

Okanagan Basin Water Board Meeting Agenda



Okanagan Basin
WATER BOARD

DATE: Tuesday, February 5, 2019

TIME: 10 a.m. to 2 p.m.

PLACE: Regional District of Central Okanagan
1450 KLO Rd., Kelowna, B.C.

1. CALL MEETING TO ORDER

- 1.1 Acknowledgement of First Nations Traditional Territory

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 Dec. 12, 2018 at Regional District of Central Okanagan ([page 1](#))

5. BOARD ORIENTATION

Presentations by Corinne Jackson, Communications Director; Kellie Garcia, Policy and Planning Specialist; and Stefanie Wenker, Water Demand Model Specialist

6. STAFF REPORTS

- 6.1 Executive Director Report ([page 9](#))
6.2 Water Stewardship Director Report ([page 12](#))
6.2.1 Water Stewardship Council Report ([page 15](#))
6.3 Operations and Grants Manager Report ([page 16](#))
6.3.1 B.C. Municipal Affairs Ministry July 2000 letter to OBWB re: 1 ha. policy ([page 18](#))
6.3.2 B.C. Municipal Affairs Ministry April 2000 letter to City of Kelowna re: 1 ha. Policy
6.3.3 B.C. Community Services Ministry Feb. 2007 letter to RDOS re: 1 ha. policy
6.4 Communications Director Report ([page 24](#)) ([resolution required](#))
6.4.1 Make Water Work 2018 Final Report ([provided as separate attachment](#))
6.4.2 Don't Move A Mussel 2018 Final Report ([provided as separate attachment](#))
6.4.3 B.C. Invasive Mussel Defence Program 2018 Interim Report ([page 27](#))
6.4.4 ONA Canada Water Week event info ([page 30](#))
6.5 Policy and Planning Specialist Report ([page 31](#))

7. NEW AND UNFINISHED BUSINESS

- 7.1 Trout Lake Discussion ([information provided at meeting](#))
7.2 Board Remuneration Memo ([page 34](#)) ([resolution required](#))

8. CORRESPONDENCE

- 8.1 Letter from Fisheries & Oceans Canada to OBWB re: invasive mussel funding ([page 35](#))
8.2 Letter from B.C. Ministry Environment to OBWB re: invasive mussel prevention ([page 38](#))
8.3 Letter from Township of Spallumcheen to OBWB re: aquatic invasives study ([page 39](#))
8.4 Letter from B.C. Ministry Environment to OBWB re: groundwater license deadline ([page 40](#))
8.5 Letter from B.C. Ministry Environment staff to OBWB re: groundwater license deadline ([page 41](#))

9. NEXT MEETING

- 9.1 The next meeting of the Okanagan Basin Water Board will be Tuesday, March 5, 2019 at 10 a.m. at Regional District of Okanagan-Similkameen in Penticton.

10. ADJOURNMENT



**MINUTES OF A REGULAR MEETING OF THE OKANAGAN BASIN WATER BOARD
HELD DECEMBER 12, 2018, AT THE REGIONAL DISTRICT OF CENTRAL OKANAGAN
1450 KLO RD., KELOWNA, 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 |
| Alt. Director Doug Holmes | Regional District Okanagan-Similkameen |
| Alt. Director Subrina Monteith | Regional District Okanagan-Similkameen |
| Director Lisa Wilson | 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 |
| James Littlely | Operations and Grants Manager |
| Corinne Jackson | Communications Director |
| Kellie Garcia | Policy and Planning Specialist |

1. CALL MEETING TO ORDER

Dr. Sears called the meeting to order at 10 a.m.

Dr. Sears respectfully acknowledged that the meeting was being held on the traditional and unceded territory of Okanagan Nation.

2. ELECTION OF CHAIR & VICE CHAIR

Board Appointments and Elections for 2018

Regional District of North Okanagan

Director Victor Cumming
Director Rick Fairbairn
Director Bob Fleming
Alternates – Christine Fraser, Amanda Shatzko, Shirley Fowler

Regional District of Central Okanagan

Director James Baker
Director Colin Basran
Director Cindy Fortin
Alternates – Mark Bartyik, Gail Given, Stephen Johnson

Regional District of Okanagan-Similkameen

Director Toni Boot

Director Rick Knodel
Director Sue McKortoff
Alternates – Mark Pendergraft, Subrina Monteith, Doug Holmes

Water Management Appointments

Okanagan Nation Alliance

Director Lisa Wilson

Water Supply Association of BC

Director Bob Hrasko

Okanagan Water Stewardship Council

Director Denise Neilsen

Alternate Scott Boswell

Dr. Sears requested nominations for chair. Alt. Dir. Holmes nominated Dir. McKortoff. Dir. McKortoff accepted the nomination. There being no other nominations, Dir. McKortoff was elected chair.

Chair McKortoff requested nominations for vice-chair. Alt. Dir. Holmes nominated Dir. Fortin. Dir. Fortin accepted the nomination. There being no other nominations, Dir. Fortin was elected vice-chair.

3. INTRODUCTION OF LATE ITEMS

9.1.4 OBWB letter to Chair of the Standing Committee on Fisheries and Oceans re: aquatic invasive study and invasive mussels

4. APPROVAL OF AGENDA

“THAT the agenda of the regular meeting of the Okanagan Basin Water Board of Dec. 12, 2018 be approved as amended.”

CARRIED

Dir. Basran entered the meeting at 10:05 a.m.

5. ADOPTION OF MINUTES

5.1 Minutes of the Regular Meeting of the Okanagan Basin Water Board of Oct. 2, 2018 at the Regional District of North Okanagan

“THAT the minutes of the regular meeting of the Okanagan Basin Water Board of Oct. 2, 2018 at the Regional District of North Okanagan be approved.”

CARRIED

Dir. Wilson entered the meeting at 10:07 a.m.

6. BOARD ROUNDTABLE

6.1 OBWB Directors - top water issues in their area for 2019

Directors were invited to speak to the top water issues in their areas.

Chair McKortoff: First elected to Osoyoos council in 2011 and serving a second term as mayor. Member of Osoyoos Lake Water Quality Society and on International Joint Commission's International Osoyoos Lake Board of Control, working on transboundary water issues. Retired school teacher. Four years on OBWB.

Dir. Basran: First elected to Kelowna council in 2011. Serving a second term as mayor. Issues include flood mitigation, the potential for invasive mussels and impact on in-lake infrastructure, and integration of water systems in the city. Provincial and federal grants have been submitted for flood mitigation work.

Alt. Dir. Monteith: Newly elected in a new area, Area D divided and represent Twin Lakes area. Attending as an alternate on the OBWB board.

Alt. Dir. Holmes: Attending as an alternate for Dir. Toni Boot. Second time on Summerland council, first term on RDOS board. Flooding a concern for the municipality e.g at Aeneas Creek. In this case it went through private property which created additional issues. There have since been discussions with the province, including about water licensing approvals and how it can affect neighbours. Metering also an issue in Summerland, especially for some farmers who feel their water rates are unfair. The municipality has been looking into this.

Dir. Wilson: Priorities include protecting water rights and title. Top issues are flood, drought and fire.

Dir. Cummings: Have been involved in water issues off and on for many years, including as a post-secondary student on the 1975 Okanagan Basin Study when my father was co-chair of the study committee. Have previously worked as consultant to OBWB and worked with the Penticton, Okanagan and Lower Similkameen Indian Bands. Elected to council for the first time in November as mayor. Current issues include freshet-caused creek siltation and water filtration on upper Duteau Creek and Kalamalka Lake. Okanagan Indian Band and RDNO are working together to address flooding, beach management, and other water issues.

Vice-chair Fortin: A Peachland citizen survey a couple years ago found water was number one issue. The district approved a new water treatment plant for \$18.2 million, but the cost has increased \$5 mill. with various issues including U.S. tariffs and contractor availability. The municipality has received some grants to help with the cost. Continue to chair the Peachland Mayor's Task Force on Climate Change. There are continued concerns regarding mining activities in the shared Peachland-Summerland watershed and a meeting is being planned with the Mayor of Summerland.

Dir. Neilsen: Have been a member of the Okanagan Water Stewardship Council (WSC) for several years, initially as a scientific researcher at the Summerland Research Station representing Ag Canada. Recently retired and now sit as an emeritus member and is currently chair. Issues from WSC include new groundwater regulations. Council committees include: Irrigation, Dams and Reservoirs, Policy, Flood Protection, and the Sustainable Water Strategy,

Dir. Fleming: OBWB Director for about five years and then took a two year hiatus to be RDNO chair. A new chair has been appointed, and so Dir. Fleming reappointed to Water Board. A Swan Lake study found that human influence was having a detrimental effect on water quality. The RDNO has applied for grant funding for a sewage treatment plant, hoping that this helps. A couple of tributaries into Kalamalka Lake are also being studied, in the Commonage area and Cosens Bay, suggesting the need to do some work in these areas as well.

Dir. Fairbairn: Elected to RDNO in 2002 and appointed to the OBWB in 2004 until appointed as the RDNO Chair for a time. Happy to be back on the OBWB board. Issues include boating impacts on Shuswap River and elsewhere. RDNO has been working with B.C. Conservation Officer Service to help address.

Dir. Baker: This is fifth term as Lake Country mayor and had previously been a councillor before

the district was incorporated. During this time he has been on and off the Water Board. Issues include source water protection in multiuse watersheds and around reservoirs with cabins, and the sale of fee-simple lots. Long-term planning in development is important and try to raise awareness for the importance of natural capital.

Dir. Hrasko: The Water Supply Association of BC (WSABC) has about 50 members and began in 1923 as an association of irrigation districts. Members are mostly local government utilities now. Have been on the WSC since 2006 and worked on the Sustainable Water Strategy. Climate change is biggest challenge we have with drought, fire and flooding. The storm of May 9, 2018 resulted in the highest flows seen in Mission Creek, but also other creeks and rivers in the province. The moisture in the air was also something we haven't seen before. How we build resiliency, protect residents, and work with the province is important. Provincial staff cutbacks and retirements has resulted in capacity issues. The OBWB can have great influence in how to address these issues. Trying to balance fair agricultural water prices is another challenge.

7. **BOARD ORIENTATION**

7.1 Presentations by Executive Director, Water Stewardship Director, and Operations and Grants Manager

It was noted that the Communications Director and Policy and Planning Specialist will present at next meeting in February.

Dr. Sears provided an overview of OBWB structure and governance. The 2003 drought and forest fires, she noted, prompted the board in 2006 to include three external directors who would bring important perspectives to the table. This included a representative from ONA, the WSABC, and the chair of the WSC. In the 1970s, the OBWB's liaison committee dissolved. The province transferred its milfoil control program to the Water Board, and there were sewage issues, which both took over OBWB attention and other water issues were set aside. When the board came back in 2006 to its original mandate, it reestablished the liaison committee (WSC) which is required within its mandate as a core function.

The reason the water board works is its structure and the ability to receive and provide funding, creating a platform for joint initiatives.

The OBWB includes three programs: the Sewage Facilities Assistance Program, Watermilfoil Control Program, and Water Management Program. A strategic plan was developed for 2015-2019. The Water Board's priorities include invasive mussel outreach and advocacy, groundwater regulations, Environmental Flow Needs and hydrology modeling.

Challenges include system changes (weather, population, need for infrastructure upgrades), legislative changes, lack of capacity within ONA and in senior and local government departments.

Mr. Jatel joined OBWB in 2007. He grew up in Naramata where his parents have a vineyard. His studies have included a Masters degree looking at social networks and water governance, and currently he is working towards his doctorate, looking at how OBWB and the Okanagan historically responded to flood conditions.

The WSC is the technical advisory body to the board which meets monthly and is made up of representatives from various agencies, including agriculture, academia, local and senior government, including ONA. The impacts of climate and its impact on hydrology and ecosystems are often discussed at council. Research models are showing a shift in the Okanagan's hydrology, including floods and droughts in the same year.

One of the projects Mr. Jatel is manages is the Mission Creek Groundwater-Surface Water Interaction Study, which also includes South East Kelowna Irrigation District (now City of Kelowna), Black Mountain ID and Rutland WaterWorks District. The purpose is to look at what areas of Mission Creek are gaining or losing water, and potentially impacted by groundwater extraction.

The Environmental Flow Needs (EFN) Project, now in its fourth year, is being conducted in partnership with the ONA and the province. The project is now looking at 19 tributaries in the Okanagan to see how much water is needed for fish and ecosystem function to help ensure proper water licencing by the province and to better understand how to manage these systems in times of drought and flooding. The Water Board hosted an international EFN conference in October with the Canadian Water Resources Association to share knowledge.

The Okanagan Hydrology modeling project looks at stream flows in the tributaries to inform infrastructure, fisheries management and water allocation. It will, along with the Okanagan flood mapping project (which includes the LiDAR project work) will help Okanagan communities make science-based decisions.

Mr. Littley noted he has been with the board for since 2012. He was a reservist for 14 years, born and raised in Kelowna. He has a degree in political science and did his masters thesis on sustainable planning in B.C. As Operations and Grants Manager, he manages the SFA grant program which is funded through tax requisition. Some \$65 million has been paid out since the late 70s.

The board's Milfoil Control Program was initially a provincial function that began in the 1960s and was handed off to the OBWB in the 70s. In addition to invasive milfoil there is a local milfoil and several other local plants. The invasive milfoil robs oxygen from the bottom of the water causing issues for aquatic life, can promote algae blooms, outcompete native plants, is harmful to native fish, has recreational impacts, and reduces property values. The program costs between \$600,000 and \$800,000 per year and is subject to environmental permits. The program involves harvesting (mowing and weed removal) in summer, and rototilling in winter. Challenges include decreased ability to access launches to move equipment in and out of water and weed transfer sites. Equipment maintenance is done in-house.

Responding to questions, Mr. Littley explained that SFA grants and the resulting decrease in nutrients in the lake has helped control milfoil growth. As for alternate control methods, Dr. Sears added that it is illegal to use herbicides in the north end of Okanagan Lake.

The OBWB has five-year work permits because of the endangered Rocky Mountain ridged mussel and requires an environmental plan before staff can work in an area. Dir, Wilson noted that ONA had done a study on bivalves and may be able to assist.

The Water Conservation & Quality Improvement (WCQI) Grant Program started in 2006. Since then, 250 projects have been granted a total of \$ 4.1 mill. so far. Some \$300,000 is available each year. New this year is that grants will no longer be divided between regions, but be awarded based on valley-wide benefit. Also, applications no longer require a resolution of support from a local board or council where the project is proposed to take place. Instead, a letter of support by a local government officer, mayor or chair, of the area will do.

8. STAFF REPORTS

8.1 Operations and Grants Manager Report

Mr. Littley presented a recommendation for annual theme for the WCQI program.

“THAT for the 2019-20 WCQI grant competition annual theme, the OBWB seeks projects in any category that are intended to address climate change adaptation related to water conservation or water quality improvement, 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

The board was updated on an audit process for the SFA Grant Program.

“THAT the Operations and Grants Manager’s Report, dated December 4, 2018, be received.”

CARRIED

8.2 Policy and Planning Specialist Report

Ms. Garcia provided a brief overview of projects she is working on. A draft of the updated Sustainable Water Strategy will be presented to council in March for adoption and then it will be brought to the board to receive.

Additional projects recently have included participation in an Okanagan Lake Protection Initiative led by the Okanagan Collaborative Conservation Program.

“THAT the Policy and Planning Specialist’s Report, dated December 3, 2018, be received.”

CARRIED

8.3 Communications Director Report

Ms. Jackson gave an overview of recent communication efforts including news releases for various projects including the EFN conference, 2019 WCQI grant intake, OBWB request to province for stronger invasive mussel response, and more.

The board was updated on a new “Climate Change and Water in the Okanagan” infographic that was developed as an outreach and education piece, as well as another award for “A River Film,” this time for Documentary Feature at the Oregon International Film Awards.

Final reports for the Make Water Work (valley-wide outdoor water conservation) and Don’t Move A Mussel (invasive mussel awareness) campaigns will be provided to the board in February. In the meantime, staff are working with a research company to hold focus groups in January to review the campaigns and adjust as necessary.

“THAT the Communications Director’s Report, dated December 4, 2018, be received.”

CARRIED

8.4 Executive Director Report

Dr. Sears noted the meeting schedule for 2019.

The board was provided a brief overview and update of the LiDAR floodplain mapping project and the various issues that have resulted in delays in receiving data, including the plane accident, fire smoke and fog.

Dirs. Cumming, Fairbairn, Fleming and Baker left the meeting at 1 p.m.

Additional mapping is being done, including hydrological analysis of the mainstem lakes and river system, and a bathymetric survey of the Okanagan River channel. In response to questions, Dr. Sears added that the contractor hopes to recover the missing 20% of the data off the hard drive damaged in the plane incident. If it can't recover the rest, they will re-fly missing areas in June.

The City of Kelowna, RDNO, RDCO, RDOS, Armstrong and Penticton are doing some additional flood mapping. The LiDAR data will be available to all local governments in the Okanagan.

Dir. Wilson added that ONA is holding a flood risk assessment meeting at the Cove Resort next week and the OBWB is invited to attend.

"THAT the Executive Director's Report, dated December 4, 2018, be received."

CARRIED

8.5 Water Stewardship Director Report

Mr. Jatel provided an update on the November council meeting with a presentation from RDOS and Penticton Indian Band regarding lessons learned from the 2018 flood. The next meeting is Dec. 13.

A final report is being developed for the October EFN conference and will be posted to the OBWB website (www.OBWB.ca).

A brief update was provided on the Okanagan Hydrology Model Project, determining surface and groundwater flows on 16 to 19 tributaries into Okanagan lakes and looking at water demands. This project builds on the OBWB's 2010 basin-wide Water Supply and Demand Study. In response to questions, Mr. Jatel noted that more streams can be added in time.

"THAT the Water Stewardship Director's report, dated December 4, 2018, be received."

CARRIED

9. **NEW AND UNFINISHED BUSINESS**

9.1 Policy Letters to Government

Dr. Sears provided an update on letters sent from the OBWB during the interregnum period. The letters include a letter to the province repeating a call for legislation that requires all watercraft coming into B.C. to be inspected for invasive mussels before launching.

Alt. Dir. Holmes & Chair McKortoff suggested that the OBWB reach out to the Southern Interior Local Government Association and get the mussel issue on their conference agenda, and then take it to the Union of BC Municipalities conference to garner support for stronger provincial action. There was general agreement by the board.

A second letter was sent to the province regarding extending the deadline on groundwater licensing. About 15 per cent of groundwater users have applied for a license as required under the new Water Sustainability Act in the past three years. Of these, approximately two per cent

have been approved because of a backlog. Unless the other 85 per cent have licenses approved, they will be drawing water illegally which requires punitive measures (eg. fines, loss of water rights). The Water Board's letter recommends greater outreach to ensure licensing done. A third, more detailed letter was sent to staff who are overseeing groundwater licensing.

Finally, Shuswap MP Mel Arnold asked for a letter of support for a study to look at how Federal Aquatic Invasive Species funding is spent. Currently, about 80-90% of the funding goes to two invasives in the Great Lakes. Mr. Arnold is part of the Standing Committee on Fisheries and Oceans, and while the committee approved the study there was concern that time was running out to address this.

"THAT the Policy Letters to Government Report, dated December 4, 2018, be received."
CARRIED

10. NEXT MEETING

10.1 The next meeting of the Okanagan Basin Water Board will be Tuesday, February 5, 2019 at 10 a.m. at Regional District of Central Okanagan in Kelowna.

10. ADJOURNMENT

"THAT there being no further business, the regular meeting of the Okanagan Basin Water Board of December 12, 2018 be adjourned at 1:27 p.m."
CARRIED

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| Certified Correct: | | |
| | | |
| Chair | | Executive Director |

MEMORANDUM

Okanagan Basin Water Board
Regular meeting
February 5, 2019
Agenda No: 6.1

File No. 0550.04

To: OBWB Directors
From: Anna Warwick Sears
Date: January 30, 2019
Subject: **Executive Director Report**

Board Orientation

This month, the board orientation continues with staff presentations. Corinne Jackson will present on OBWB communications, Kellie Garcia on policy and planning initiatives, and Stefanie Wenker on her work to understand Okanagan water demand. Next month, we will have a presentation on invasive mussels, by Lisa Scott of the Okanagan and Similkameen Invasive Species Society, and in April we are lining up a presentation by the Shuswap Watershed Council.

Collaborations on Flood Risk Reduction

At the board's recommendation from the December 2018 meeting, I approached SILGA about doing a presentation at their conference in May. I have been approved to give a talk on "Flood Threats and Solutions", highlighting the work being coordinated by OBWB, and other collaborative efforts in the area – including the Okanagan Nation's Flood Risk Assessment.

In December, I joined the ONA's Flood Risk Assessment steering committee. This is a diverse group, with elected officials and senior staff from local governments and Syilx communities throughout the Okanagan and Similkameen. The ONA is incorporating scientific approaches and traditional knowledge, using a planning process that includes the Syilx Water Responsibility Planning Methodology. It will include a one-day workshop and watershed trips in the Okanagan and Similkameen watersheds. It's a very good opportunity to learn about the landscape and historical processes in a new way. There are likely to be several more meetings this year, which complement our other flood mapping and planning processes.

The Okanagan LiDAR project continues on. We anticipate that all the data and photos that were acquired in 2018 will be available shortly. The mainstem lakeshore and river channel data is scheduled to be available in mid-February, with the remainder of the data available in mid-March. The missing portions of the watershed data (lost in the plane crash) will be acquired in June 2019 and will be ready for use in Fall 2019.

Kelowna/RDCO Area Based Water Management Plan

The City of Kelowna and RDCO are partnering on a planning process to better manage the watershed above Mission Creek. This is a new priority for the city, as they inherited considerable responsibilities for source protection, fish-flow management, etc. when they brought the South East Kelowna

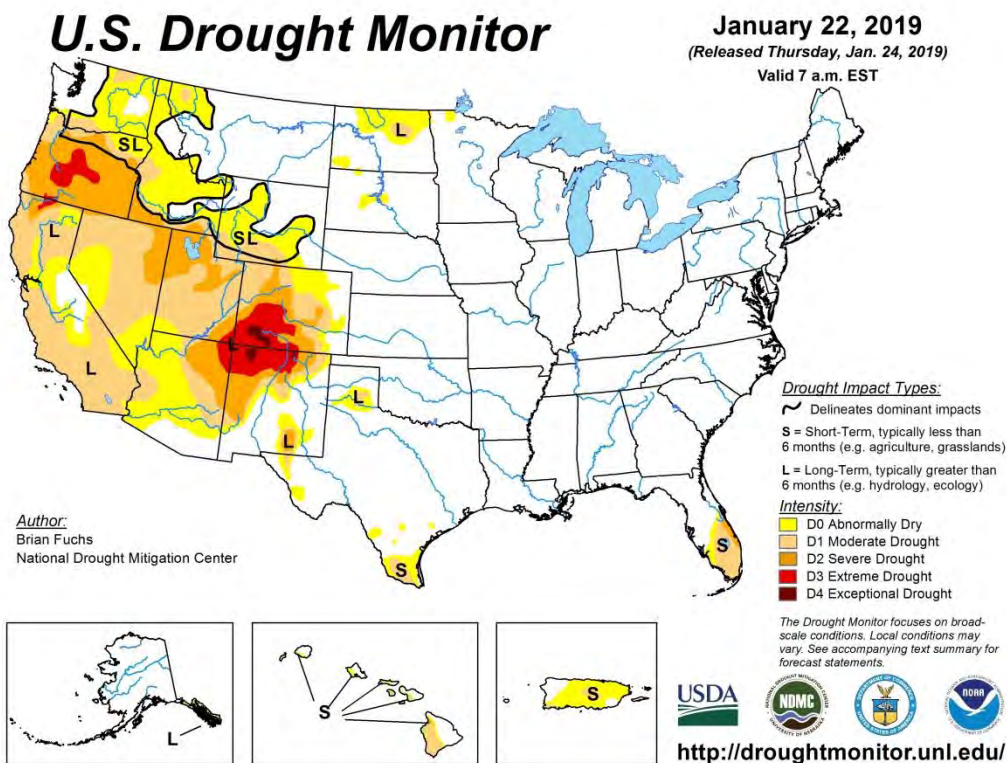
Irrigation District into the city utility umbrella. Last year, the OBWB agreed to be an advisor to this process, ensuring that plans have access to the most recent scientific information. The OBWB provides advice and science support for all planning processes in the valley, and we are optimistic that the Kelowna area could be a pilot for the implementation of environmental flow measures from our recent study.

Real Estate Foundation of BC Report

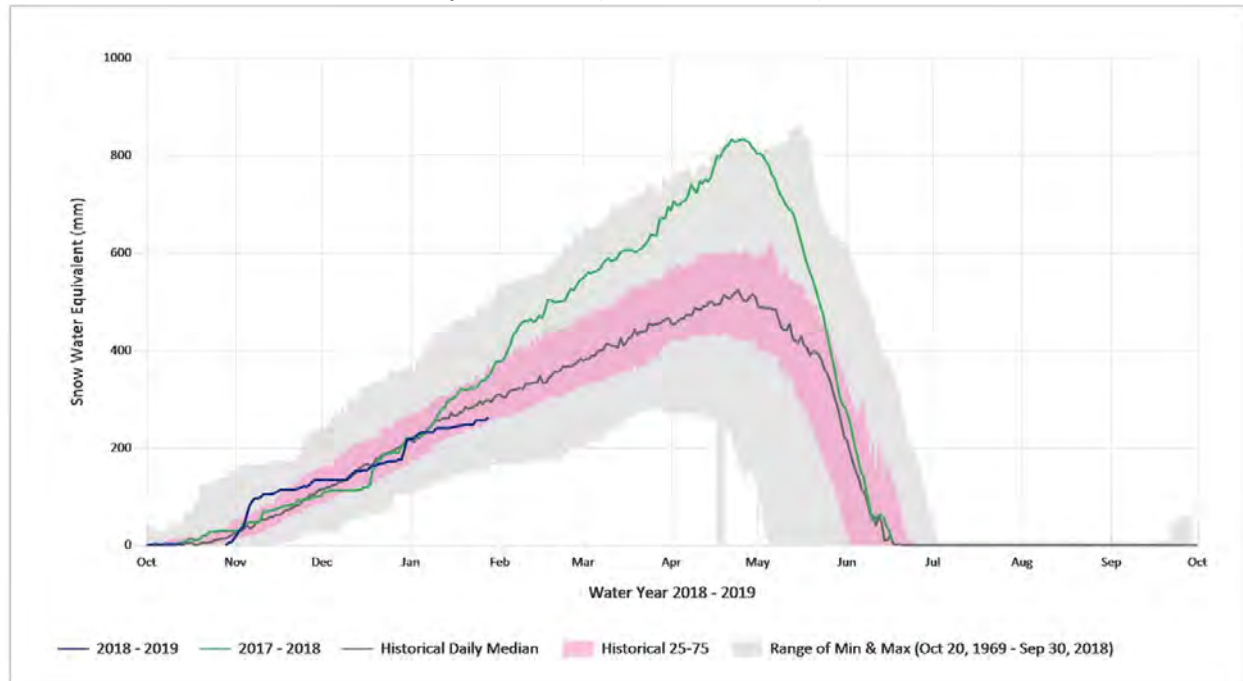
In addition to my work at the OBWB, for the past few years I've been on the board of governors of the Real Estate Foundation. The foundation has been doing a series of public surveys on topics related to sustainability. The most recent one, on Sustainable Land Use in BC was just released this week. It has some interesting findings on the high priority B.C. residents place on clean water and healthy environments. A direct link to the survey summary is below. We have also included it as a separate attachment along with the agenda package. <https://www.refbc.com/sites/default/files/REFBC-SLU-Opinion-Highlights-2019.pdf>.

Weather Report

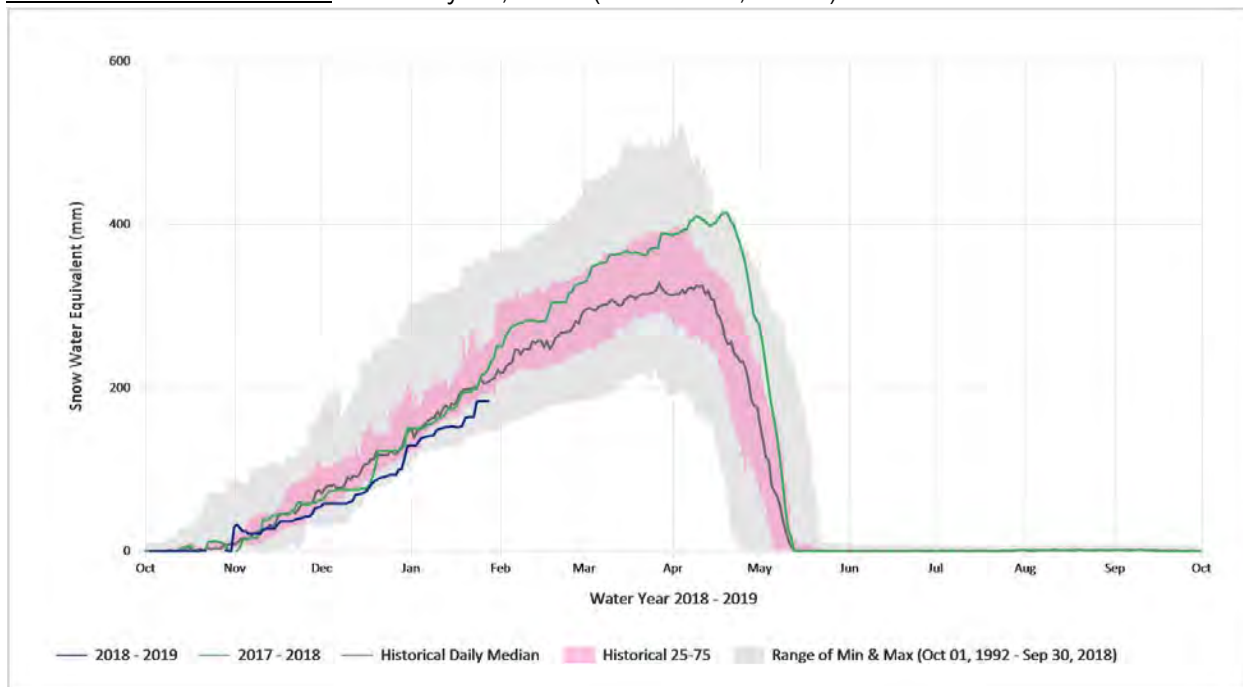
Each OBWB meeting I give the board a brief overview of the latest water forecasts from the B.C. River Forecast Centre, Environment and Climate Change Canada, and other agencies. These reports are publicly available, and help forecast whether the Okanagan will experience droughts, floods, or other water challenges in the months ahead. According to the snow pillows and snow surveys, the Okanagan is slightly below normal. In a typical year, we have about 55% of the annual snow accumulation by Jan. 15, but the graphs below show that actual amount vary sharply from year to year. According to the most recent predictions by the U.S. drought monitor, Eastern Washington State is experiencing abnormally dry to moderate drought conditions.



Mission Creek Snow Pillow – January 28, 2019 (Elevation 1794m)



Brenda Mines Snow Pillow – January 28, 2019 (Elevation 1,453 m)



MEMORANDUM

Okanagan Basin Water Board
Regular meeting
February 5, 2019
Agenda No: 6.2

File No. 0550.04

To: Board of Directors
From: Nelson R. Jatel
Date: January 30, 2019
Subject: **Water Stewardship Director's Report**

January Water Stewardship Council meeting

The Water Stewardship Council, technical advisory committee to the OBWB, had a well-attended meeting on January 10th. The Council received a presentation from **Kathy Eichenberger**, Executive Director, Columbia River Treaty Review (8 years), Ministry of Energy and Mines. Ms. Eichenberger is the executive director of the Columbia River Review for the Province of B.C. with a background as a hydraulic engineer by profession having led numerous environmental social and economic assessments of major projects throughout British Columbia.

Columbia River Treaty

- Significant flooding around the Columbia in 1948 and growing U.S. power demand after WWII led to the desire for a water management agreement between Canada and the US
- Main objective: power and flood control in both countries
- Treaty was signed in 1961 and ratified in 1964

BC Treaty Mandate (under Canadian Constitution):

- Federal treaty-making power
- Provincial jurisdiction of natural resources, including hydroelectric development
- 1963 Canada/BC Agreement transferred most of the Treaty obligations and benefits to BC
- BC Hydro is Canadian Entity to implement the Treaty
- Province of BC is the Canadian Entity for the disposal of the Canadian Entitlement

Select recent news stories and links:

- [Columbia River Treaty Past, Present, and future workshop \(Osoyoos, October 7, 2015\)](#)
- [CRT Symposium Proceedings, Video Recordings, and Additional Resources](#)
- [Proceeding of an expert's workshop on Columbia River and Hydro-system impacts on migration success and production variations of anadromous Salmon \(2018\)](#)
- [Columbia River Treaty renegotiation will impact Okanagan](#)

A copy of Kathy Eichenberger's presentation to Council is available online here: <https://www.obwb.ca/about-the-council/presentations-videos/>.

Our next Council meeting is scheduled on February 14th at the Kelowna's Coast Capri Hotel from 12:30 – 4:30 p.m. The Council meeting focus will be on the development of the Council's new version of the **Okanagan Water Sustainability Strategy**. All board members are encouraged to attend.

Project management: project updates

Some project activities and highlights for the month of January/February included:

Okanagan Environmental Flow Needs (EFN) project

The project team including the Okanagan Nation Alliance Fishery Department, B.C. Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNRORD) staff and the OBWB staff are finalizing water flow data information and developing Environmental Flow estimates for priority Okanagan streams using two techniques: **Modified Okanagan Tenant** and the **Weighted Usable Width**. The technical advisory committee will



be meeting on February 1st to review project progress. An important component to developing these environmental flow calculations is the development of naturalized flow estimates (what the stream flow would be without diversions, or other management like reservoir storage), being developed with a team of hydrologists under the direction of Drew Lejbak of Associated Environmental Consultants Inc.

Updating Okanagan Hydrology Models

As part of the Okanagan Flood mitigation and adaptation efforts, three new Okanagan hydrology modeling projects are underway. The first project provides an assessment of flood inundation zones along Okanagan mainstem lakes. The second project involves developing an updated bathymetry map for the Okanagan River. The third project involves developing 18 sub-basin (i.e. Mission Creek) hydrologic models to support local governments adapt and mitigate flooding events.

The Raven hydrology models under development for the 18 sub-basins will be spatially distributed, linking surface and groundwater flow models (where groundwater data is available) with the Okanagan Water Demand Model – to enable water balances to be determined at multiple points along each tributary (see Figure 1).

Improving water management in the tributary streams, which support aquatic, riparian, and wetland habitats and the needs of fish and other aquatic life is an important outcome from this project. Part of the challenge in the Okanagan is to manage storage in the upper watershed reservoirs so that sufficient flow is maintained in the streams during the hot summer months when there are high irrigation demands.

A second challenge relates to local governments developing hydraulic models for their municipal footprint, without detailed hydrology models of the entire watershed to support their efforts. Both these challenges benefit from a detailed sub-basin hydrology model. All three Okanagan hydrology projects are on-time and on-budget.

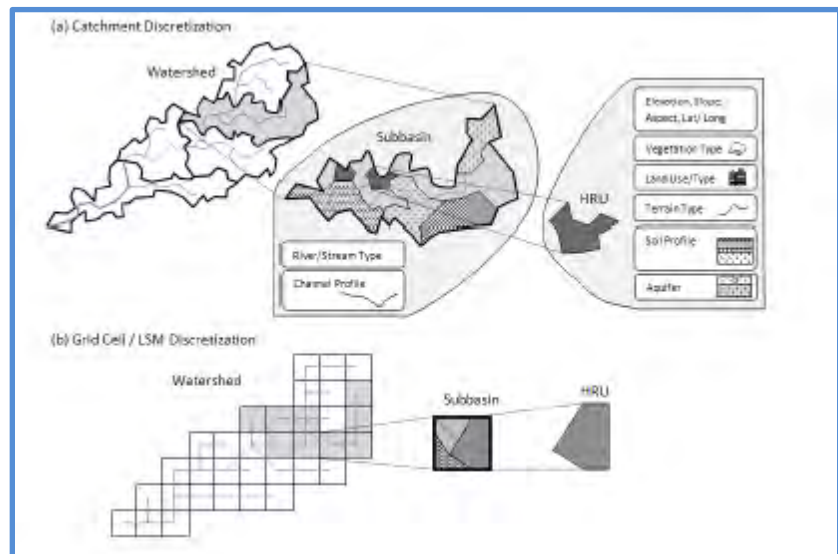


Figure. 1. Example of sub-basin hydrology model.

Okanagan Water Stewardship Council

Technical advisory committee to the OBWB



Okanagan Basin Water Board
Regular meeting
February 5, 2019
Agenda No: 6.2.1

January 2019

Council Members

(Term 8: May 2018 – Oct 2019)

Appointed representatives / alternates

| |
|---|
| • AAFC, Research Branch Kirsten Hannam / Tom Forge |
| • APEGBC Mike Nolan / Don Dobson / Shawn Badasha |
| • BC Agriculture Council Hans Buchler / Christine Dendee |
| • BC Cattlemen's Association Lee Hesketh / Keith Manders |
| • BC Fruit Growers Association Kevin Day / Glen Lucas |
| • BC Ground Water Association Marta Green / Doug Geller |
| • BC Ministry of Agriculture Andrew Petersen / Stephanie Tam |
| • BC Water Supply Association Bob Hrasko / Toby Pike |
| • BC Wildlife Federation – Region 8 Lorne Davies / Jackson MacPherson |
| • Canadian Water Resources Association Brian Guy/ Dwayne Meredith |
| • City of Kelowna Rod MacLean / Ed Hoppe |
| • City of Vernon Ed Stranks |
| • Fisheries and Oceans Canada Doug Edwards |
| • Interior Health Rob Birtles / Judi Ekkert |
| • Okanagan Indian Band Dan Wilson / Tim Isaak |
| • IIABC Bruce Naka / Ted van der Gulik |
| • Ministry of FLNRO: Fish/Wildlife Lora Nield |
| • Ministry of FLNRO: Resource Mgmt Robert Warner / Ray Crampton |
| • Okanagan Collaborative Conservation Scott Boswell / Tanis Gieselman |
| • Okanagan College Allison O'Neil / Rob St Onge |
| • Thompson - Okanagan Tourism Association Glenn Mandziuk / Ellen Walker - Matthews |
| • RD of Central Okanagan Danika Dudzik / Todd Cashin |
| • RD of North Okanagan Renee Clark / Jennifer Miles |
| • RD of Okanagan –Similkameen Zoe Kirk / Evelyn Riechert |
| • Shuswap Okanagan Forestry Association Ted Swab / Murray Wilson |
| • Environment Canada – Meteorological Services Russel White / Chris Doyle |
| • UBC Okanagan Bernard Bauer / Craig Nichol |
| • Okanagan Nation Alliance (observers) Zoe Eyjolfson / Elinor McGrath / Natasha Lukey |

Council Meeting Highlights*

• Business arising:

Lakeshore area LiDAR data will be presented to the Province on February 1st; data will become available to local governments in spring. The rest of LiDAR data will be compiled by the end of February.

Ted – wrote a letter to a Province re GW licensing deadline extension – Province's decision will depend on registration status by the end of cut off period.

• Committee reports:

Irrigation Management: Landscape Irrigation Management toolkit and implementation of QWEL program– combining effort with cities of Kelowna and Vernon to apply for funding
Policy: continues working on several initiatives: UNDRIP; groundwater licensing; EFNs; source water protection; agricultural water reserve.

Drought and flood: RDCO will hold a workshop on various applications of LiDAR data end of February;

Dams & Reservoirs: finalized SWOT analysis and using it to prepare a work plan;

Source Water Protection: committee met on Jan 9th; refined a work plan to focus on 3 outcomes: 1) Accessible Source Water Protection Knowledge and Resources; 2)

Collaborative and Coordinated Planning; 3) Recommendations for Reliable Funding;

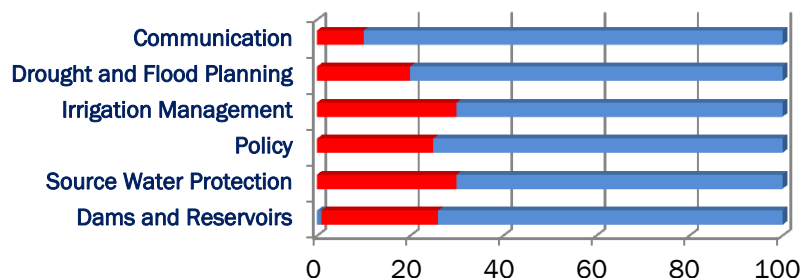
Presentation by Kathy Eichenberger "Columbia River Treaty"

Provided a review of Columbia River Treaty, emerging priorities and challenges, negotiation objectives and recent progress.

Round-table updates:

- Nelson Jatel – three major hydrology projects on the way: mainstem lakes hydrology; Okanagan river bathymetry; RAVEN modeling 19 sub-basins
- Ted van der Gulik – FLNRO is adding SHIM layers for Fraser Valley into ag water calculator; Okanagan might consider doing that as well
- Andrew Petersen - well licensing workshop on January 31st in RDOS
- John Wagner – working on follow up to Social Life of Water Exhibition; 'waterways', 'floodplain restoration' initiative
- Bruce Naka – new irrigation scheduling tools in Interior
- Ted Swab – LiDAR acquisition project; suggested contacting him if any topics are of particular interest for an upcoming presentation by Forestry sector;
- Doug Geller – 2019 AGM will take place in April in Langley
- Lorne Davies – Fraser Watershed Restoration Conference takes place in April 2019

Committees Progress



*Council Meeting minutes are posted at: www.obwb.ca/wsc

For more information contact:

Nelson Jatel, Water Stewardship Director
Okanagan Basin Water board

nelson.jatel@obwb.ca

(250) 469-6295

MEMORANDUM

Okanagan Basin Water Board
Regular meeting
February 5, 2019
Agenda No: 6.3

File No. 0550.04

To: OBWB Directors
From: James Littley
Date: January 30, 2019

Subject: Operations and Grants Manager Report

Sewerage Facilities Assistance (SFA) Grants

As the longest-running core program of the OBWB, SFA Grants have paid more than \$65 million to Okanagan local governments since the first grants were approved in 1977. SFA grants currently provide 16% of total eligible project costs for the installation of tertiary sewage treatment plants and pipes to service lots that were created prior to 1978. In order to be eligible for the grants, local governments must have bylaws or policies in place to prevent the creation of new lots which are less than one hectare in size, unless the new lot is connected to community sewer. This also applies to carriage houses. The only provision for a variance to our policy is for the local government to have a Liquid Waste Management Plan, incorporating the subdivision, which is approved by the province. The CAO of each grant-receiving community must sign an assurance every year that they have the One Hectare Bylaw in place.

Our policy was developed to mirror the policy of the Infrastructure Finance Division of the Ministry of Municipal Affairs and Rural Development. They instated the One Hectare Bylaw rule as a condition for infrastructure funding, after conducting studies that found repeated failures of small-lot subdivisions on septic (see attached correspondence from 2000 and 2007).

In the last several years, the SFA program has been under increasing pressure from developers to allow one-off variances of the 1 ha. policy, including instances where development proposals have been amended and resubmitted to local government in an attempt to circumvent the existing policy.

The current Terms of Reference (TOR) for the program have been developed and amended occasionally since the program began over 40 years ago, with occasional partial reviews on certain aspects of the TOR such as the grant formula, amendments to the 1 ha. policy, and the need for senior government technical review for new applications. After 42 years and \$65 million spent through SFA grants, a comprehensive program review would seek to answer several questions.

1. How much of the land base in the OBWB area is pre-1978 and has not been serviced with community sewer? I.e. how much area remains eligible for SFA grants?
2. Are the current TOR sufficient to meet the objective of improved water quality through reducing nutrient loading from failing septic systems in the valley?
3. Are there new wastewater treatment technologies that should be considered eligible for the program?

4. Are one-off variances to the 1 ha. policy being granted to individual development applications?
5. Is the wording in the 1 ha. policy sufficiently clear to prevent circumvention of the intent of the policy?

The aim of the review would be to provide recommendations to the board about improvements to the TOR, ensuring that the current policies and procedures are aligned with the objective of water quality improvement. The review would also provide local governments with a list of areas that are eligible for future grants, which could help inform infrastructure and development decisions. Finally, the review would make recommendations to the board about how variances to the One-Hectare Policy would affect the eligibility of a local government to receive current and future SFA grants.

By conducting this review, the OBWB will ensure that we are providing an up-to-date service to local governments in the Okanagan, while continuing to deliver on improvements to water quality. The review can be used to further engage local government staff, ensuring that eligible projects are being funded, while policies around land-use are consistent with the significant progress made through this program since 1977.

Prevention of Invasive Mussels in the Okanagan

Since 2012 the OBWB has been very active in working to prevent the introduction of invasive zebra and quagga mussels into the Okanagan and the wider region. We have taken a two-pronged approach to this effort with the public outreach of the “Don’t Move A Mussel” campaign, and ongoing engagement at every level of government, including through participation in the Pacific NorthWest Economic Region (PNWER) Invasive Species Working Group. Our efforts have directly contributed to improvements in legislation and prevention regimes, increased funding, enhanced public outreach and better partnerships.

We recently received a reply from Fisheries and Oceans Canada, and another from the B.C. Minister of Environment to correspondence we sent in 2018. Both of these letters will be discussed as board correspondence.



July 2, 2000

ROBERT HOBSON, CHAIR
OKANAGAN BASIN WATER BOARD
9848 ABERDEEN ROAD
VERNON BC V1B 2K9



Okanagan Basin Water Board
Regular meeting
February 5, 2019
Agenda No: 6.3.1

Dear Robert Hobson:

Thank you for the opportunity to explain to the Okanagan Basin Water Board (OBWB), at their meeting in Vernon on May 30, 2000, the Ministry of Municipal Affairs' policy regarding on-site sewage disposal systems for lots with an area of less than one hectare.

The Ministry is taking a firm stand on the need to reduce the impact resulting from the subdivision of small parcels of less than one hectare with on-site disposal systems. This position is based upon the Ministry's experiences over several years where small lots have been developed with on-site sewage treatment plants located in close proximity to each other, resulting in malfunctioning systems and a cumulative loading effect on the surrounding soils. This pattern of development inevitably results in the requirement for connection to community sewer at a later date, placing further stress on limited infrastructure funding and greater demand on the local tax base.

While on-site sewage disposal is suitable rural technology where there is sufficient land area to ensure adequate treatment of the effluent, this approach nevertheless, becomes problematic when such technology is used for urban and suburban development where there are small compact lots in a high density configuration.

There was discussion at the meeting as to whether alternative innovative treatment systems would address the issue. The Ministry is very supportive of innovative technology which is evident from the criteria outlined in the LGGP, however such technology must be appropriately applied. In essence, planning must lead technology and not vice versa. While single package treatment plants may provide a high quality effluent on a small footprint, this technology nevertheless demands a far higher standard of operation and maintenance than conventional on-site disposal systems. Furthermore, the increased hydraulic loading factor on the smaller footprint must also be taken into consideration. An inter-agency committee is currently addressing the management of on-site systems in conjunction with the sewage disposal regulation review.

The issue of geotechnical assessments as a criteria for developing small lot developments with on-site systems was raised by the OBWB. The Ministry has concern, that unless the study is completed on a watershed basis, the information gathered is confined to, and reflects only, the

THE GOVERNMENT OF BRITISH COLUMBIA IS AN "EMPLOYMENT EQUITY EMPLOYER"

Ministry of
Municipal Affairs

Municipal Engineering Services

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Victoria BC V8W 9N7
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Location:
4th Floor - 800 Johnson St
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Website:
<http://www.marh.gov.bc.ca/MUNFIN>

soil conditions of the immediate development area without due consideration of the cumulative impact on the adjacent properties. With the terrain analyses received with LGGP applications to date, it has proven difficult to translate, in a scientific way, the field information regarding soil types, stability etc into site areas and safe lot sizes. The one hectare standard, while it is an empirical rule based on experience, it does however capture the majority of the problem areas and perhaps, as much as 95% of them.

In response to the question on the Agricultural Land Commission's position on homesite severance, the Ministry does not consider that this policy conflicts with the broader aims of the LGGP one hectare policy. Given the larger area for effluent treatment provided in the case of a homesite severance under the ALR and the broader goal of retaining the integrity of farmland, this policy regarding a minimum lot size is appropriate for that particular circumstance. In the case of urban or suburban development however, where on-site is being contemplated, there is not the luxury of available land to ensure that there is an adequate treatment of the cumulative impact caused by the effluent.

In summary, Ministry of Municipal Affairs confirms its position as stated at the May 30, 2000 meeting, that if lots less than one hectare are to be developed, they will require to be sewered and connected to the community system. To be eligible for funding under the LGGP, local government shall provide evidence of a bylaw to the effect that no new lots less than one hectare will be subdivided unless connected to the community system.

The Ministry will be confirming with all local governments in the province the LGGP one hectare policy in relation to subdivision and connection to community sewer. This information will be circulated throughout the province shortly.

Yours truly,



Eric Bonham
Director
Municipal Engineering Services

pc: Dale Wall
Assistant Deputy Minister

Drew MacTaggart, Executive Director
Municipal Financial Services



Okanagan Basin Water Board
Regular meeting
February 5, 2019
Agenda No: 6.3.2

April 14, 2000

~~W. J. Berry P.Eng
Wastewater Engineer
Works and Utilities Department
City of Kelowna
1435 Water Street
Kelowna BC V1Y 1J4~~

Dear Bill Berry:

Further to our conversation last week on the minimum lot size grant condition, we have now reviewed and discussed your grant application, and your letter dated February 11, 2000, which enclosed a copy of extracts from the City of Kelowna Subdivision, Development and Servicing Bylaw, and a map from your Official Community Plan. This material does not satisfy the present Local Government Grant Program requirements for a grant towards a project to correct on-site sewage disposal problems. It would perhaps be useful to explain the background to the requirement and its evolution over the last number of years.

Around 1990, the ministry was concerned about the number of grant applications being received to install sewers to areas where development had been approved using on-site systems, because of failures of these systems. After a report by the Ombudsman on the on-site permitting process, the ministry conducted a survey of known problem areas and correction costs, from liquid waste management plans or engineering studies which were available. This recorded 142 communities or neighbourhoods in B.C. with serious problems. Of these, 92 have been studied and have estimated costs of \$556 million to correct them. The ministry concluded that something was radically wrong with the way land had been developed and serviced in these communities. The factors contributing most commonly to failure were listed as: poor soils, high water table, excessive slopes and small lots. It became clear that what was a rural development technology was being used for urban and suburban development with inadequate site analysis.

When the ministry received 51 applications with costs of \$162 million in 1994/95 under the Canada-BC Infrastructure Works program, it was obvious something had to be done. It was necessary to break the cycle of inappropriate development servicing approvals, followed by high cost sewer installations when systems failed; and also the expectation that this ministry

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Municipal Affairs**

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W. J. Berry P.Eng
Page 2

would fund the necessary corrective works for inadequately serviced development. If the ministry was going to fund the backlog of expensive fix-ups, steps had to be taken to ensure that the problems were not being perpetuated.

As the ministry had not at that time given notice in advance of applications being made, we could only require grant recipients under that particular program to give consideration to a bylaw. This bylaw would base minimum lot sizes on a terrain analysis which we could examine and approve, or which in default would use a minimum one hectare unsewered lot size. In the November 1996 letter, the ministry felt that your current bylaw did consider the question and was moving you in the right direction, so that we could pay the grant which had already been approved. By an accompanying letter we did put recipients on notice for future grant programs. The 1996 Local Government Grants Program moved forward by only approving grants where a bylaw was already in place requiring community sewer to all new lots of less than one hectare, or where an alternative was based on a settlement suitability analysis which had been accepted by both the Ministries of Municipal Affairs and Health. Your current bylaw would not have satisfied that requirement.

Between 1996 and 1999, several examples of terrain analyses were received, and it was clear that there is no scientific way of converting the analysis of soil types, slopes etc. to site areas and safe lot sizes without using some empirical starting point. Experience has also shown that analysis of soil types and modelling of post development water table mounding has not been reliable. You will see from our Program Guides for 1999 and again for 2000 that the ministry now accepts only the minimum one hectare lot size which by analysis would avoid 95 % of the problems which have been documented. In most situations this allows for the replacement fields which are necessary for system longevity. Of course, the minimum lot size is not a substitute for a thorough site analysis, but complements it as the one factor which is most critical to a reliable outcome. Confirmation that the bylaw is in place (i.e. a copy of the bylaw) must accompany the application in order for it to be considered for grant.

I hope this satisfactorily explains the current ministry position on the issue.

Sincerely,



Andrew MacTaggart
Executive Director
Municipal Financial Services

→ pc. Greg Armour, Okanagan Basin Water Board

FEB 01 2007

Ref: 120406

Mr. Dan Ashton
Chair
Regional District of Okanagan-Similkameen
101 Martin Street
Penticton, BC V2A 5J9

RECEIVED
FEB - 11 2007
REGIONAL DISTRICT OF
NORTH OKANAGAN

Dear Chair Ashton:

Thank you for your letter of December 11, 2006, regarding our meeting at the 2006 Union of British Columbia Municipalities convention and clarification on the one-hectare minimum parcel size requirement. I apologize for the delay in responding.

It was my pleasure to meet with you and discuss Regional District of Okanagan-Similkameen (RDOS) issues. It was also my pleasure to provide the RDOS with two Infrastructure Planning Grants: one for the East Princeton Waterworks District Feasibility Study and the other for the West Bench Irrigation District Feasibility Review.

Regarding the one-hectare minimum parcel size as an eligibility requirement for sewer extension projects, the Canada-British Columbia Municipal Rural Infrastructure Fund Program Guide states the following:

To be considered eligible, applications must demonstrate that there is an adequate planning process in place with applicable bylaw(s) that promote future development in a sustainable fashion. This requirement can be met by **either**:

1. An approved (by Minister of Environment) Liquid Waste Management Plan (LWMP) for decentralized wastewater. The LWMP must address on-site sewage in a sustainable fashion, with the understanding that on-site sewage systems will be considered as permanent infrastructure. The LWMP must be supported by appropriate bylaws (OCPs, zoning, subdivision standards, etc.) At the minimum, the LWMP will address:

.../2

Mr. Dan Ashton
Chair
Page 2

Where the recipient is proposing development of new properties that will not receive community sewer, and the cumulative hydraulic loading from onsite sewage disposal systems can be safely and sustainably handled by the overall soils environment,

- a community plan for the management and maintenance of onsite septic systems;
- a bio-solids management plan; and
- a septage collection plan;

OR

2. Confirmation that a bylaw is in place which requires community sewer service to all new lots of less than one hectare in size within the boundaries under the jurisdiction of the applicant.

This has been consistently applied throughout the Province of British Columbia within capital grant programs to stipulate that the entire jurisdiction of a regional district, not just the electoral area or service area being considered in a grant application, must meet the one-hectare bylaw requirement. I understand that this requirement is consistent with that being utilized by the Okanagan Basin Water Board for its funding programs.

I hope this provides clarification and direction so that the Board can move forward with the necessary steps to support a grant application. I encourage RDOS staff to continue to work with Mr. Glen Brown, A/Director, Municipal Engineering Services Branch, in order to ensure that your concerns are addressed and that any pending capital grant applications meet program requirements. If you have any additional questions or concerns, Mr. Brown can be contacted by telephone at 250 356-9012, or by email at Glen.T.Brown@gov.bc.ca.

Once again, it was a pleasure to meet with you during the 2006 UBCM convention. I trust my comments have provided you with clarification and the direction needed to proceed with your capital grant applications.

Sincerely,

ORIGINAL SIGNED BY

Ida Chong, FCGA
Minister

pc: Honourable Bill Barisoff, MLA, Penticton-Okanagan Valley
✓ Mr. John Slater, Chair, Okanagan Basin Water Board
Mr. Glen Brown, A/Director, Municipal Engineering Services Branch

MEMORANDUM

Okanagan Basin Water Board
Regular meeting
February 5, 2019
Agenda No: 6.4

File No. 0550.04

To: OBWB Directors
From: Corinne Jackson
Date: January 30, 2019
Subject: Communications Director Report

Make Water Work (MWW) & Don't Move A Mussel (DMM)

Final reports for our MWW (valley-wide, outdoor residential water conservation) campaign, and our DMM campaign are attached. This year we contracted with a new company, Hiilite, to provide marketing assistance.

As you will see from the final reports, with a budget of \$52,247 for MWW (\$1-3,000 from local government/utility partners, matched by OBWB-Okanagan WaterWise and with additional funds provided for focus group testing), plus \$30,508 provided in-kind by contest and media partners, the 2018 campaign is valued at \$82,756. As for DMM, OBWB's OkWaterWise spent \$59,147, and with \$35,908 provided in-kind, delivered a campaign worth \$95,055.

More importantly is the impact the two campaigns had. Web traffic to the MWW website (www.MakeWaterWork.ca) saw a 63% increase over the previous year, from 3,256 visitors to 8,832 (8,223 unique). As part of the MWW campaign we invite people to pledge to conserve and be entered to win WaterWise yard prizes. This year we had a 43% increase in pledges. Web traffic to the DMM website (www.DontMoveAMussel.ca) also increased, by 25%, from 2,152 visitors in 2017 to 2,872 (2,827 unique) in 2018.

As reported at the last board meeting, we organized some focus groups to review the two campaigns to ensure the messages are working and tweak where needed. This is a follow-up to the focus groups we held for MWW in 2012 and the first time we have done any for DMM. Two focus groups, each with 10 Okanagan residents, were held Monday, Jan. 28. I will provide more details at the board meeting. A final report is being compiled and should be completed by mid-February, in time to inform the build-out of our campaigns for a May launch. (A few images are attached below.)



Marketing Contract Renewal

Back in March 2018, following a thorough review of proposals for marketing consultants, the board approved an initial contract of \$50,000 for MWW and \$50,000 for DMM. The contract included an option to extend for two further periods of one year. Based on this past year's results, I recommend extending the contract for one more year without going to an RFP.

Recommended Motion

THAT the Board approve an extension of the existing contract at \$50,000 for 'Make Water Work' and \$50,000 for 'Don't Move A Mussel' for one year without further competition.

B.C. Invasive Mussel Inspection Report

Attached (as item 6.4.3) is the province's Invasive Mussel Defence Program 2018 Interim Report. In addition to providing inspection numbers, there is an update on the lake monitoring program, and an update on training of a second dog to help with mussel-prevention efforts. A couple points of note: two mussel-fouled watercraft were intercepted between 10 p.m. and 5 a.m. at the Golden inspection station (the only 24-hour station); and, the province received advanced notice regarding 20 of the 25 mussel-fouled watercraft from outside jurisdictions. OBWB staff inquired about both of these items at the September 2018 outreach wrap-up meeting. Provincial staff noted that they would be reviewing the data, as well as feedback from partners and lessons learned from other jurisdictions, to inform their 2019 season.

UN World Water Day/Canada Water Week

This year, Canada Water Week (CWW) runs March 17 to 23, with UN World Water Day falling March 22. We have had great success with film screenings held as part of the OBWB-Okanagan WaterWise's celebrations. This year we wanted to screen "Beyond Climate," directed by Ian Mauro, narrated by David Suzuki, and featuring a number of Okanagan faces, including our own Anna Warwick Sears, Doug Findlater, OBWB partner Ted van der Gulik of the Irrigation Industry Association of B.C., and others.

We are fortunate to be able to screen the film, but were limited for dates. As such, we will be screening the film on March 7 at UBCO. Further details will be provided at the board meeting. A trailer of the film can be found here: <https://www.youtube.com/watch?v=HQ3huLxj4Qo>.

In addition to the screening, the OBWB-OkWW is sponsoring and assisting with Okanagan Nation Alliance's Syilx Water Forum event on March 22. The event, entitled "Collaborative approach to siwłkʷ (water) resiliency: Protecting our headwaters," will include a tour of the Peachland watershed, bridging traditional and scientific knowledge, a lunch, and follow-up dialogue to find solutions to protect drinking water. (Please see draft poster attached as 6.4.4.)

We are also looking at other potential events during CWW and will provide more details as they become available.

Other communication initiatives

In addition to the above, we provide communications support as we are able to various partners on water-related items. In the last couple of months this has included:

- final proofing "Building Climate Resilience in the Okanagan," a homeowners resource guide put out by the South Okanagan Real Estate Board and several of our partners,
- proofing of the Environmental Flow Needs Conference 2018 – Proceedings and Outcomes publication,
- reviewing water communications for City of Kelowna,
- promotion of the Munson Pond Endowment Fund,
- promotion of the Okanagan Xeriscape Association being named to the Mediterranean Gardening International,
- sharing of the Regional District of Central Okanagan's 2019 Living Greener Calendar, and more.

Summary of Recent OBWB-Related Media

| | |
|---------|---|
| Dec. 24 | "Osoyoos mayor to chair Okanagan water board," <i>Black Press - BC Local News, Vernon Morning Star, Kelowna Capital News, Summerland Review</i> |
| Jan. 4 | "A new water strategy," <i>Castanet.net</i> |
| Jan. 7 | "Kelowna councillors dive deep into new water study," <i>InfoNews.ca</i> |
| Jan. 8 | "Kelowna adapting to larger Okanagan watershed management role," <i>Kelowna Capital News</i> |
| Jan. 10 | "Mayor McKortoff reflects on 2018, talks issues of 2019," <i>Osoyoos Times</i> |
| Jan. 14 | "Town using AAP to gauge resistance to \$6-million lift-station project," <i>OsoyoosToday.ca</i> |
| Jan. 15 | "Town plans \$3.5M loan," <i>Castanet.net</i> |
| Jan. 17 | "Osoyoos mayor takes on leadership of Okanagan Basin Water Board," <i>Osoyoos Times</i> |
| Jan. 22 | "Sewer plans for Swan Lake area revealed at open house," <i>Global News</i> |

Invasive Mussel Defence Program 2018 Interim Report



Welcome to the interim report for the 2018 season. The Invasive Mussel Defence Program (IMDP) is a shared delivery between staff from the B.C. Conservation Officer Service (COS) and the Environmental Sustainability & Strategic Policy Division (ESSPD) within the Ministry of Environment and Climate Change Strategy (ENV). The Program would like to recognize the ongoing funding provided by BC Hydro, Fortis BC, Columbia Power Corporation, and Columbia Basin Trust to support the delivery of the program. For more information about the Program please visit www.gov.bc.ca/invasivemussels. Suspected invasive mussels should be reported immediately to the Conservation Officer Services Report All Poachers and Polluters: 1-877-952-7277 (RAPP).

Program Operations

Watercraft Inspection Stations

Invasive mussel inspection stations opened on April 1, 2018. For the 2018 season over 38,000 watercraft were inspected and crews interacted with approximately 78,000 people to promote Clean, Drain, Dry.

Of the total watercraft inspected, 1,700 were identified as high risk, 293 Decontamination Orders were issued, and 238 watercraft were issued quarantine periods to meet the required 30-day drying time. A total of 450 decontaminations were performed by provincial inspectors.

Of the 38,000 watercraft inspected, 25 were confirmed to have adult invasive mussels. These came from Ontario (16), Arizona (3), Manitoba (2), Michigan (2), Utah (1) and Nevada (1) and were destined for the Lower Mainland (11), Okanagan (3), Thompson-Nicola (5), Vancouver Island (4), and the Kootenays (2). The Program received advanced notification on 20 of the 25 mussel fouled boats either from another jurisdiction (e.g., AB, MT, ID, WA) or by Canada Border Services Agents (CBSA).

Between May 15 and October 27, 391 watercraft were inspected at night (10 p.m. to 5 a.m.) at the Golden inspection station on Hwy 1. Of those, 22 were identified as high risk and two of the mussel fouled watercraft were intercepted between 10 p.m. and 5 a.m.



Watercraft inspection station on Hwy 93 near Radium.

| | 2017 End of Season | 2018 End of Season |
|--|--------------------|--------------------|
| Total Watercraft Inspected | 35,500 | 38,000 |
| People Interacted with to promote CDD | 73,300 | 78,000 |
| High Risk Inspections | 2,071 | 1,700 |
| Decontamination Orders Issued | 286 | 293 |
| Quarantine Periods Issued | 200 | 238 |
| Mussel fouled watercraft | 25 | 25 |

Comparison of watercraft inspection totals for the 2017 and 2018 seasons.



Valemount inspectors completing a decontamination on a high-risk boat.



Marine blue mussels attached to a boat inspected this season coming from the ocean. These mussels do not survive in fresh water, but they attach onto boats and can be mistaken for invasive mussels when they are smaller in size.

Lake Monitoring

For the 2018 season, sampling ran from early June to October and efforts doubled this year with 812 samples analyzed to date. All samples have come back negative for invasive mussels. The complete results from the 2018 sampling season will be released in the year-end report in spring 2019.

Program Effectiveness

To date, of the boaters whose watercraft were inspected, approximately 60% had previous knowledge of [Clean, Drain, Dry](#) and/or aquatic invasive species. A total of 190 people without boats voluntarily stopped at the watercraft inspection stations to get more information about invasive mussels and other aquatic invasive species (AIS). The Program also received 87 inquiries from members of the public about bringing their boat into BC and to learn more about the watercraft inspection stations.

Average compliance at the inspection stations for the 2018 season was 81%. Of the watercraft that failed to stop at the inspection station, 79% were non-motorized watercraft such as canoes, kayaks, and paddleboards which pose a much lower risk than motorized watercraft. For 2018, a total of 82 violation tickets and 50 warnings were issued by Conservation Officers to motorists for failing to stop at inspection stations.

The Program continues to work with the CBSA to receive notifications of high-risk watercraft at the southern border crossings. During the 2018 season, CBSA sent 300 notifications to the Program from the southern border crossings.

Public Reports

This summer the Program received reports of suspected invasive mussel shells floating on a lake in the Okanagan. Provincial inspectors were able to collect the shells and confirm with a taxonomic expert that they were dead marine blue mussels (see picture to the left). Just like invasive zebra and quagga mussels the blue mussel can attach onto boats. Blue mussels do not survive in fresh water, but it is still important to practice Clean, Drain, Dry when moving your boat from salt water to freshwater.

If you observe any suspected invasive mussels contact the Provincial inspectors immediately by calling the Report All Poachers and Polluters Hotline 1-877-952-7277 (RAPP). This allows our trained inspectors to respond quickly and take the appropriate steps to identify the mussels and prevent any unnecessary concern.

Highlights

K9 Major and his handler Sergeant Cynthia Mann just completed their training and will be joining Kilo and his handler Sergeant Josh Lockwood for the 2019 season touring the inspection stations. Major is trained to detect invasive mussels, firearms and bear gall bladders. Major is also trained to human scent track. His full biography is below.

Full Name: Major Von Haderhof

Age: 1 year

Date of Birth: Nov 16, 2017

Breed: German Shepard

Next Steps

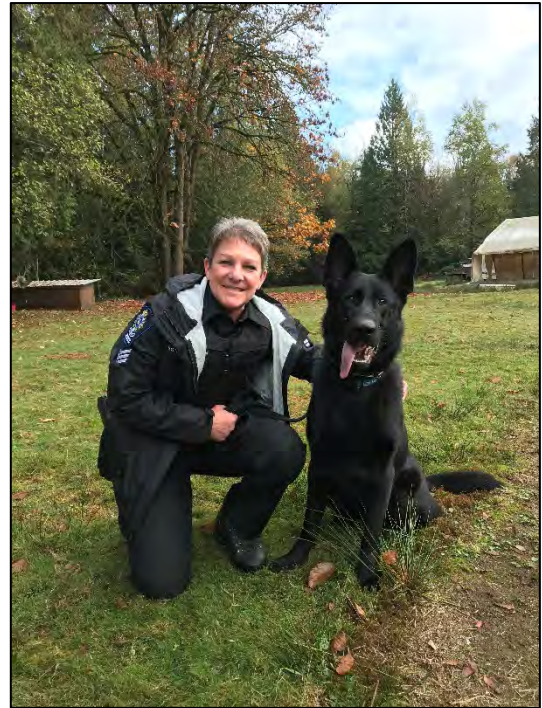
Staffing/hiring:

Ecosystems branch is currently in the process of hiring an Aquatic Invasive Species Specialist to join the science team and hope to have the position filled early in the new year. The Conservation Officer Service (COS) is in the process of hiring an administrative coordinator for the Program and hoping to have this position filled early in the new year. In addition, the COS is in the process of hiring an additional Sergeant (supervisor) position to enhance operational oversight to staff at inspection stations.

The AIS inspector job postings for the 2019 season will be posted on the [BC Government Job site](#) in mid-December. Please stay tuned for this!

Planning for 2019:

As part of the annual review, Program staff are reviewing the 2018 inspection data, feedback from staff and partners, as well as lessons learned from other jurisdictions across western Canada and the US. This will inform adjustments to program operations for the 2019 season. BC will also be meeting with AB, SK, MB and YK this winter to coordinate inspection programs across western Canada and further strengthen the perimeter defence.



Sergeant Cynthia Mann and K9 Major who just completed their AIS detection training.



JOIN US
WORLD WATER DAY MARCH 22, 2019

COLLABORATIVE APPROACH TO SIWŁKʷ (WATER) RESILIENCY: PROTECTING OUR HEADWATERS

Forest disturbances are having long term
IMPACTS on our DRINKING WATER
Explore the Peachland watershed to
become informed on how to protect your
watershed.

i?_siwłkʷ yʕat taʔkín kíl_kscxʷłxʷalts i?_tmhxʷúlaʔxʷ ut kíl_tmixʷ
Water comes in many forms and all are needed for the health of land and for the animals

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HIGHLIGHTS

- Learn from UBCO Forest Hydrology Experts and other resource and water experts!
- Engage in a collaborative approach to find solutions to protect drinking water
- Participate in a Hands on learning utilizing both scientific and Syilx knowledge to assess the watershed.

REGISTRATION & FEES

\$50 Student, Senior, Peachland Resident
NGO and Non-profit

\$150 General

** Fee includes bus tour and lunch

Register at www.eventbrite

TIME & LOCATION

TIME: 9:00 AM – 4:30 PM

Bus will leave from: Peachland Community
Centre 4450 6 St, Peachland BC

Tour Location: **scʕaxans nhithitəl**
Peachland Watershed

For more information contact:

Tessa Terbasket, ONA NR Research and Policy Coordinator
T: 250-707-0095 ext. 209 E: ttebasket@syilx.org

MEMORANDUM

Okanagan Basin Water Board
Regular meeting
February 5, 2019
Agenda No: 6.5

File No. 0550.04

To: OBWB Directors
From: Kellie Garcia
Date: January 29, 2019
Subject: Policy and Planning Specialist Report

Agricultural Water Supply Communications Project

The Agricultural Water Supply Communications Project is designed to help Okanagan water suppliers provide agricultural water customers with timely and accurate information about the state of local water supplies to assist them with making appropriate water-use decisions on their farms. The first pilot for the project worked with two water suppliers – the City of Penticton and Greater Vernon Water – to develop and test water supply communication materials and mechanisms during the 2017 growing season. In addition to building on their traditional communication channels like letters and websites, the water suppliers tested an e-alert system called CivicReady (centrally hosted by the OBWB).

We are starting a second pilot to enable much broader purveyor and producer participation with the aim to establish a consistent and reliable Okanagan-wide process for communicating water supply information to agricultural water users. Water suppliers who are participating this year include:

- Greater Vernon Water
- Okanagan Indian Band
- City of Kelowna (using their own messaging platform)
- Glenmore-Ellison Irrigation District (using their own messaging platform)
- City of West Kelowna
- District of Summerland (possibly)
- City of Penticton
- Penticton Indian Band
- Regional District of Okanagan Similkameen

We are waiting for responses from Black Mountain Irrigation District, Kaleden Irrigation District, Osoyoos Indian Band and Osoyoos Irrigation District. The Town of Oliver, Town of Osoyoos and District of Lake Country have declined for this year but are possibly interested in participating next year.

With our help, the water suppliers will send out regular messages to their agricultural customers between April and October related to:

- early season forecasts - snow pack conditions, spring precipitation forecasts, lake and reservoir levels, and streamflow,
- water supply updates - current water supply levels, drought stages and associated responses,

- changes in provincial drought levels - current provincial drought level for the region and how it relates to current local drought stage, and
- other water supply information such as turn on/turn off dates and emergency works to infrastructure.

Funding for this project has been provided through the BC Agriculture & Food Climate Action Initiative.

Sustainable Water Strategy project

I am working with the Water Stewardship Council to modernize their Sustainable Water Strategy (SWS), which was originally released in 2008. The new strategy will help the council and board re-hone priorities and plan new initiatives. Among other updates, the modernized strategy incorporates insights into changes in water legislation and regulations, and better addresses issues such as our capacity to adapt to climate change. It brings together technical information about the valley, showcases current projects and case studies, and recommends actions designed to protect water at its source, share water in times of shortages, manage water demand, and collect and distribute data and information.

In anticipation of the Board receiving the Sustainable Water Strategy this spring, I am providing more information about the document. The strategy chapters are organized under the themes: (1) introduction, (2) water quality, (3) water quantity, (4) delivery mechanisms, and (5) action plan.

Chapter 1 (Introduction) provides information on the OBWB and its Water Stewardship Council, gives an overview of why water is so important in the Okanagan and what challenges we are facing, and describes why we need a sustainable water strategy.

Ten guiding principles are presented in Chapter 1, and include (DRAFT):

1. **Respect water.** Water connects and sustains all life. It is our responsibility to protect water and watersheds.
2. **Think and act as one watershed.** Local decisions will consider water and ecosystem interconnections within a broad, Okanagan-wide watershed context. Collaboration and partnerships across political boundaries are essential for informed and coordinated decision-making.
3. **Control pollution at its source.** The most effective way to eliminate pollution is to prevent it from happening. Source watersheds will be protected for the benefit of healthy ecosystems and to safeguard a clean, safe, and reliable water supply.
4. **Restore aquatic ecosystems.** Natural ecosystems, especially those that are rich in biodiversity, are needed to maintain water quality and quantity. Their protection is also critical for climate change adaptation.
5. **Put water stewardship at the forefront in land-use planning decisions.** Land and water are interconnected. Urban and rural land-use decisions will minimize local and cumulative impacts on water resources and aquatic habitats.
6. **Allocate water in a transparent and responsible manner.** How and when water is allocated will be determined in a way that is rational, evidence-based and easy to understand. Sufficient water will be

available for the environment, basic human needs, agriculture, cultural self-determination, and economic livelihoods now and in the future.

7. **Ensure community water supply systems are resilient to climate change.** Water systems will be designed to reduce water waste, maximize water use efficiency, and minimize environmental impacts. When practical, alternative sources such as rainwater harvesting and greywater reuse will be developed.
8. **Collect and share knowledge.** Technology, science, and traditional knowledge (with permission) will be used to inform decisions about water. Data will be integrated and easily accessible. We will engage in evidence-based decision-making; however, a lack of data will not limit action to protect water.
9. **Encourage active public engagement and learning.** Transparent and collaborative decision-making and opportunities for information sharing and communication are essential to a collective understanding and acceptance that humans are part of the environment, and our activities affect water.
10. **Practice adaptive management and think long-term.** Continuous learning, innovation, planning, and improvement are essential for sustainable water management. Long-term ‘water-first’ thinking will be used to avoid the cumulative effects of short-sighted land use actions.

Chapter 2 (Water Quality) includes information and actions related to source water protection, aquatic ecosystem conservation and restoration, sustainable land use planning, and aquatic invasive species. The status of source protection planning in the Okanagan, current challenges with managing multi-use watersheds, and opportunities for improvement and collaboration are highlighted in the chapter. The advantages of using green infrastructure such as wetlands, foreshores, and riparian areas to safeguard water quality and quantity and attenuate flooding is underscored. Invasive mussels are front and centre in the chapter, with a call to diligently continue the OBWB advocacy campaign. Local government land use policy tools that encourage “water-centric” community design and development practices and minimize risks to communities from floods, droughts and other natural hazards are highlighted.

Chapter 3 (Water Quantity) includes information and actions related to water supply and demand, water conservation and efficiency, drought preparedness and response, integrated flood management, and water storage. The chapter discusses topics such as establishing and maintaining environmental flows and preserving access to water for agriculture. Developing and enforcing landscaping and irrigation standards, using water meter data to identify trends in water consumption, and providing timely feedback to customers so they can quickly rectify leaks or other issues are all highlighted as important water conservation measures. The chapter emphasizes the importance of having local drought plans with robust triggers and the need to have consistent watering restriction lingo across the valley. Preparing up-to-date flood maps and using appropriate land use planning and regulation are discussed as ways to reduce flood risk.

Chapter 4 (Delivering the Strategy) discusses the importance of knowledge integration and transfer, good governance, coordination and collaboration, community engagement, and funding and resources to moving forward with water sustainability.

Lastly, Chapter 5 (Action Plan) brings all of the actions together into a table and outlines who should complete each action and its timeline for completion.

Okanagan Basin Water Board
Regular meeting
February 5, 2019
Agenda No: 7.2

MEMORANDUM

File No. 0550.04

To: OBWB Directors
From: Anna Warwick Sears
Date: January 30, 2019
Subject: Board Remuneration

As of January 1, 2019, the OBWB directors who are appointed by local government have lost a federal tax benefit on their board meeting pay (30% of the honorarium had been exempt from tax). I understand that many B.C. local governments are raising their board remuneration to compensate for the extra tax. For example, it is my understanding that the RDCO raised director remuneration by 14%.

The OBWB chair currently receives \$180.00/meeting, and directors receive \$130.00/meeting. Remuneration has been at this level since 2007, with no changes. A 14% increase would be approximately \$25.00/meeting for the chair, and \$18.00/meeting for each director.

Typically, OBWB meets 10 times per year. If directors' compensation were increased by 14%, it would amount to approximately \$2,200 altogether – not likely to significantly impact our budgeted operations.

I recommend that the board (1) consider compensating for the lost tax benefit (which will not increase take-home remuneration, but will avoid a decrease), and (2) provide staff direction about whether to include a remuneration adjustment in the 2021 budget process, given that there has been no increase since 2007.

Recommended Resolution: *That the OBWB adjust board remuneration by 14% to offset federal tax changes to meeting pay.*



Ms. Tracy Gray
Chair
Okanagan Basin Water Board
c/o Corrine Jackson
< Corinne.Jackson@obwb.ca >

Dear Ms. Gray:

Thank you for your correspondence of August 16, 2018, concerning funding to prevent invasive mussels from entering British Columbia (BC). I regret the delay in responding.

I appreciate your kind words on my appointment as Minister of Fisheries, Oceans and the Canadian Coast Guard. I am honoured by the opportunity to take on the responsibilities and challenges of this portfolio and to serve my fellow Canadians in this capacity.

Fisheries and Oceans Canada (DFO) recognizes that preventing the introduction and spread of invasive mussels into Western Canada is a high priority and a shared responsibility across federal, provincial and territorial governments. The Department takes this matter seriously.

Regarding your invitation, my schedule unfortunately cannot accommodate this request. However, I have provided responses to your specific points below. I have copied my Director of Operations, Ms. Laura Mitchell, and my Special Assistant–Pacific Desk, Ms. Fiona Simons, for their information.

The work undertaken or funded by DFO is complementary to BC's efforts, as DFO recognizes that the provincial government is the formal authority for management of freshwater fisheries in BC. The BC Ministry of Environment and Climate Change Strategy is responsible for the provincial watercraft inspection program, monitoring, enforcement, outreach and other activities. DFO cannot provide financial support for monitoring, inspection or other activities directly to any province or territory because the Department does not have this budgetary authority. Nonetheless, DFO is already contributing significantly to the six priorities you raised through the following activities.

.../2

Increased Lake Monitoring (Priority 1)

DFO recently announced funding for research to predict the potential spread and ecological impact of invasive mussels in the Okanagan water basin. That research and previous science advice relevant to waterbodies within BC (e.g., screening-level risk assessment of BC's Pacific Fishery Regulations Schedule VIII and risk assessment for the three dreissenid mussel species in Canadian freshwater ecosystems) aim to inform the structure of BC's freshwater prevention and monitoring activities, as well as enforcement activities.

Enhanced Inspection Program Resources (Priority 2), Expanded Inspection Activities (Priority 5), and Increased Capacity of Conservation Officer Service K9 Unit (Priority 6)

The BC Conservation Officer Service has established a number of inspection stations at strategic entry points into BC. They act under authority of the BC *Controlled Alien Species Regulation* made pursuant to the BC *Wildlife Act*. Fishery officers will act in a supporting role, if resources are available, for inspection stations.

DFO has received feedback from other provinces and departments who also employ K9 programs for AIS inspection. Based on that feedback, the Department's understanding is that the education and outreach benefits of K9 programs outweigh their inspection capabilities. A K9 program is expensive, particularly because of the time required of trainers and handlers. Such a program requires careful consideration of whether it is the best use of allocated funds, especially given the funding DFO has recently provided for education and outreach activities in BC. DFO cannot support K9 units at this time.

Increased Outreach, Education and Research (Priority 3)

Funded by DFO with \$400,000 over three years, the Canadian Council on Invasive Species (CCIS) will significantly support education and outreach in BC. CCIS will do this by advancing a "Clean, Drain, Dry" campaign in cooperation with the province as the lead authority for the management of aquatic invasive species in fresh waters. The project is divided into three main components:

- 1) development and distribution of "Clean, Drain, Dry" resources;
- 2) "Clean, Drain, Dry" signage for recreational boaters; and
- 3) outreach and social media, such as videos and public service announcements.

Increased Coordination and Preparedness (Priority 4)

Discussions are ongoing between DFO and the Government of British Columbia, and through the Canadian Council of Fisheries and Aquaculture Ministers. To maximize efficiency and avoid duplication, DFO regional staff and BC representatives are discussing their respective roles and responsibilities regarding AIS, including response activities.

.../3

To enhance coordination of management efforts moving forward, DFO is establishing a Pacific AIS Working Group with BC and Yukon to streamline and coordinate work plans, priorities and information sharing. DFO has also been invited to participate alongside BC, Alberta, Saskatchewan, Manitoba and Yukon in the Western AIS Agreement Directors Group, which is focused on preventing the western spread of zebra mussels.

I hope that the information I have provided is helpful.

Yours sincerely,

A handwritten signature in blue ink, reading "Jonathan Wilkinson". The signature is fluid and cursive, with the first name "Jonathan" and last name "Wilkinson" clearly legible.

Jonathan Wilkinson, P.C., M.P.
Minister of Fisheries, Oceans and the Canadian Coast Guard

c.c.: Mr. Stephen Fuhr, M.P.
Kelowna-Lake Country
Mr. Mel Arnold, M.P.
North Okanagan-Shuswap
Mr. Dan Albas, M.P.
Central Okanagan-Similkameen-Nicola
Mr. Richard Cannings, M.P.
South Okanagan-West Kootenay
Ms. Laura Mitchell
Director of Operations
Ms. Fiona Simons
Special Assistant-Pacific Desk

Reference: 335913

December 12, 2018 (via email)

Anna Warwick Sears, Executive Director
Okanagan Basin Water Board

c/o Corinne Jackson, Communications Director
Email: corinne.jackson@obwb.ca

Dear Ms. Warwick Sears:

Thank you for your email of November 20, 2018, regarding legislative changes to prevent the spread of invasive zebra and quagga mussels.

The Province is focused on implementing an effective, risk-based approach when it comes to preventing the spread of invasive mussels. The Invasive Mussel Defence Program has been operating since 2015 and its operations undergo thorough annual reviews that benefit from ongoing feedback from staff, partners and the general public, as well as adapt based on lessons learned from other jurisdictions across western Canada and the US. The Province will continue to work with partners and have internal discussions to explore all options and approaches to maximize program effectiveness. These discussions will include how to strengthen legislative requirements and ways to ensure watercraft entering the province are inspected.

Through the Interprovincial Territorial Agreement for Coordinated Regional Defence Against Invasive Species, BC collaborates with Alberta, Yukon, Saskatchewan, and Manitoba on enhanced coordination when it comes to preventing and managing aquatic invasive species; the initial emphasis is on zebra and quagga mussels.

The Province is also working directly with the Canada Border Services Agency (CBSA) to receive notifications of watercraft at the southern border crossings. This includes 24-hour coverage along several of the southern border crossings. For the 2018 season, the program received, responded to and followed-up on 300 notifications from the CBSA. The Province will also continue to work with CBSA to strengthen the screening of all watercraft entering from the United States and intercept high-risk watercraft at border crossings.

As you may know, during the 2018 season over 38,000 watercraft were inspected, of which 1,700 were identified as high risk and 25 were confirmed to have adult invasive mussels. BC received advanced notification on 20 of the 25 mussel-fouled boats either from another jurisdiction (for example, Alberta, Montana, Idaho or Washington) or by CBSA.

The legislative changes suggested in your email are options we will continue to consider as improvements are made to the mussel defence program. Thank you again for taking the time to write and for sharing your concerns with me.

Sincerely,

George Heyman
Minister

THE CORPORATION OF THE
TOWNSHIP OF SPALLUMCHEEN

TEL. (250) 546-3013
FAX. (250) 546-8878
OUR FILE NO.



www.spallumcheentwp.bc.ca

4144 Spallumcheen Way
Spallumcheen, B.C. V0E 1B6

Email: mayor@spallumcheentwp.bc.ca

OFFICE OF THE MAYOR

December 18th, 2018

Okanagan Basin Water Board
Regular meeting
February 5, 2019
Agenda No: 8.3

Corinne Jackson, Communications Director
Okanagan Basin Water Board
1450 KLO Road
Kelowna BC V1W 3Z4

Dear Ms. Jackson:

At the meeting held on Monday, December 17th, 2018, the following direction was given:

"... That the Township of Spallumcheen Council direct staff to provide a letter of support to the Okanagan Basin Water Board for the Fisheries Projection Program – Aquatic Invasive Species Study."

The Township Council is pleased to support this important program. Please keep us updated as your Study progresses.

Sincerely,

Christine Fraser
Mayor

CF/jh

Reference: 335197

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|---|
| Okanagan Basin Water Board Regular meeting February 5, 2019 Agenda No: 8.4 |
|---|

December 13, 2018 (via email)

Anna Warwick Sears, Executive Director
Okanagan Basin Water Board

c/o Corinne Jackson, Communications Director
Email: corinne.jackson@obwb.ca

Dear Anna Warwick Sears:

Thank you for your letter of November 20, 2018, regarding the deadline for existing groundwater users to apply for a licence under the *Water Sustainability Act*. As Minister of Environment and Climate Change Strategy, I am pleased to have the opportunity to respond. I appreciate you taking the time to express your concerns and provide suggestions for encouraging existing groundwater users to engage in BC's water licensing program.

While an estimated 20,000 existing non-domestic groundwater users were anticipated to apply for a water licence before March 1, 2019, the public response has been much lower than expected (approximately 12 percent to date). To encourage applicants to engage in the licensing system, the Province has taken a multi-pronged approach to reach out to the public and to process applications. Specialized staff were hired, the online application process simplified, promotional pamphlets distributed, direct mail campaigns piloted, workshops and trade show outreach undertaken and the government's water webpages updated to assist the public in better understanding the changes.

We recognize that the requirement for a non-domestic groundwater licence represents a significant cultural shift for many BC citizens to recognize the value of a licence to secure water rights. This is especially true for people who have used the groundwater for decades for free and without any government oversight.

In 2019, a media advertising campaign via local print media and radio will be launched in addition to direct mail, and government staff will continue to pursue opportunities to enhance public awareness, including looking for opportunities for partnership on implementing *Water Sustainability Act* related changes.

Thank you again for taking the time to share your concerns. We acknowledge your interest in extending the March 1, 2019 application deadline. Your comments, as well as those of others, will be retained and considered as we continue to monitor the situation.

Sincerely,

George Heyman
Minister

cc: Honourable Doug Donaldson, Minister of Forests, Lands, Natural Resource Operations and Rural Development



Okanagan Basin Water Board
Regular meeting
February 5, 2019
Agenda No: 8.5

Ref: 337775

SENT VIA EMAIL

January 21, 2019

Anna Warwick Sears
Executive Director
Okanagan Basin Water Board
1450 KLO Road
Kelowna, BC V1W 3Z4
anna.warwick.sears@obwb.ca

Dear Ms. Warwick Sears:

Thank you for your letter of November 23, 2018, regarding the deadline for existing groundwater users to apply for a licence under the *Water Sustainability Act* (WSA). I am also replying on behalf of Ted White, Director and Comptroller of Water Rights, Resource Stewardship Division, Ministry of Forests, Lands, Natural Resource Operations and Rural Development. I apologize for the delay in getting back to you.

We appreciate you taking the time to write us to encourage government action in response to low groundwater licence application levels. While the issues raised in your letter are familiar to us, we do appreciate the recommendations and are interested in the OBWB's offer of support. As mentioned in Minister George Heyman's reply of December 13, 2018 to the OBWB regarding the same, we are planning a media campaign to raise public awareness in early 2019 and exploring other options to addressing the challenges raised in your letter. We have taken note of your offer to assist and will reach out in the upcoming months to explore opportunities to collaborate further on WSA implementation.

Thank you again for taking the time to share your concerns and thoughtful recommendations.

Sincerely,

Lynn Kriwoken
Executive Director

...2

cc: Mark Zacharias, Deputy Minister,
Ministry of Environment and Climate Change Strategy

Bobbi Plecas, Deputy Minister, Ministry of Environment and Climate Change Strategy

Ted White, Director and Comptroller of Water Rights,
Ministry of Forests, Lands, Natural Resource Operations and Rural Development