh water challenges?

On behalf of the Okanagan Basin Water Board, the following are the essential science, data, policy, and program gaps that need to be filled in relation to these fresh water challenges:

- Lack of comprehensive, easily accessible, and spatially representative data sets on: climate, particularly at medium and high elevations; streamflow and groundwater; evapotranspiration from natural systems (upland areas, grasslands, lowlands); snow water equivalent (from ground-based and remote sensing information); Okanagan Lake evaporation; and surface-groundwater interactions across low elevation alluvial fans.
- Rationalization of surface and groundwater licences and licensing practices. How do current and future (i.e., under the influence of climate change, and given population and agricultural expansion) water requirements compare with licenced amounts?
- Long-term baseline data for water quantity and quality for research, modelling, management, and monitoring of trends and indicators.
- Science, policy and program gaps exist in the management of aquatic invasive species (AIS) across Canada. Two major gaps are: (1.) The lack of a coordinated inter-ministry and inter-provincial effort to regulate vectors of AIS; and (2.) The lack of programs to deal effectively with established AIS through increased scientific research, monitoring and management within Canadian waters.

Question 3: What role would you see a Canada Water Agency playing in filling these gaps?

- Improve communication and where possible consolidate existing federal water activities, fully embrace Indigenous participation, respect existing jurisdictional boundaries. The agency should enable all levels of government in Canada to better understand and manage current and future water challenges.
- Provide leadership on the collection and management of water quantity and quality data with consistent methods across the country. The Water Survey of Canada currently serves this purpose for the collection, storage and dissemination of hydrometric data and could be used as a model for other types of data management. Examples of effective management include national quality standards for collection and computing data, centralized data management, and easy to access and understandable spatial data for public for both real-time and quality approved historic data.
- Water Survey of Canada, through Federal-Provincial-Territorial agreements, is also a model for effective collaboration. Local government and First Nations should be added to these agreements. This model could be applied to the creation of other data collection agencies.

- While Water Survey of Canada does their role well related to monitoring, they suffer from chronic underfunding. Any future data management agencies must be provided with adequate funding.
- Provide a grant program for other jurisdictions to allow for funding for more local data collection, such as hydrometric stations, and groundwater observation wells. These funds should be contingent on data collection methods meeting accepted standards for such programs, and that the data is uploaded to an easily accessible database. To be effective, data monitoring grants would need to be on the multi-year to decadal scale to be useful for seeing trends and establishing indicators.
- Provide provinces and communities with funding and support to help meet local water research needs, and conduct locally-important water projects. In particular, preparation of water sustainability plans should be prioritized. A “water sustainability plan” is a broad term for looking at the watershed with a multi-jurisdictional and holistic lens. These plans have different names with slightly different goals but are all watershed in scale, and can include Source Assessment and Protection Plans, Drinking Water Safety Plans, and Water Management Plans.
- Provide federal staff to fully engage in technical advisory committees, water stewardship councils, and other collaborative processes as requested by local government and First Nations to support local capacity and to build understanding within the Government of Canada about regional perspectives and priorities.
- Coordinate national and inter-provincial AIS prevention efforts, focussing more broadly than the current DFO-led AIS program. A Canada Water Agency should have a mandate to examine the harm that AIS can cause to Canadian waters, and the knock-on effects which that harm causes to the environment, economy and society. As the links are established, the Canada Water Agency should have the authority to support and coordinate prevention efforts across Canada.

Question 4: Recognizing the important role of provinces and territories in fresh water management in Canada, how should a Canada Water Agency work to enhance federal-provincial-territorial coordination and cooperation?

- Examine other national water agencies and other relevant Canadian agencies to provide models, e.g. the European Union Water Framework which emphasises a) establishing common goals among partners b) cooperation c) setting and enforcement of standards d) creative, long term reliable sources of funding.
- Establish inter-jurisdictional committees like the federal-territorial committee on water quality guidelines for database management.
- Include First Nations and local governments in these cooperative endeavours.

Question 5: Recognizing the Government of Canada’s commitment to advancing reconciliation with Indigenous peoples through renewed nation-to-nation, government-to-government relationships based on recognition of rights, respect, co-operation and partnership, what role should a Canada Water Agency have in working with Indigenous peoples on fresh water management issues?

- Include First Nations as founding partners. A Canada Water Agency will not be successful without First Nations having a key role. First Nation participation is crucial to ensure that we learn from Indigenous knowledge, value systems, and ways of knowing to improve our relationship with water that will in turn guide and inform water management.
- Comprehensively include First Nations in the process of improving access to safe and reliable drinking water to First Nation communities across the country.
- Partner with First Nations to collect and analyze data; and to develop water and ecosystem management tools and regional water policies. The Okanagan Basin Water Board works closely with local First Nation groups. Recent project examples include successfully partnering to obtain and analyse streamflow, groundwater, and fisheries data to support setting of environmental flow needs for 18 streams in the Okanagan.
- Support First Nations capacity-building. For example, First Nations communities and individuals need more opportunities for education and training to operate water and wastewater treatment facilities.

MEMORANDUM

Okanagan Basin Water Board
Regular meeting
December 1, 2020
Agenda No: 6.2

File No. 0550.04

To: Board of Directors
From: Nelson R. Jatel
Date: November 25, 2020
Subject: Water Stewardship Director's Report

Water Stewardship Council (Council)

The November 12th Council marked our 5th virtual Council meeting hosted on Zoom due to the COVID-19 pandemic. The meeting focused on the topic of agriculture irrigation and groundwater licensing. **Jeff Nitychoruk**, Senior Water Stewardship Officer with the FLNRORD department of the BC Government provided an informative presentation and was supported by **Ray Crampton**, District Manager and **Tony Zanotto**, A/ Resource Manager.

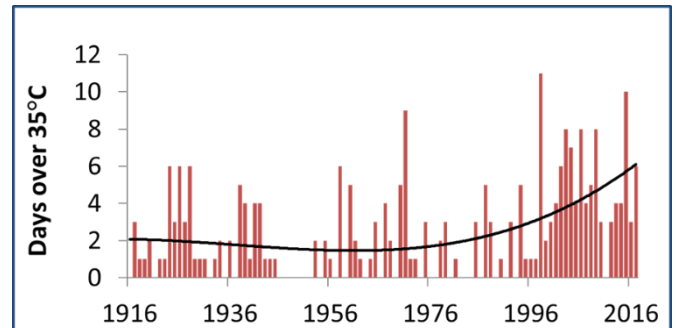


Figure 1 Annual number of days over 35°C recorded at Summerland, BC (1916 to 2018; Environment Canada (2019)). Bars within the horizontal blue rectangle are for 2000 to 2010, the years for which weather data are included in BC's Agriculture Water Calculator.

There were four issues of concern discussed about groundwater licensing for irrigation including:

- The BC Agriculture Water Calculator was not designed to inform the water licenses adjudication process.
- Licensing 'to crop' hampers long-term planning and adaptation by the agriculture community.
- Groundwater license adjudication process is unclear.
- Active communication between groundwater adjudicators and applicants is needed.

Figure 1 identifies a warming trend in the Okanagan that has implications for future water irrigation and food security issues.

The Council's five committees (policy, dams and reservoirs, flood planning, agricultural water, and source water protection) continued to be active throughout November. The *ad hoc* nomination committee will be meeting in December to discuss membership for the upcoming 2021 Council term. This month's Council meeting will be held again on Zoom: December 10th from 1 – 3 pm. The council will be discussing the Trout Creek restoration project with guest speaker **Karilyn Alex**, Fisheries

biologist with the Okanagan Nation Alliance (ONA) Fisheries Department. Board members are welcome and encouraged to attend. We are also planning a virtual holiday celebration after the Council meeting – details to follow.

Okanagan Hydrometric Monitoring Network service – operational and budget planning

The work plan for expanding our hydrometric network in 2021 with the ONA Fisheries Department and Canadian Hydrometric Service deliver partners is under development. A technical advisory committee is being organized to support the management of this initiative and will be in place in early 2021. From a technology perspective, we are upgrading our hydrometric database called Aquarius. The upgrades will be completed in early January and will support: data input from our partners, enhanced quality assurance and quality control, and integrate OBWB collected hydrometric into the BC government hydrometric data warehouse – making the information readily available to local Okanagan governments and their partners.

Select project updates

Below are updates and highlights from select OBWB projects that I am working on:

1) Okanagan Wetland Strategy

I spoke at the BC Wildlife Federation Wetlands Program speaker series on November 10th with over 75 guests from across the province highlighting a number of wetland projects we have developed in the Okanagan including the Okanagan Wetland Strategy (www.obwb.ca/wetlands) and the new Okanagan mapping project conducted in partnership with UBCO.

2) Okanagan Flood Story - Canadian Geography Information System Awareness Week

On November 18th, Canadian Geographical Information Service (GIS) Day, I presented (virtually) on behalf of the OBWB at the national Esri Canada conference to a national group of nearly 300 people. My presentation showcased the new valley-wide flood maps “[Okanagan Flood Story](http://www.OkanaganFloodStory.ca)” website – an ARCGIS StoryMap, helping residents and local governments understand flood concerns and prepare. Our www.OkanaganFloodStory.ca website is the culmination of two years of flood mapping in our valley. After high-water events in 2017 and 2018, the Okanagan Basin Water Board (OBWB) led a valley-wide partnership of local governments and Indigenous communities to update the region’s floodplain mapping. An important goal of this project is to increase community understanding of the flood hazard in the Okanagan watershed through information sharing. Current efforts through the Council sub-committee is underway to develop a speaker series in February 2021 to bring this important flood information to the attention of real-estate and insurance professionals.

Council related initiatives

- A new Okanagan dams and reservoirs working paper is under development and will be completed for January. This paper provides a summary of Okanagan dams and reservoirs and explores opportunities for future dam works.
- A new source water protection working paper is being finalized and will be presented to the Council at the December meeting with recommendations to the Board in the new year.

MEMORANDUM

Okanagan Basin Water Board
Regular meeting
December 1, 2020
Agenda No: 6.3

File No. 0550.04

To: OBWB Directors
From: James Littlely
Date: November 23, 2020
Subject: Operations and Grants Manager Memo

SFA Grant Program

The Sewerage Facilities Assistance grant program uses a two-part application system with a notification form one year in advance of project completion, allowing future grant payments to be allocated during the budgeting process, followed by a formal application with final numbers upon project completion. The OBWB has received the following application and notification:

1. Town of Osoyoos – Main Lift Station

This is an application from the Town of Osoyoos for a project to replace the Main Lift Station, built in 1978, which has reached the end of its service life. The original lift station did not receive an OBWB grant, and 26.81 % of the properties which will be serviced by the new station were developed prior to 1978, making them eligible for an SFA grant now. The final total project cost was \$6.147 million of which \$1.659 million is eligible for an SFA grant. This grant was approved in principle by OBWB in August 2018 and is calculated at \$17,153.51 per year based on current interest rates.

Recommendation: That the SFA grant for the Osoyoos Main Lift Station project be approved as outlined above.

2. RDOS - Kaleden

We have also received notification for a grant to RDOS for the extension of sewer to Kaleden. The preliminary annual SFA grant value is estimated at \$85,000 using the project budget, and today's interest rates as established by the Municipal Finance Authority. We also still require a calculation of the pre-1978 lots to determine how much of the project is eligible for the grant. Once the project is complete, RDOS will submit an application with final numbers for board approval.

Recommendation: That the SFA grant for the RDOS Kaleden project be approved in principle for OBWB budgeting purposes.

SFA program Terms of Reference Update

2020-12-01_OGM_memo

In reviewing and updating the SFA Program Guide, I have noted some ambiguity in the Terms of Reference (TOR) with regard to grant eligibility. The current TOR state:

2.1 The grant program funds upgrades to treatment plants using old technology and extensions of sewer service to subdivisions, created prior to 1978 that are still on septic.

It later states:

3.3 Lots on septic at the time of the original grant program, 1977, will be eligible for funding when sanitary sewers are installed.

The principle behind the 1978 eligibility criteria is that after the establishment of the SFA program in 1977, Okanagan local governments would charge developers for the cost of sewerage new lots. This principle ensured that the OBWB SFA program would have an eventual sunset for spending on sewerage infrastructure, and that developers would bear the cost of future subdivision.

Clause 2.1 makes lots that were created (and not subsequently subdivided) before 1978 eligible for SFA grants. This makes sense because once the lots were created and zoned, this meant that they were permitted for septic systems, regardless of whether septic was actually installed before 1978. Clause 3.3, in contrast, suggests that septic systems had to be in place on lots prior to 1978 to be eligible for SFA grants. This clause runs counter to the 1978 principle, because after lot creation, there was no mechanism for local governments to collect development cost charges or similar fees.

In practice, SFA grants offer a financial incentive for local governments to extend sewer service to old neighbourhoods, and for homeowners to connect to community sewer. Clause 3.3 removes the incentive for property owners where a lot was created prior to 1978, but where septic was not installed until a later year. In this case, the community would not have collected DCC's or other fees for future sewer infrastructure, and would also not be eligible for an SFA grant for those lots.

Finally, in determining which lots are eligible, local government applicants must use 43-year-old files and records to calculate the percentage of pre-1978 lots. It is simpler and more accurate to find which lots already existed in 1978 versus trying to determine which lots had septic existing in 1978. Changing Clause 3.3 will help to meet the 1978 principle, and will save local government staff time during the application process. To my knowledge, Clause 3.3 has never been used as written when calculating the eligible pre-1977 area for an SFA grant application. It will not likely significantly increase the cost of the SFA program to OBWB.

Recommendation: That Clause 3.3 in the SFA TOR be amended to read: "Lots that were existing at the time of the original grant program, 1977, (and have not been subsequently subdivided), will be eligible for funding when sanitary sewers are installed.

AND that this change will take effect for the 2021 grant year and not be retroactive for existing grants that were approved prior to 2021.

Milfoil Program Update

Our operators are well into the winter rototilling season, with work occurring in permitted areas in the Vernon arm and North arm of Okanagan Lake, Wood Lake and West Kelowna and Peachland areas. As I reported in

September, we continue to source replacement equipment as scheduled in our Milfoil Asset Management Plan. We have recently awarded a contract to JJ Trailers of Scarborough, Ontario to provide a replacement equipment trailer. This new, custom-built trailer should provide some extra flexibility for launching and removing machines in low-water conditions, expanding our potential work season in several areas. Before December 1st, we will also be posting a significantly revised RFP to source a new crane truck. The board has already approved a maximum of \$250,000 (not including GST) for this purchase.

We have also received a winning bid for the purchase of three shop trucks to replace our current small fleet. This RFP was combined with RDCO's RFP to replace their fleet, and the winning bid came in significantly under our anticipated budget. Board approval is needed to move forward with this contract, and the funds are allocated in the current fiscal year budget.

Recommendation: That the Okanagan Basin Water Board approve the purchase of three new shop trucks for a total price not to exceed \$125,000 + tax.

MEMORANDUM

Okanagan Basin Water Board
Regular meeting
December 1, 2020
Agenda No: 6.4

File No. 0550.04

To: OBWB Directors
From: Corinne Jackson
Date: November 25, 2020
Subject: Communications Director Report

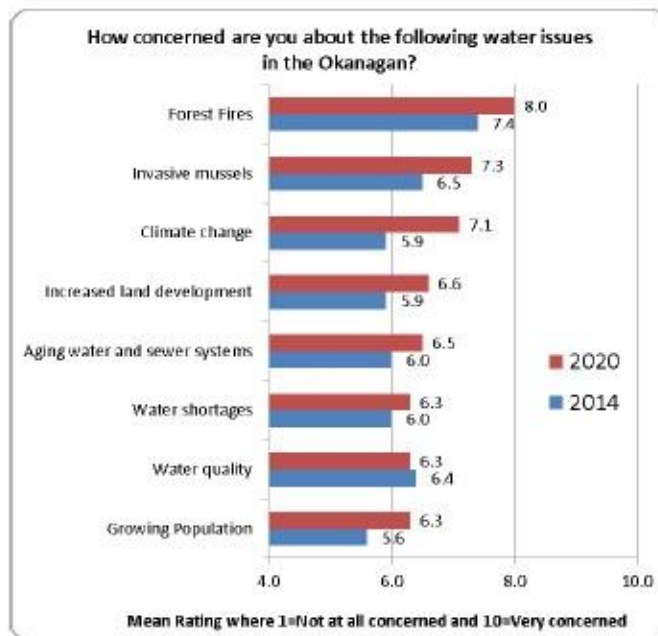
Okanagan Water Survey

As noted last month, the OBWB hired Discovery Research to conduct a telephone survey of Okanagan residents in October. The purpose is to measure valley residents' understanding of Okanagan water issues and help guide outreach and other water management efforts.

A random sample of 500 Okanagan Basin residents completed the survey. A stratified sample was generated to ensure each region had an adequate sample size and each household within the region had an equal opportunity of being selected for the research.

Statistics generated from a sample size of 500 will be accurate within $\pm 4.4\%$, at the 95% confidence interval (19 times out of 20). Below are a few of the key findings.

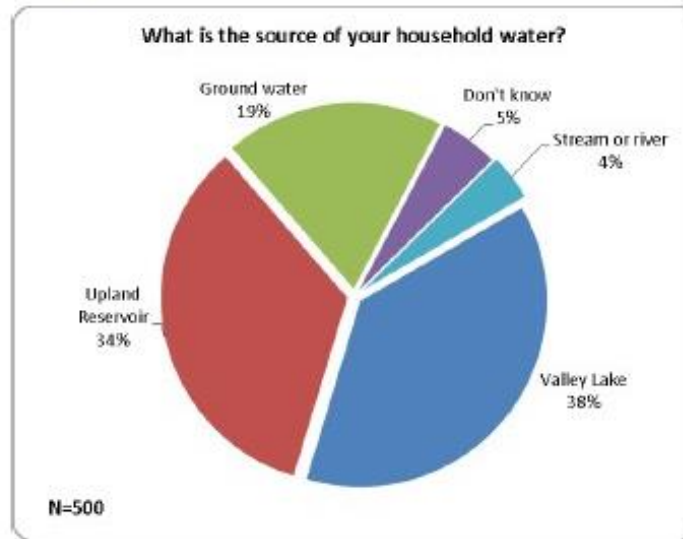
Q1. Concern about Water Issues



Residents are most concerned about *forest fires*, receiving an average rating of 8.0 out of 10 in 2020. *Invasive mussels* received an average rating of 7.3 out of 10.

Concerns about *climate change* received an average rating of 7.1 in 2020 compared to 5.9 in 2014.

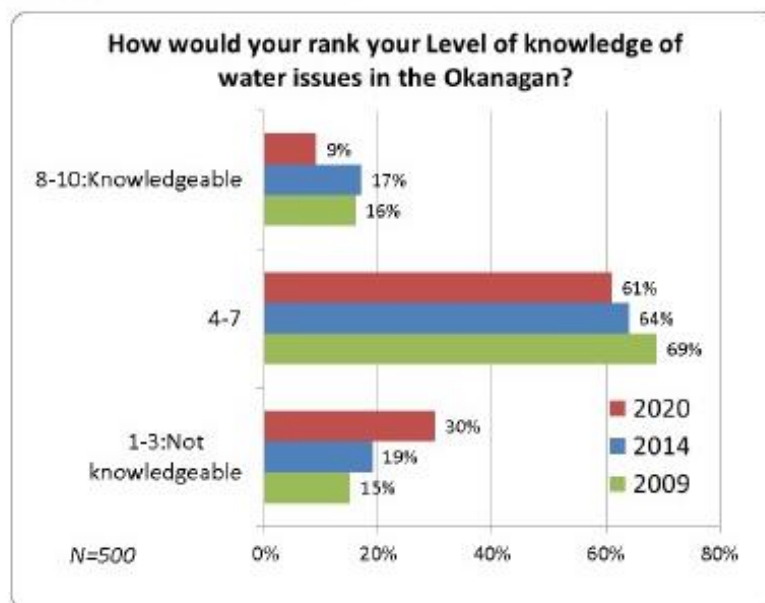
Q4. Source of Household Water



Residents were provided with a list of potential water sources and 38% indicated their household water was sourced from a *Valley Lake*, 34% indicated *Upland Reservoir*.

In 2020, 5% said they *did not know* where their household water comes from compared to 20% in 2014.

Q5. Knowledge about Water Issues



In 2020, only 9% gave high rankings (8, 9, or 10 out of 10) of their *knowledge of water issues in the Okanagan* compared to 17% in 2014.

Majority of Residents conserve water

- Eighty-five percent of residents say they practice some form of water conservation. Among residents that conserve water, **53%** conserve by *watering their yard less*, **43%** indicated they *wash clothes with fuller loads* (up from 37% in 2014) and **39%** *use the dishwasher less with fuller loads* (up from 19% in 2014).
- It is encouraging to see that **18%** indicated they *changed to low-water landscape* (up from 10% in 2014) – and a key message in the OBWB-OkWaterWise “Make Water Work” campaign.

Majority of Residents protect water quality

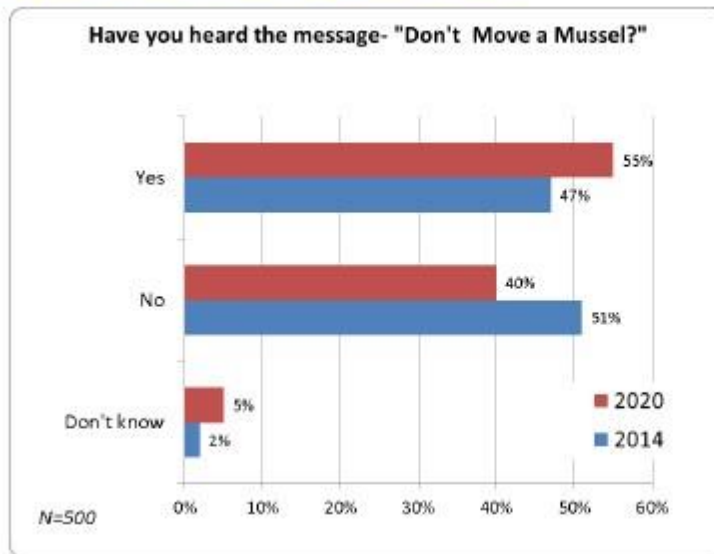
- Fifty-two percent of residents protect water quality. Among residents that protect water quality, **63%** indicated they do not put anything down the storm drain.

- Among the 165 respondents that don't protect water quality, **68%** *were not sure or have not thought about why they haven't.*

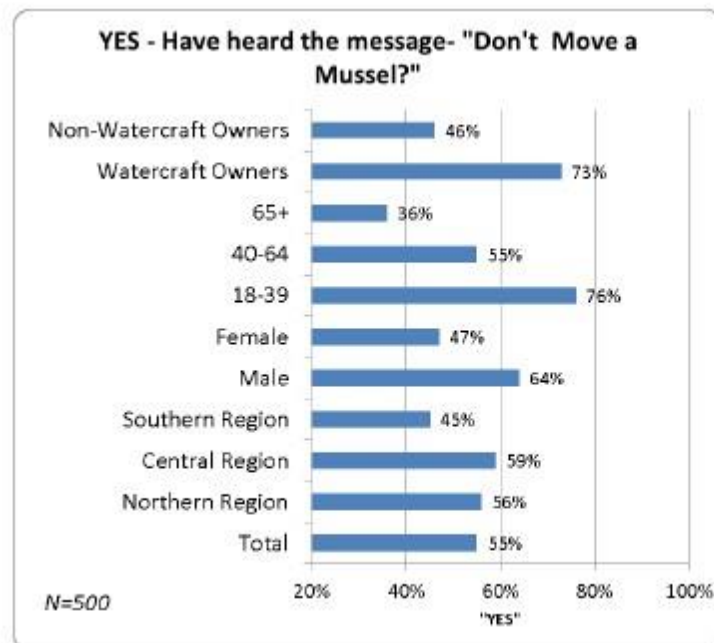
Fifty-five percent had heard 'Make Water Work' messages

- Forty-five percent had heard the message *"I pledge to water between Dusk and Dawn"*. Thirty-eight percent had heard the message, *"I pledge to water plants, not pavement."* It is difficult to compare to 2014 survey results which had higher numbers because messages changed to include "I pledge."

Q18. Awareness of 'Don't Move a Mussel' Message



The majority (55%) had heard of the 'Don't Move a Mussel' message.



Awareness of the "Don't Move a Mussel" message was highest among watercraft owners (73%), respondents aged 18-39 (76%); and males (64%).

- Forty-one percent had heard the message, *"Clean, drain, dry"* (up from 15% in 2014). Awareness of the CDD message was highest among watercraft owners at 70%.

Further survey details will be provided at the board meeting.

Make Water Work & Don't Move A Mussel campaigns

Wrap-up reports are being compiled for both the Make Water Work (valley-wide, residential outdoor water conservation) campaign and Don't Move A Mussel campaign.

A few of the Make Water Work highlights:

- An updated website with new water demand information... "The Okanagan's Water Story," and an improved MWW Plant Collection page for the expanded collection with photos and links for the 105 plants to the OXA Plant Database
- Expansion of garden centre partners
- Total visits to the MakeWaterWork.ca website between May 1 and Oct. 15, 2020 was 13,216 with 9,827 unique visitors. There were 707 unique pledges to conserve.
- The OBWB's OkWaterWise program provided matching contributions to local government and utility partners. Together, the campaign spent \$52,513. Another \$57,561 was contributed as in-kind support from media partners to deliver a campaign worth \$110,075.

Highlights from Don't Move A Mussel:

- Updated print and radio creative, as well as website updates.
- With COVID-19, face-to-face outreach was heavily curtailed and we pivoted to developing more digital outreach materials, including a series of five posters, web badge, social media banner, rack card, fact sheet, boat checklist and more.
- Total visits to the DontMoveAMussel.ca website between May 1 and Oct. 15, 2020 was 6,669 with 5,780 unique visitors (up from 4,199 in 2019).
- The OBWB's OkWaterWise program spent \$44,025 on the campaign and received \$43,087 in-kind, delivering a campaign worth \$87,112.

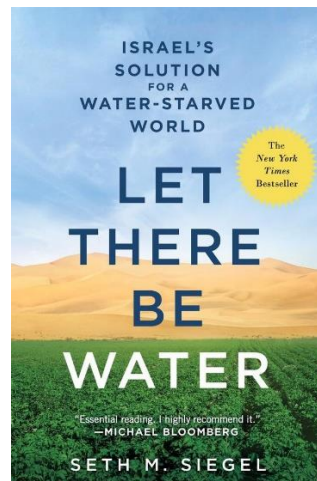
Final reports will be provided prior to the meeting.

The current contract for media services for these two campaigns ends March 31, 2021. Staff will be putting out an RFP for these services in December and gathering a committee to review proposals in January with the intention of presenting a recommendation to the board in February.

Other communication initiatives

Additional projects this month included a review of the updated "Slow it. Spread it. Sink it!" Okanagan homeowners guide. This popular guide is being updated for the first time since it was initially released in 2011.

On Nov. 12 we held our second online speaker event featuring Seth M. Siegel, celebrating the OBWB's 50th Anniversary. The video is now posted to our YouTube channel at <https://youtu.be/>



2020-12-01_CD Report_Memo

On Nov. 18, I attended a fascinating **Royal Roads University** webinar, “Communicating in a Polarized, ‘Changing’ Climate,” looking at recent research on the topic and considerations in effective communication.

Summary of OBWB-Related News Media

- Oct. 29 “Widening of river channel could quicken Okanagan Lake drainage,” *Kelowna Daily Courier*, *Penticton Herald*
- Oct. 30 “[Okanagan Valley water supply sustainability reaching a critical point: Global expert.](#)” *Kelowna Capital News*, *Salmon Arm Observer*, *Eagle Valley News*, *Vernon Morning Star*, *Lake Country Calendar*, *West Kelowna News*, *Summerland Review*, *Penticton Western News*, *Keremeos Review*
- Oct. 31 “[Response sought to Okanagan Lake level management shortfalls.](#)” *Kelowna Capital News*, *Lake Country Calendar*, *West Kelowna News*, *Summerland Review*, *Penticton Western News*
- Nov. 4 “Column - Straight From DeHart: RDCO recognized for floodplain project with OBWB and local govts,” *Kelowna Capital News*, *KelownaNow.ca*, *AM1150*
- Nov. 5 “Water basin board accepting applications,” *Penticton Herald*
- Nov. 5 “Okanagan Water Board Opens Grant Program with Focus on Water Security,” *Water Canada*
- Nov. 9 “[Okanagan river channel expansion may be key to preventing more Okanagan Lake floods.](#)” *InfoNews.ca*
- Nov. 10 “Respecting Indigenous water sustainability ethics in the Okanagan,” *Vernon Morning Star*, *Lake Country Calendar*, *Kelowna Capital News*, *West Kelowna News*, *Summerland Review*, *Penticton Western News*
- Nov. 14 “[Israel: A lesson in water management innovation for the Okanagan.](#)” *Vernon Morning Star*, *Lake Country Calendar*, *Kelowna Capital News*, *West Kelowna News*, *Summerland Review*, *Penticton Western News*
- Nov. 21 “City of Vernon says restrictions on lake weed harvesting degrading quality at Kin Beach,” *Castanet.net*
- Nov. 22 “[Vernon mayor questions ‘underlying science’ preventing fight against invasive milfoil in Okanagan Lake.](#)” *InfoNews.ca*
- Nov. 24 “The City of Vernon is building a case against Rocky Mountain Ridge Mussels,” *Castanet*

MEMORANDUM

Okanagan Basin Water Board
Regular meeting
December 1, 2020
Agenda No: 6.5

File No. 0550.04

To: OBWB Directors
From: Kellie Garcia
Date: November 24, 2020
Subject: Policy and Planning Specialist Report

Okanagan Collaborative Flood Planning Group

On November 5, I hosted the first meeting of the Okanagan Collaborative Flood Planning Group via Zoom. Thirty-five people attended, bringing together engineers, planners, GIS specialists, public works staff, and emergency response people from Okanagan regional districts and municipalities, Westbank First Nation, the B.C. Ministry of Forests, Lands and Natural Resource Operations and Rural Development, Emergency Management BC, the Okanagan Collaborative Conservation Program, and UBC Okanagan. The Okanagan Nation Alliance and the *Splatsin* First Nation also have members on the group but they were unable to attend the meeting.

The purpose of the meeting was to provide an opportunity for people across the Okanagan to share knowledge and experiences related to flood preparedness and mitigation and to connect with their counterparts in other communities. The group heard from Shaun Reimer about the challenges and considerations involved with a review of the Okanagan Lake Regulation System, and Dr. Sears talked about next steps with that process (i.e. the gap analysis). Mr. Jatel gave an update on the datum issues (datums express the height above sea level, and the new flood maps and information developed by NHC are in the new datum, CGVD2013, while most organizations are still working in CGVD28) and talked about solutions. Each attendee gave an update on their flood-related projects and funding applications and we talked about opportunities for collaboration and what the OBWB can do to help communities move forward. The group will meet again in early spring 2021.

Source Water Protection Toolkit

On October 28, I hosted the third meeting of the Source Water Protection Toolkit Technical Advisory Committee (TAC). Doug Wahl, Manager of Audits and Investigations with the Forest Practices Board, gave a presentation about the board's experiences with water issues on the Crown forest land base, and brought forward ideas for what the provincial government and water suppliers could do to improve source water protection. He talked about how sediment from roads (namely those built prior to current standards) is the biggest issue, as well as the not well understood cumulative effects of multiple resource and recreation activities going on in the watersheds. He emphasised the importance of collaboration and encouraged water suppliers to be proactive in getting everyone together and influencing change in practices. After the presentation, the group shifted focus to the toolkit, reviewing and giving feedback on several draft sections and graphics.

The first full draft of the toolkit was sent to the TAC yesterday with a request for comments by early December. The group is meeting again on December 7 to discuss their feedback. If all goes well, the toolkit should be mostly complete by the end of the year. Then, the consulting team will begin designing and developing the web version of the toolkit.

Thompson Okanagan Regional Drought Response Team 2020 Debrief

The province held their annual debrief for the Thompson Okanagan Regional Drought Response Team on November 18. At the meeting, we talked about successes for the 2020 season and opportunities for improvement next year. I offered to work with provincial staff on a couple of initiatives over the winter, including helping them consider opportunities for improving public education around drought and assisting with building out the Okanagan Stream Watch tab on the BC Drought Portal website.

Natural Assets Management

In addition to assisting Ms. Restrepo-Tamayo with organizing a natural asset workshop for Okanagan local governments, I just started a four-week online course on natural asset management through Royal Roads University. The goal of the course is to provide a good understanding of what natural assets are, why they matter, and how they can be better conceptualized, valued, and ultimately managed for the full suite of services they provide. I want to become more knowledgeable on the topic so I can offer support and advice to Okanagan local governments who may be starting down this path.

Water Supply Association of BC Workshop

This month, I attended the Water Supply Association of BC's annual workshop and AGM, which was held online for the first time in their almost 100 years of operation thanks to COVID-19. Presentations included information on a collaborative plan for logging the watersheds between Mission Creek and Vernon to reduce the chance of a catastrophic forest fire, an overview of the UBCO Benchmarking of Water Utility Performance project by Dr. Sadiq at UBC Okanagan, and updates from Interior Health and FLNRORD on the latest water issues facing the province from their perspectives.

MEMORANDUM

Okanagan Basin Water Board
Regular meeting
December 1, 2020
Agenda No: 6.6

To: OBWB Directors
From: Carolina Restrepo Tamayo
Date: November 24th, 2020
Subject: **Special Projects Coordinator report**

This month, I have been working on four initiatives: The OBWB 50th Anniversary celebrations, the AquaHacking Challenge 2021, the Osoyoos Lake Water Science Forum 2021, and the Municipal Natural Assets Workshop for local governments. Below is a short report on the status of each of them.

OBWB 50th Anniversary Celebrations

The final event of the 50th OBWB anniversary celebration took place on November 12th:

- November 12th - 4-5:30 PM (PT) Virtual Guest Speaker - Seth M. Siegel - New York Times bestselling author, international water activist, and Senior Fellow at the University of Wisconsin's Center for Water Policy. Mr. Siegel had a very insightful and interesting conversation with Dr. Sears and Mr. Littley, reflecting on the state of water management in Israel, the U.S. and globally, and provided lessons for the future of water management and governance, including in Canada's most water-stressed region, the Okanagan. There were lots of questions from the public and it was a great night. Total attendance was about 50 virtual guests.

Osoyoos Lake Water Science Forum 2021

I'm working with Dr. Sears to form the steering, finance and program committees for the forum. The first meeting of the Steering Committee is expected to happen in December 2020. The other two committees, program and finance will meet in early 2021.

Municipal Natural Assets Workshop for Municipalities:

The workshop date has been moved to mid-January 2021. The 2.5 hour event has confirmed participation as panelists, experts from the City of North Vancouver, the District of West Vancouver, the City of Grand Forks, Kelowna and Vernon. Guests will include representatives from all local governments in the Okanagan Basin. The main goals for this event are to hear about the current status and interest in Municipal Natural Assets (MNA) in our region, to present some examples from the province about the uses and application of MNA, to understand the relation between MNA and current projects the OBWB is involved in, and to define the next steps the OBWB will take to support local governments in this initiative. Registration details and information about the workshop will be sent in mid-December.

AquaHacking

Current areas we are working on:

- Call for Water Issues: The call is open for submissions until Nov. 30. The advisory committee will then select the four issues for the 2021 Western Canada Challenge that will be launched in early January.
- Recruiting: Initial steps for recruiting at universities are in place. We are working with the same network we worked with last year for the BC challenge, as well as establishing through our partners and our own research, university contacts at the institutions in the other three western provinces.
- Advisory Committee: The first advisory committee meeting took place on Nov. 20. This committee provides guidance for: the selection & refinement of water issues, accessing the data to be made available to teams; recommendations of potential team mentors and judges; and promotion of the AquaHacking Challenge events. This year we have put together a great group of experts for the committee that are representative of the business, government, innovation and technology areas as well as from the four western provinces. See photo attached of the membership.

Members of the Advisory committee



Andrew Greer
Managing Director, Cofounder



Anna Warwick-Sears
Executive Director



Bob Sandford
Chair in Water Climate Security



Carolyn Dubois
Director, Water Programs



Claire Jackson
Director of Engineering



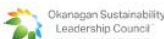
David Saltman
Chair



Devin Budreau
Senior Policy Analyst



Denise Lee
CEO Office, Intern



James Litley
Advisory Committee Member



Kat Kavanagh
Executive Director
and Founder



Pauline Gernard
Deputy Director



Marta Green
Senior Hydrogeologist



Merrill-Ann Phare
Commissioner



Melissa Dick
Program Manager



Raghu Gopal
President & CEO

