

Okanagan Basin Water Board Meeting Agenda



DATE: Tuesday, May 2, 2017

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

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

1. **CALL MEETING TO ORDER**
2. **INTRODUCTION OF LATE ITEMS**
3. **APPROVAL OF AGENDA**
4. **DELEGATIONS**
 - 4.1 Wayne Wilson of the Central Okanagan Land Trust (COLT): *“COLT and the restoration of Mission Creek and Munson Pond: the role of the Land Trust”*
5. **ADOPTION OF MINUTES**
 - 5.1 Minutes of the Regular Meeting of the Okanagan Basin Water Board of April 4, 2017 at Regional District of North Okanagan, Coldstream B.C. *(page 1)*
6. **CHAIR’S REPORT**
7. **STAFF REPORTS**
 - 7.1 Executive Director Report *(page 7)*
 - 7.2 Water Stewardship Director Report *(page 11)*
 - 7.3 Operations and Grants Manager Report *(page 14)*
 - 7.3.1 Invasive Milfoil Backgrounder
 - 7.3.2 Invasive Mussel Briefing Note
 - 7.4 Communications Director Report *(page 20)*
 - 7.5 Policy and Planning Specialist Report *(page 23)*
8. **NEW AND UNFINISHED BUSINESS**
 - 8.1 Okanagan Wetlands Statement of Values *(page 25)* *(resolution requested)*
 - 8.2 Environmental Flow Needs Contract Memo *(page 27)* *(resolution requested)*
 - 8.3 Make Water Work/Don’t Move A Mussel Contract Memo *(page 29)* *(resolution requested)*
9. **IN CAMERA**
 - 9.1 In-camera session (under sec. 90(2)(b) of the Community Charter)
10. **NEXT MEETING**
 - 10.1 The next meeting of the Okanagan Basin Water Board will be an abbreviated meeting on Tuesday, June 6, 2017 at 10 a.m., followed immediately by the joint Board-Water Stewardship Council meeting until **3 p.m.** Location to be announced.
11. **ADJOURNMENT**



**MINUTES OF A REGULAR MEETING OF THE OKANAGAN BASIN WATER BOARD
HELD APRIL 4, 2017, AT THE REGIONAL DISTRICT OF NORTH OKANAGAN
9848 ABERDEEN RD., COLDSTREAM, B.C.**

PRESENT

Chair Tracy Gray	Regional District Central Okanagan
Vice-chair Juliette Cunningham	Regional District North Okanagan
Director Doug Dirk	Regional District North Okanagan
Director Rick Fairbairn	Regional District North Okanagan
Director Ron Hovanes	Regional District Okanagan-Similkameen
Director Sue McKortoff	Regional District Okanagan-Similkameen
Director Peter Waterman	Regional District Okanagan-Similkameen
Director Lisa Wilson	Okanagan Nation Alliance
Director Toby Pike	Water Supply Association of BC
Director Brian Guy	Okanagan Water Stewardship Council

REGRETS

Director Doug Findlater	Regional District Central Okanagan
Director Cindy Fortin	Regional District Central Okanagan

OBWB STAFF

Anna Warwick Sears	Executive Director
Nelson Jatel	Water Stewardship Director
James Littley	Operations and Grants Manager
Corinne Jackson	Communications Director
Kellie Garcia	Policy and Planning Specialist
Alyssa Bougie	Communications & Outreach Coordinator

1. CALL MEETING TO ORDER

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

2. INTRODUCTION OF LATE ITEMS

- 9.2 Letter from Federal Ministry of Environment to OBWB re: invasive mussels
- 9.3 Letter from B.C. Ministry of Community, Sports & Cultural Development to OBWB re: wetlands guidebook grant

3. APPROVAL OF AGENDA

"THAT the agenda of the regular meeting of the Okanagan Basin Water Board of April 4, 2017 be approved as amended."

CARRIED

4. DELEGATIONS

Harmony Bjarnson - B.C. Agriculture and Climate Change Action Initiative and Current Okanagan Projects

Ms. Bjarnson told directors the Initiative has an advisory committee made up of producers as well as local, provincial and federal government staff. The purpose is to develop tools and resources to enhance the BC agriculture sector's ability to adapt to climate change and build

resiliency. There are two programs: Regional Adaptation Enhancement and Farm Adaptation Innovator, funded through the provincial and federal Growing Forward 2 program. Regional plans have been developed, including one for the Okanagan, informed through consultation with ag sector producers and other stakeholders, and government.

Drs. Hovanes and Wilson entered the meeting at 10:10 a.m.

The Okanagan working group includes the BC Fruit Growers Assoc., BC Grape Growers, OBWB, and others.

Climate change in the Okanagan will result in warmer and drier summers. We are already seeing an increase of 1.4 degrees, added Ms. Bjarnson, as well as lower river flows in summer, reduced water availability and increased demand. Elsewhere, in the Lower Mainland, we expect an increase in annual precipitation and more extreme rainfall events.

Some of the other issues expected include changes in pests and pollinators, such as increasing winter survival rates and number of reproduction cycles per year, changes in range and distribution of pests, diseases, and the introduction of new pests. At the same time, there will be wildfire risk and an increased risk of drought. The Initiative has developed plans for these impacts.

Dir. Waterman entered the meeting at 10:18 a.m.

Ms. Bjarnson provided information on some of those plans including the Okanagan Agricultural Water Supply Status Outreach Project being conducted with the Water Board. Action items include improving communication to growers about drought, and creating a consistent system for disseminating source-specific water supply information. The team is working with City of Penticton and Greater Vernon Water on a pilot project that includes developing an e-alert system to communicate water supply status.

Another Okanagan initiative is a Vineyard Water Use Efficiency project that will support the sharing of existing water management best practices.

Dir. Waterman noted there have been a number of tools developed over the years to increase water efficiency and the need to promote uptake of those tools. Ms. Bjarnson responded that this is being looked at. One of the concepts is to make a toolkit available to farmers, which includes a survey, and then a follow-up visit from a farm agent to address issues specific to the farmer. Some pilot projects with Okanagan farmers are planned and then it would be rolled into Environmental Farm Plan process, she added.

In response to questions, it was noted that the work of the group has not included riparian restoration, in part due to the project needing to be completed by March 2018. However, this may be possible in future years.

Ms. Bjarnson also spoke to a few other projects including extension of a project out of Washington state that links real-time weather data to pest control efforts, a Wildfire Impact Reduction Pilot Project in Central and South Okanagan, and a centralized website for the Okanagan on invasive species.

5. **ADOPTION OF MINUTES**

5.1 Minutes of the Regular Meeting of the Okanagan Basin Water Board of March 7, 2017 at the Regional District of Okanagan-Similkameen in Penticton.

“THAT the minutes of the regular meeting of the Okanagan Basin Water Board of March 7, 2017 at the Regional District of Okanagan-Similkameen be approved.”

CARRIED

6. CHAIR REPORT

Chair Gray spoke to the March 30 provincial invasive mussel announcement and the reported effectiveness of the OBWB's last letter to the province, outlining concerns and suggested solutions. She added she is still looking at how OBWB directors can meet with MPs and other federal officials on this issue in June while at the Federation of Canadian Municipalities in Ottawa.

Funding from the province to build on the Okanagan wetlands project and create a local government guidebook to build additional wetlands was also welcomed.

7. STAFF REPORTS

7.1 Executive Director Report

Dr. Sears provided an update on a discussion with RDCO about an internal service review of the OBWB. Following some conversation, it was suggested that a formal letter be sent asking for more information.

“THAT the Okanagan Basin Water Board send a letter to Regional District of Central Okanagan requesting for more information on the service review.”

CARRIED

Staff are waiting to hear from RDCO on the milfoil equipment transfer to RDOS. Once feedback is received, it will be forwarded to RDNO for approval.

Dr. Sears noted that the Water Board has been granted a two month extension of its UN Assoc. of Canada grant for its Okanagan WaterWise Communications and Outreach Coordinator position. Alyssa Bougie will be working with us until early September.

The OBWB is working with federal and provincial agriculture ministries, as well as BC Assessment, to update the Okanagan Water Demand model, looking at where our water is used and how much.

The board was updated on a recent conference call with the International Osoyoos Lake Board of Control (IOLBC). It is unlikely that a drought will be declared on Osoyoos Lake this summer. Also, the International Joint Commission and IOLBC is looking at objectives and how climate change may affect these. The OBWB has offered to help them access related research done in the Okanagan.

Staff have been assisting the three Okanagan regional districts to create water indicators for a “State of the Basin” report. The report, the first of its kind in B.C., will include topics ranging from transportation and housing, to community health and water resources and is aimed at measuring changes over time and recognizes the interconnectedness of the region.

Planning for the annual joint Board/Council meeting in June is underway. Each year the Water Board focuses on an emerging water theme of interest to board and council members. This year staff are looking at a presentation on planning and response to invasive mussels.

Dr. Sears noted that recent rainfall has added water to the snowpack. At this time, the Okanagan is on track for an average water year as long as it doesn't melt too fast.

“THAT the Executive Director’s Report, dated March 28, 2017, be received.”
CARRIED

7.2 Water Stewardship Director Report

Mr. Jatel provided an update on presentations at the last council meeting by the Okanagan Collaborative Conservation Program and the South Okanagan-Similkameen Conservation Program and possibilities to work together with the council on issues. Members also heard on the Kelowna Integrated Water Supply Plan. Next week’s meeting will include a presentation on biosolids and its impact on water quality.

Work on the Mission Creek Groundwater-Surface Water Interaction project continues. Partners include the province, several Kelowna-area water utilities including Black Mountain Irrigation District and Rutland Waterworks, Okanagan Nation Alliance and UBC Okanagan. The purpose is to meet several objectives including the collection of information to better understand the water supply, infrastructure planning needs of water suppliers, assist the province in licencing decisions, understanding the environmental flow needs of fish and aquatic life. Currently, the technical committee is analyzing data in the area to determine types of sediments to better understand the characteristics of the aquifers and the reliability of the aquifers to recharge.

“THAT the Water Stewardship Director’s report, dated March 28, 2017, be received.”
CARRIED

7.3 Operations and Grants Manager Report

Mr. Littley told the board that the milfoil rototilling season is coming to a close for the season with many of the areas closed as of April 1 due to environmental considerations. Milfoil maps are being developed and will assist with the OBWB’s five-year permit application starting in 2018, he added.

There was some discussion about the program and questions some directors receive from the public. It was suggested that the board be provided with a one-page information sheet.

Directors were updated on the province’s mussel announcement, including the expansion of inspection hours, two additional stations, the Golden station moving to 24-hours a day, a doubling of inspectors to 68 in June, additional signage and funding for mussel monitoring in waterways. There was discussion about additional items that were mentioned, but not in the written announcement. It was suggested that more clarification was needed.

“THAT the Operations and Grants Manager’s Report, dated March 28, 2017, be received.”

CARRIED

7.4 Communications Director Report

Ms. Jackson updated the board on Canada Water Week events including the panel discussion “Why WASTE Water,” a sold-out screening of RiverBlue at the Grand 10, and the Okanagan WaterWise Challenge for youth. The contest runs until April 28 and encourages young people, five-17 years of age, to complete two to three challenges that encourage youth to get active in and around water, and build awareness for the need to look after it. Challenges include creek clean-ups, fixing leaks, and more. Prizes include a two-hour boat cruise on Okanagan Lake for a private class lesson on Okanagan water, presented by the Okanagan Science Centre, as well as

pizza parties and pool passes. Winners will be announced during BC Water Week (May 7-13). There are individual and class-entry contest categories. More info is at www.OkWaterWise.ca.

There was some discussion about ways to improve attendance at the panel, including the possibility of holding a weekend event.

Ms. Jackson reminded the board that the monthly Board Report is provided to Okanagan local government councils and boards to be included in agendas to help keep them apprised of board work. It is also intended to assist Water Board directors in providing monthly updates to their board/council. A couple suggestions were provided to ensure the report was received by the right people. Staff will follow up.

Staff have been providing communications support to a few projects including: an Historic Fishing Survey that supports the work of the OBWB's Environment Flow Needs project; a foreshore clean-up effort on April 8 from Kelowna's Heritage Museum and being done in partnership with the Vancouver Aquarium; a "Don't Move A Mussel" public event on April 25 in Penticton with OASISS and featuring presentations by Stephanie Hester with Montana's Invasive Species Council and Alberta's Cindy Sawchuk, along with her mussel sniffing dog, and a follow-up event with RDOS on April 26 for local government officials.

"THAT the Communications Director's Report, dated March 27, 2017, be received."
CARRIED

7.5 Policy and Planning Specialist Report

Ms. Garcia spoke to the Mainstem Drought Triggers Project and the incorporation of feedback from water suppliers. The updated guidelines consider a number of factors including lake levels and in flows. The project team is looking to have the guidelines ready by end of April.

Work is also underway on an update to the Sustainable Water Strategy. An editorial committee has been struck and a survey has been sent out requesting feedback, including a look at the last edition's 45 actions – what should be revised, added, removed – and what else should be considered in this newest version.

The Agricultural Water Supply Communications Project team, aimed at assisting Okanagan water suppliers better inform ag water users about water supplies in times of drought and otherwise, is building on existing communication channels (e.g. websites) and testing new ones, including a mass notification system. These tools are being test piloted this summer.

Ms. Garcia added that she will be presenting on the Okanagan's 2015 drought response and lessons learned as part of a Fraser Basin Council webinar on April 6, and then on being drought-ready to the Water Supply Assoc. workshop April 7.

"THAT the Policy and Planning Specialist's Report, dated March 27, 2017, be received."
CARRIED

8. NEW AND UNFINISHED BUSINESS

8.1 New Banking Authority Memo

Dr. Sears introduced a revised banking authority memo.

"THAT the Signing Authority Resolution be approved as presented."
CARRIED

8.2 Water Conservation and Quality Improvement (WCQI) Grants 2017 Memo

Mr. Littley presented WCQI recommendations for 2017.

There were some questions about process. Mr. Littley explained that late submissions are not accepted, the only exception is on the resolution of support from local government. If staff are made aware before the grant deadline that the resolution process is underway it will accept the resolution once it is passed. Applications are graded based on criteria set by the board (e.g. valley-wide benefit). Recommendations also consider viability of a project based on WCQI grant funds available.

Dr. Sears added that the board discusses the process each year before the call for applications goes out and suggested that this be done again, later in 2017, for the 2018 program.

“THAT the Water Conservation & Quality Improvement Grants 2017 recommendations be approved as presented.”

CARRIED

9. CORRESPONDENCE

- 9.1 Letter from Town of Oliver to B.C. Ministry of Environment re: invasive mussels
- 9.2 Letter from Federal Ministry of Environment to OBWB re: invasive mussels
- 9.3 Letter from B.C. Ministry of Community, Sports & Cultural Development to OBWB re: wetlands guidebook grant

“THAT the letters to the Okanagan Basin Water Board be received.”

CARRIED

10. NEXT MEETING

The next meeting of the Okanagan Basin Water Board will be Tuesday, May 2, 2017 at the Regional District of Central Okanagan in Kelowna at 10 a.m.

10. ADJOURNMENT

“THAT there being no further business, the regular meeting of the Okanagan Basin Water Board of April 4, 2017 be adjourned at 1:44 p.m.”

CARRIED

Certified Correct:		
Chair		Executive Director

MEMORANDUM

Okanagan Basin Water Board
Regular meeting
May 2, 2017
Agenda No: 7.1

File No. 0550.04

To: OBWB Directors
From: Anna Warwick Sears
Date: April 26, 2017
Subject: **Executive Director Report**

Upcoming meetings

A reminder, that the June 6th OBWB meeting will be held jointly with the Water Stewardship Council. This year we are organizing a meeting with a focus on the impact of invasive mussels. The July OBWB meeting will be cancelled due to the conflict with the Canada Day holiday, but we will have a meeting August 1st, at RDCO. If directors have summer vacations scheduled, please be sure to inform your alternates.

Audit and annual report

In the past several weeks, OBWB staff have been busy wrapping up the 2016-17 fiscal year, and preparing for the audit by BDO. We anticipate that the draft audited financial statements will be available for review and adoption by the board at our June meeting. The audited statements will then be incorporated in our annual report, which should be ready for review by the August OBWB meeting.

RDCO Service Review of OBWB

Following the OBWB resolution of last month, I have formally written to Brian Reardon for more information about the goals and the structure of the RDCO service review process, and will share these with the board when he has provided it.

Milfoil equipment transfer

I have no update on this process, since last month. The plan to transfer legal ownership of the milfoil control equipment to RDOS is still pending reviews by CAOs of RDCO and RDNO. Brian Reardon, the CAO of RDCO, has requested that the RDCO board approve the final document by resolution, once he has finished his review. David Sewell, the CAO of RDNO has said he can give it administrative approval when the document is made final – incorporating any revisions by RDCO.

UBCO Water Research Chair Advisory Committee

The UBCO LEEF Chair in Water Resources was established through a \$1.25M grant from the Province, matched with \$250K from the Real Estate Foundation of BC, and \$500K from the Okanagan regional districts (through the OBWB). These funds created an endowment that covers a portion of the Chair's salary and research budget. The Chair is an appointed faculty member, holding

a five-year term. Dr. John Janmaat, a water resource economist was recently appointed to his second term in this position.

When UBCO reached out to the regional districts and OBWB, they offered to establish a local advisory committee, to provide advice to the Chair on water issues of local significance, and to bring information about university water research back to the communities. The advisory committee has been meeting since 2012, approximately twice per year, hosted by the university. At our last meeting, on April 12, the Advisory Committee discussed options for changing the format and structure. It's been proposed to have larger, more open meetings in a workshop-like format, where there would be a larger number of UBCO water researchers present and a larger number of interested community members.

I will be meeting with the university administration to discuss this new format. Overall, I believe the change would be good, to take better advantage of the opportunity for meeting with a broader number of researchers, and increasing the level of interaction between "town and gown."

Water science in/water science out

Working with the Water Supply and Demand committee of the Water Stewardship Council, I'm preparing to write one or more large grant applications to the Gas Tax Strategic Planning Fund, and/or the FCM Green Municipal Fund/Climate Adaptation Stream. The committee is especially interested in improving our models of stream flow, which underlie much of the EFN work, and are extremely valuable for long-term planning by local governments. We are also considering applying for an internship grant from Ag Canada, to work on updates to our Water Demand Model.

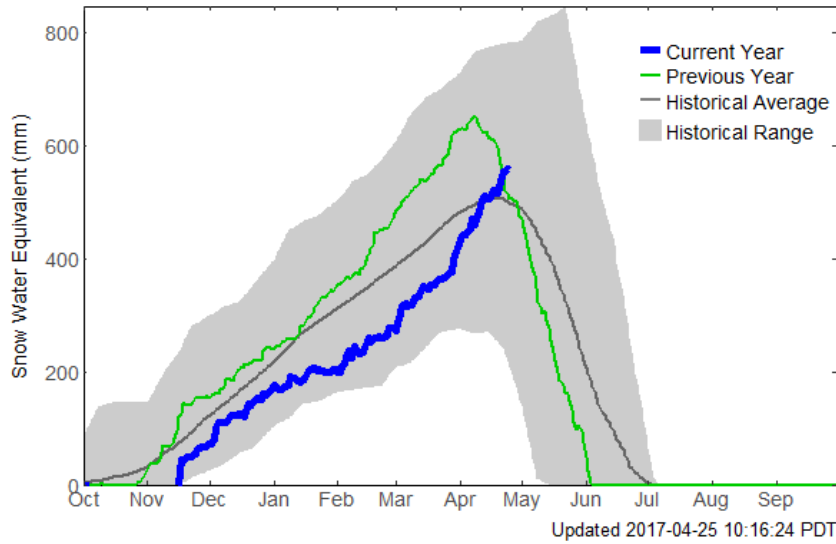
We've had two significant requests for water science information this month. One was from a consultant, doing a mapping project for the Okanagan Nation Alliance, seeking information from our Land Use Inventory and Water Demand Model. The other was from the City of Kelowna, looking for information on climate impacts and water use from the Water Demand Model, and updates on the Environmental Flow Needs study, the Mission Creek Groundwater/Surface Water study, and the Mainstem Drought Triggers Study.

Weather update

Okanagan snow packs are now above average. All indications are that we should expect a relatively “normal” or average water year, although there are some concerns about flooding if we have a sudden warming in May, with a rapid melt and our already saturated soil.

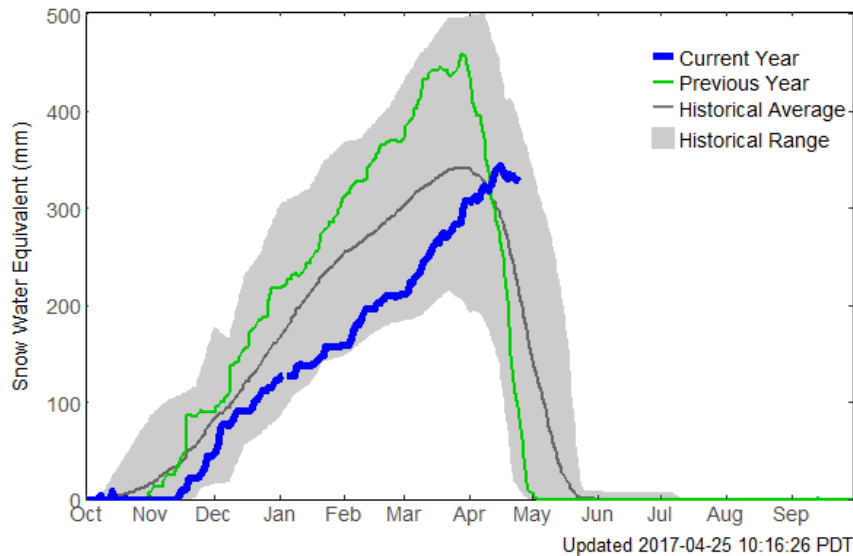
Mission Creek Snow Pillow – April 26th, 2017 (Elevation 1794m)

- River Forecast Centre reports that this was at 109% as of April 22nd.



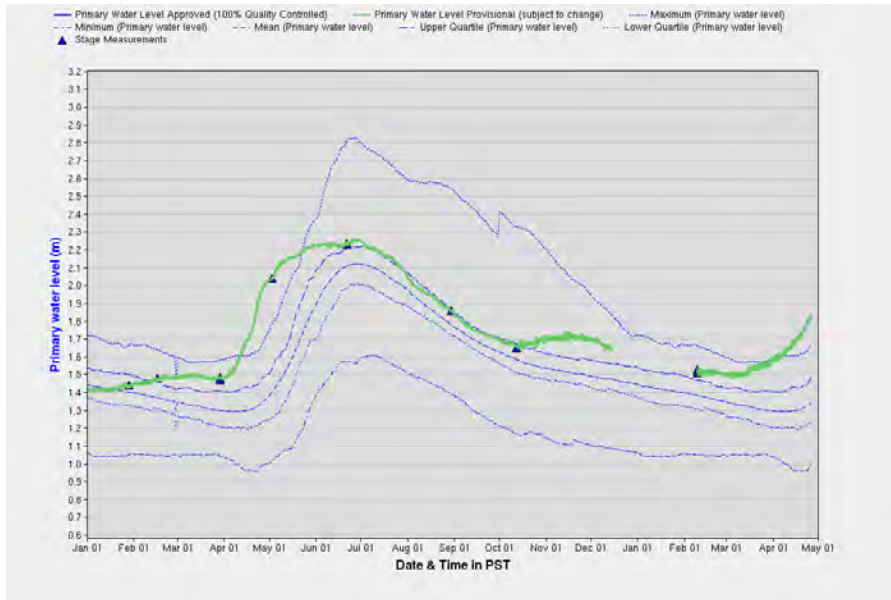
Brenda Mines Snow Pillow – April 26th, 2017 (Elevation 1,453 m)

- River Forecast Centre reports that this was at 137% as of April 22nd.

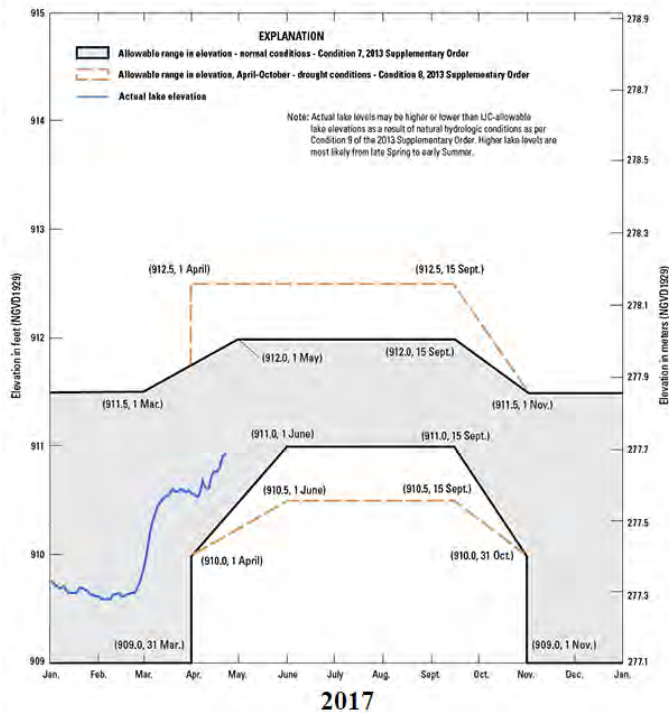


Okanagan Lake Level

Provincial water managers are ramping up releases from the dam in Penticton, to ensure that Okanagan Lake doesn't rise too much this year. Currently, the rate of inflow is greater than they are releasing, so the lake level is increasing. Care has to be taken to not release too much too fast, and harm juvenile fish or "unbalance" lakes downstream – so far, so good, judging from Osoyoos.



Actual and Allowable Lake Elevations per IJC Orders of Approval, Osoyoos Lake near Oroville, Washington, USGS Station 12439000



MEMORANDUM

Okanagan Basin Water Board
Regular meeting
May 2, 2017
Agenda No: 7.2

File No. 0550.04

To: Board of Directors
From: Nelson R. Jatel
Date: April 26, 2017
Subject: Water Stewardship Director's Report

Water Stewardship Council (Council)

At our April 13th Council meeting we had a panel of four speakers presenting on Okanagan bio-solids: **Rob Birtles** (IH), **Andrew Reeder** (Kelowna), **Timothy Phelon** (Opus), and **Mike Van Ham** (Sylvis). Options for managing class 1 biosolids produced in the Okanagan were discussed. Regulatory constraints on agricultural producers was identified as a policy issue requiring further analysis. Past Chair Dr. Tom Siddon was in attendance and provided comment on biosolid projects and policy under development in the South Okanagan.



Prior to Council three committees met, Communications, Environmental Flow Need management and Irrigation management, to discuss project priorities and committee goals.

Council Chair, Dr. Brian Guy, and committee chairs provided activity updates during the regular Council meeting. A summary of the Council committees, work plans and objectives can be found here: http://www.obwb.ca/newsite/wp-content/uploads/2016-18_owsc_workplan.pdf

All board members are encouraged to attend our May 11th Council meeting at the Coast Capri Hotel from 12:30pm – 4:30pm. Council will be exploring implications of boat traffic density on Okanagan lakes with three guest speakers: **Scott Boswell** (Okanagan Collaborative Conservation Program) **Heather Larrett** (Larratt Aquatic Consulting), **Jason Schleppe** (Ecoscape Environmental Consultants).

Project updates

Okanagan Groundwater: Mission Creek surface-groundwater interaction project

Okanagan groundwater is important to meet many water needs including: residential drinking water, agricultural food production and ecosystem functions including fish spawning needs – as groundwater flows supplement surface water. For the past year, the OBWB has been studying the contribution of groundwater to Mission Creek. Working with the province, and Dr. Craig Nichol from UBCO, we determined that we needed a better understanding of

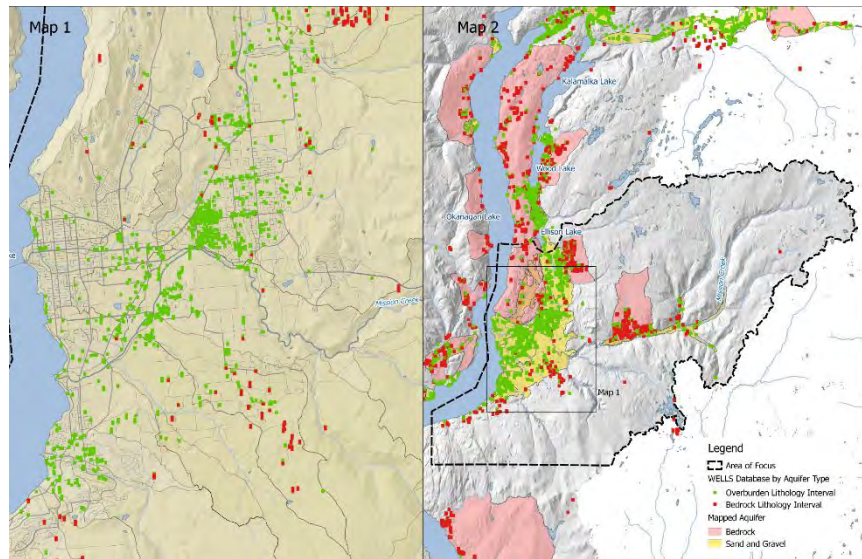
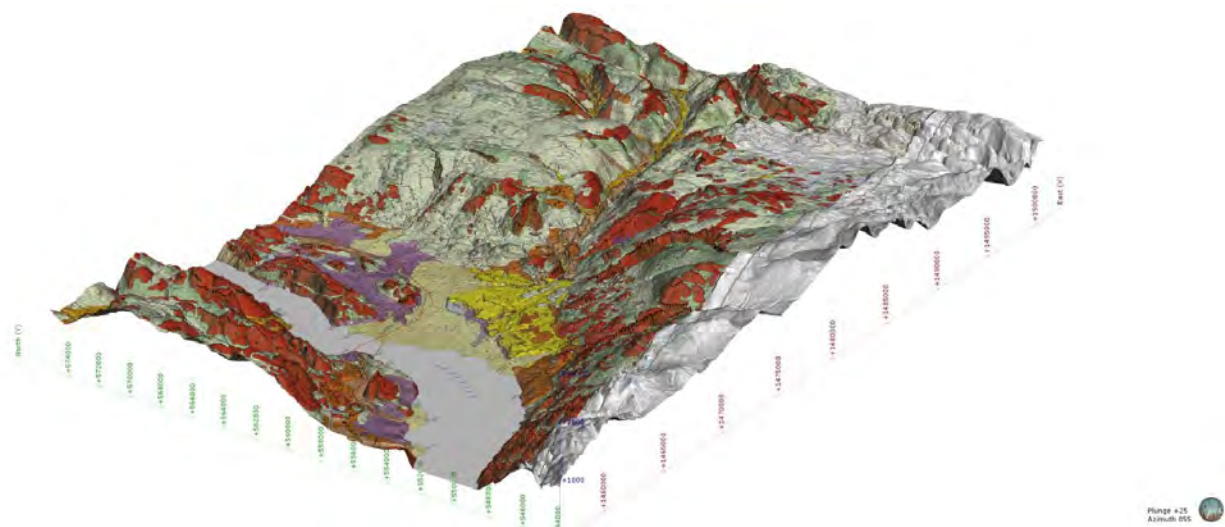


Figure 1 Project study area

aquifers in the area. We received a grant from Environment and Climate Change Canada to help model the aquifers, as the next step in the process.



Leapfrog 3D rendering of Kelowna-Mission Creek topography and surficial geology from the Geological Survey of Canada (Paradis 2009).

A number of groundwater modeling efforts have previously been undertaken in the Okanagan valley. However, many of these models used limited historical data. In order to ensure that bias wasn't introduced to the aquifer modeling project, historical data and models from previous projects were not used as a starting point for development of the datasets. For example, data from the BC Aquifers maps were not used. Rather, this project used the original well drilling data to characterize aquifers in the study area. Given the computer technology currently available, it is possible to develop a new framework for a groundwater model.

This project completed its objectives to update and standardize the BC Government WELLS database and all project deliverables were developed and reviewed by multiple hydrogeologists, and will serve as the backbone of future modelling exercises in the Mission Creek basin. This project is a partnership between the BC Government groundwater hydrology team, OBWB, ONAFD, City of Kelowna, SEKID, and RWW.

MEMORANDUM

Okanagan Basin Water Board
Regular meeting
May 2, 2017
Agenda No: 7.3

File No. 0550.04

To: OBWB Chair and Board
From: James Littley
Date: April 25, 2017
Subject: **Operations and Grants Manager Report**

Milfoil Control Program Update

I have recently completed the RFP for the Design and Build of a new milfoil rototiller, to supplement and eventually replace the machine built in 1984. We have also purchased updated engines for the milfoil harvesters, which provide greater fuel efficiency and more power than the old engines. The old engines will be sold to recoup some costs. We still anticipate sourcing one new harvester in the next five years.

Due to the winter temperatures and freeze up on several lakes, our rototilling is continuing for the next few weeks with two operators on the lake, and two operators in the shop preparing the harvesters. Monique Stone has now officially joined our crew full time, after working casually for the past two years. Monique rotates between machine operations, shop duties, and assisting with the safety program.

I have attached a one-page information package for directors about the milfoil program, as requested at the April meeting.

Invasive Mussel Update

Following the Premier's announcement in March, a subsequent correction was released by the Province indicating that the Premier misspoke regarding the legal requirement for watercraft entering the province to report to an inspection station. At this point, it remains the law that if an inspection station is open, all watercraft must pull in. However, it is still not a requirement for all watercraft to report to an inspection station prior to launching.

In anticipation of OBWB Directors attending FCM in Ottawa, I have prepared and attached a draft briefing note for the meeting, and will provide a more thorough backgrounder document in the next few weeks. The RDOS Resolution is also attached for info.

- On May 6th, I will be presenting to the AGM of the BC Wildlife Federation in Nelson B.C., on Invasive Mussels and the need for the hunting and fishing community to support prevention efforts.
- On June 27-28 I will be attending the 100th Meridian Initiative Columbia Basin Team's meeting in Helena, MT, one of the primary organizing groups for preventing and responding to mussel invasions. I have attached some information about the 100th Meridian Initiative to this memo.
- In late July I will be attending the PNWER Invasive Species Working Group sessions.

Introduction to Eurasian Watermilfoil

Eurasian Milfoil is an invasive lake weed which grows up to 5 cm per day in ideal conditions. Unlike many plants that only spread by seeds or root fragments, milfoil can spread when any part of the plant breaks off and settles in a new location (fragmentation). This means that when boats, wind or waves move through an area with thick milfoil, they can cause the plant to spread.

The Effects of Invasive Eurasian Watermilfoil

Invasive milfoil outcompetes native plants and has a number of negative effects on native fish and on water quality. Areas with dense milfoil can have reduced property values, and it can decrease the recreational and tourism revenue in those areas. A 1991 study on the economic benefits of the milfoil control program in the Okanagan Basin found that the regional benefits of control amounted to over \$450 million (over \$800 million in 2017 dollars). In 2017, as the population, tourism and property values have grown, the benefits of the program are likely significantly greater.

Introduction to Milfoil Operations

The Okanagan Basin Water Board Milfoil Control Program operates year-round with an annual budget of approximately \$700,000. All property owners in the Okanagan Basin contribute to this program (average less than \$6/year) which helps to create a stronger economy and healthier environment. Milfoil control in the Okanagan is currently accomplished through two types of operations, harvesting and rototilling.

Harvesting

In the summer, mechanical harvesters are used to remove the top few meters of the milfoil plant, leaving a surface of weed free water. However, because the plant roots are left intact, the treatment is only good for aesthetic quality and does not reduce overall growth. Also, harvesting means removing the weeds from the water to be trucked away. There are very few locations available to conduct this transfer, which limits the ability to harvest in many areas.

Rototilling

Winter rototilling, either with a small tractor in shallow areas, or a large floating barge, removes the plant roots from the water while they are dormant, and the fragments float to the surface where they die. Rototilling is effective when used for consecutive years at reducing the density of a milfoil bed. However, strict environmental permits limit the ability to rototill in several areas, and limit the time of year when areas can be treated.

Future Concerns

Warmer, sunny summers from climate change helps the milfoil grow faster, to deeper depths. Increased stream erosion from intense storms creates sand bars where new patches can take root. New docks and marinas can also increase sand deposits, making more areas for milfoil to grow. If they come to the Okanagan, invasive mussels could increase the growth of all lake weeds because they add liquid nutrients and increase water clarity. They may also make it more difficult to harvest, because mussels would attach to milfoil stems.

For more information on milfoil and the Okanagan's control program visit www.obwb.ca/milfoil.

For additional information, or options for specific areas, contact:

James Littley, Operations and Grants Manager, james.littley@obwb.ca or 250-469-6270.

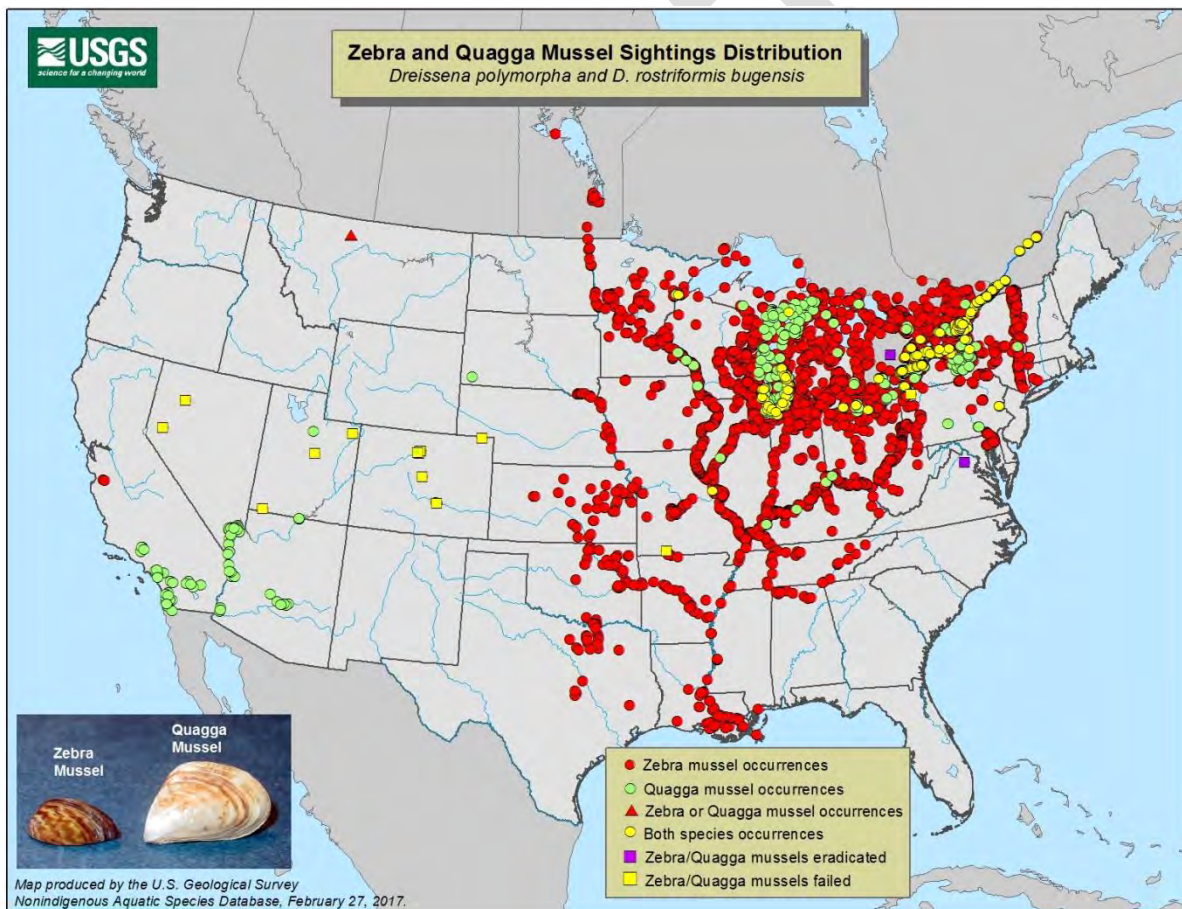
Preventing the Spread of Invasive Mussels to Uninfested Regions in Canada

Prepared by: Okanagan Basin Water Board
Date: April 25, 2017

PURPOSE

The purpose of this note is to outline actions that the Government of Canada can take to prevent the spread of invasive mussels to uninfested regions of Canada.

CURRENT SITUATION



Invasive mussels have recently been detected in water bodies in Montana (October 2016), and in Manitoba, including Lake Winnipeg (2013) and Cedar Lake (2016). Saskatchewan, Alberta and British Columbia remain the only invasive mussel-free provinces in Western Canada. Individual western provinces have allocated funding and resources to prevent the spread of invasive mussels through watercraft inspection, water sampling, emergency response plans and public education. Current federal regulations (Aquatic Invasive Species

Regulation, 2015) prohibit the importation, possession, transportation and release of these mussels in British Columbia, Alberta, Saskatchewan and Manitoba.

BACKGROUND

Current provincial programs for preventing the spread of invasive mussels have seen significant improvements in the last few years, while the last significant action by the federal government was the 2015 change to the Aquatic Invasive Species Regulation. Due to the spread of invasive mussels into Montana, Parks Canada also recently banned motorized watercraft from entering Waterton Lakes National Park, but has taken no other action in similarly threatened water bodies on other federal lands.

The Okanagan Basin Water Board (OBWB) is a unique local government agency in the central interior of B.C., located on the transboundary waters of the Okanagan River, which feeds into the Columbia River. The Okanagan watershed is almost 200 km in length, covering 8,000 km² in area and over 40,000 ha of lake surface area. The OBWB serves three regional districts, 11 municipalities, and five of the member bands of the Okanagan Nation.

In December 2016, the OBWB called for action from several federal government ministries to increase training and funding for Canada Border Services Agency, increase funding for containment to provinces that are already mussel-infested (Quebec, Ontario and Manitoba), increase funding to mussel-free provinces for prevention, and for a commitment to research and education for prevention, containment, control and eradication methods. We also asked that senior public servants in several ministries be assigned to participate in forums such as the Pacific NorthWest Economic Region's Invasive Species Working Group to demonstrate that the federal government takes this issue seriously.

The introduction of invasive mussels has several impacts on matters under federal jurisdiction, such as inland fisheries - and in particular, anadromous salmonid species (migrate from fresh water to sea and back to fresh water) - navigation of inland waterways, boundary waters and migratory birds. The federal government has jurisdiction to regulate not only fish and fisheries, but fish habitat and the quality of fish bearing waters. Given this authority, Fisheries and Oceans Canada can take concrete steps to improve the invasive mussel prevention regime in Western Canada.

In Budget 2017 the government announced that "To prevent the introduction of aquatic invasive species, respond rapidly to the detection of new species, and manage the spread of already established aquatic invasive species, Budget 2017 proposes to provide \$43.8 million over five years, starting in 2017-18, to Fisheries and Oceans Canada to continue and expand aquatic invasive species programming."

NEXT STEPS

We call again on the Government of Canada to:

1. **Provide** funding to the provinces to improve mussel containment and prevention regimes;
2. **Conduct** research into methods to mitigate or control the effects of invasive mussels on aquatic habitat and infrastructure.
3. **Increase** public education and awareness of invasive mussels, and work with the provinces to reinforce proper public prevention behaviours (Clean, Drain, Dry);
4. **Enhance** the protection of federally-controlled lands and waterways by requiring mandatory inspections of watercraft prior to launching in uninfested waters; and
5. **Direct** senior DFO and other Ministerial Staff to participate in forums such as PNWER's Invasive Species Working Group – next meeting in July 2017, Portland OR.

DRAFT

Resolution on Quagga and Zebra Mussels by the Regional District of Okanagan-Similkameen (RDOS) – to be brought forward to the 2017 AGM of the Federation of Canadian Municipalities

Adopted by the RDOS Board of Directors on April 6, 2017

WHEREAS alien species introduction into the ecosystems of Canadian waterways are the leading cause of loss of biodiversity and water quality; and,

WHEREAS affected regions suffer major remediation costs and economic losses; and,

WHEREAS the movement of infested watercrafts are not limited to border crossings but increasingly move across unprotected provincial boundaries;

NOW THEREFORE BE IT RESOLVED that the Federation of Canadian Municipalities (FCM) seek funding from the Federal Government to match provincial funding directed to enhance prevention measures halting the movement of invasive mussels into Canadian waterways.

CARRIED

MEMORANDUM

Okanagan Basin Water Board
Regular meeting
May 2, 2017
Agenda No: 7.4

File No. 0550.04

To: OBWB Directors
From: Corinne Jackson
Date: April 26, 2017
Subject: **Communications Director Report**

Make Water Work & Don't Move A Mussel campaigns

A number of meetings have been held in the last few weeks to get ready for the relaunch of [Make Water Work](#) (our valley-wide residential outdoor water conservation campaign) as well as [Don't Move A Mussel](#) (our invasive mussel awareness campaign).

Staff have met with the MWW committee (local government/utility partners) to review 2016, what worked and what we would like to try differently in 2017. As noted earlier, all 14 partners from last year (from Armstrong to Osoyoos) are back again this year. We have also met with the Okanagan Xeriscape Association and Bylands regarding the Make Water Work Plant Collection and efforts to improve the program. We are now working with our nine garden centres to ensure success in promoting the collection and getting our water conservation message out, including the holding of a "Make Water Work Week." I have also followed up with our contest partners, Ken's Horticultural Services/KelownaGardens.com, Bylands, ProSource Irrigation and Eco Turf, and all are happy to be back for another year.

More information on the launch will be provided at next week's board meeting.

A meeting was also held with the Okanagan and Similkameen Invasive Species Society to go over the 2016 DMM campaign and discuss ideas for 2017.

Additional meetings have been held with potential media partners to discuss advertising possibilities and we are beginning to gather quotes for various campaign materials.

Rain Barrels

Last month the OBWB's Okanagan WaterWise program partnered with RDCO's Waste Reduction Office to join their composter sale and offer rain barrels at cost. Pick up events are now planned in Kelowna, West Kelowna, Peachland and Lake Country over the next couple weeks. We limited the number to 200 (up from 150 in 2016) and sold out in just over two weeks into a month-long sale.

Other communication initiatives:

The requests for us to attend events are growing all the time. Thankfully, having Alyssa has allowed us to meet many of these requests, including delivery of Okanagan-specific water education in classrooms in Summerland as part of Earth Week activities, and in Kelowna.

We will be attending this weekend's Okanagan Xeriscape Assoc.'s annual plant sale to promote being WaterWise and the MWW Plant Collection.

And, we have attended events to share DMM info, for example at the April 25 “Don’t Move A Mussel” public event in Penticton with OASISS, featuring Montana’s Invasive Species Council Coordinator Stephanie Hester and Alberta Ministry of Environment and Park’s Cindy Sawchuk, talking about their experiences in the mussel battle. We also attended the follow-up local government event this morning, April 26.

Today’s local government event was very informative and included a discussion about possible collaboration and support for our efforts. I will provide an update at the board meeting. Below are a few slides from today’s presentation.



(Above) Stephanie Hester speaks to the launch of Montana’s rapid response, including a gathering of experts from throughout the U.S. following discovery of invasive mussel veligers in October 2016, and shares some of the state’s outreach efforts.

(Below) Cindy Sawchuk, head of Alberta’s K-9 Conservation Program, with photos of Lake Winnipeg and what her province is looking to avoid with mussel-fouled beaches, and speaking to one of the tools they are using – mussel-sniffing dogs.



After nearly a year of development, testing and tweaking, the Okanagan Collaborative Conservation Program, along with several partners, are ready to introduce and test an Okanagan WaterWise Water Education Curriculum at a Vernon Professional Development Day in May. The resources, for Kindergarten to Grade 7, have been developed to meet the province’s new B.C. curriculum while ensuring an Okanagan voice to teaching on water-related issues. Once the materials are good-to-go, the curriculum will be posted to the [Okanagan WaterWise](http://www.okanaganwaterwise.com) website to be accessed by teachers and eco-educators. We will also be posting a list of eco-educators to the website, including topics they cover, and whether they are able to deliver programming in the classroom and/or if they are more fieldtrip oriented.

Summary of Recent Media

- March 29 "RDCO Financial Plan Approved," *InfoNews Kelowna*
- March 30 "[Dog to sniff out mussels.](#)" *Castanet*
- March 30 "\$3 million added to war on mussels," *Kelowna Daily Courier*
- March 30 "\$3 million supports new tools to fight invasive mussels," *BCTV Kootenays*
- March 30 "New funding to fight invasive mussels," *Kelowna Capital News, Salmon Arm Observer*
- April 1 "Lake protection welcomed," *Castanet - Kelowna*
- April 6 "[More to do in fight against invasive mussels says Water Board.](#)" *Kelowna Capital News, Vernon Morning Star, Summerland Review, Salmon Arm Observer*
- April 7 "\$300,000 to improve Okanagan water sources," *Okanagan Life*
- April 11 "OBWB welcomes new provincial measures aimed at threat of mussel invasion," *Osoyoos Times*
- April 11 "Okanagan Water Board announces funding for conservation projects," *InfoNews Vernon*
- April 15 "Free public forum on threat of invasive mussels," *Penticton Western News*
- April 15 "17 Projects approved to conserve and improve Okanagan Valley water," *Kelowna Now*
- April 15 "Water quality monitoring," *Castanet - Kelowna*
- April 16 "Mussel sniffing dogs," *Castanet - Penticton*
- April 20 "This dog don't hunt, he sniffs – mussels," *Osoyoos Today*

Recent Presentations

- April 6 "Drought Response in the Okanagan Valley – Lessons Learned," to Fraser Basin Council webinar – Kellie Garcia
- April 7 "Teaming Up to be Drought Ready," to Water Supply Assoc. of BC – Kellie Garcia

Upcoming Presentations

- May 18 "A Newcomers Guide to Okanagan Water - Make Water Work & Don't Move a Mussel," to Kelowna Newcomers Club – Corinne Jackson
- May 25 "Water & the Okanagan Economy," to RDCO Economic Development Commission – Anna Warwick Sears

MEMORANDUM

Okanagan Basin Water Board
Regular meeting
May 2, 2017
Agenda No: 7.5

To: OBWB Directors
From: Kellie Garcia
Date: April 25, 2017
Subject: Policy and Planning Specialist Report

Sustainable Water Strategy Update

I am currently summarizing the results of our survey that gathered input from Water Stewardship Council members about the status of the actions in the 2008 Sustainable Water Strategy, what actions should be brought forward to the next version, and what new priorities need to be considered. Eighteen council members participated in the survey (14 completed and four partially-completed).

On April 27, Dr. Sears and I are meeting with Lisa Wilson, Manager of the Okanagan Nation Alliance (ONA) Natural Resources Department and OBWB Board Director, to discuss an appropriate process for working together with ONA to incorporate the Nation's perspectives into the updated strategy.

The editorial board has our first meeting on May 1, where we will review the survey results and start working on an annotated outline for the next version of the strategy. The outline will map out the document, and provide a brief explanation for each section and its sub-sections. It will identify where new content is required, and pinpoint information needs and potential sources for that content.

The editorial board will continue to refine the outline and work on pieces of the strategy over the summer. The survey summary and draft annotated outline will be brought forward to the council for their input in the fall, and the bulk of the strategy rewriting will be done over the winter.

Agriculture Water Supply Communications Project

The objective of this project is to improve communication between purveyors and producers about local water supplies, particularly during times of drought. On April 6, we had our first steering committee meeting. The committee is made up of producers who receive water from Greater Vernon Water and the City of Penticton, and representatives from the two pilot purveyors (GVW and Penticton), the Climate Action Initiative, and the OBWB. At the meeting, we reviewed and refined the "cut & paste" water supply status messages and graphics and the outreach delivery mechanisms, including electronic outreach. The most exciting part of this project is the text/email water supply alerts that producers can sign up for. The pilot will launch in a couple of weeks.

Mainstem Drought Triggers Project

The objective of this project is to prepare drought trigger guidelines for the Okanagan mainstem system that can be incorporated into local drought plans to support a rational and coordinated process for moving between watering restriction stages. Our technical team convened again to discuss more refinements to the guidelines and to the addendum that provides guidance on applying the triggers to different water source scenarios (purveyors with upland storage only, purveyors with mainstem lake storage only, and purveyors with both mainstem lake and upland storage). The next step is to incorporate this new information into our report and organize another workshop to get feedback from water suppliers.

Webinar for Fraser Basin Council

On April 6, Jennifer Miles, Water Sustainability Coordinator at Greater Vernon Water, and I co-presented the 2015 drought experience from a valley-wide perspective, as well as through the lens of a water utility with a diverse rural-urban customer base. Our presentation reflected on lessons learned and talked about what the OBWB and GVW have done since to improve drought response. Sixty-four people attended the webinar. Those that completed the feedback survey rated the webinar as good or excellent overall, and indicated that what they learned will help build their organizations capacity in climate adaptation.

Presentation at Water Supply Association of BC Spring Workshop

I also gave a presentation titled “Teaming Up to be Drought-Ready” at the Water Supply Association spring workshop on April 7. I talked about the importance of drought planning and how the OBWB can help, and gave an update on the mainstem drought triggers project and several other initiatives I’m working on with local water suppliers.

MEMORANDUM

Okanagan Basin Water Board
Regular meeting
May 2, 2017
Agenda No: 8.1

File No. 0550.04

To: OBWB Directors
From: Nelson Jatel
Date: April 26, 2017
Subject: **Statement of Values: promoting wetland protection & conservation**

Background

Wetlands are among the rarest and most sensitive ecosystems in the Okanagan, representing only about 0.2% of the regional landscape. In spite of their limited extents within the landscape, wetlands provide disproportionately large biological, hydrological, and socio-economic values. It is estimated that over 84% of low elevation wetlands within the Okanagan have been lost to development activities (Lea 2008).

Wetlands are known as biodiversity hotspots due to the unique habitat they provide for a wide variety of wildlife and the critical ecological services they provide in biological productivity, hydrological functions, and other socio-economic benefits. Aquatic ecosystems in the Okanagan continue to be threatened and under pressure from urbanization, encroachment, isolation, and other land development pressures. The most predominant threats facing Okanagan wetlands include filling and draining during urban and agricultural development, grazing, forestry activities, encroachment of invasive species, and climate change (MacKenzie and Shaw 2000, Bunnell et al. 2010). However, public awareness has improved over the years, prompting conservation, restoration, and enhancement of natural wetlands.

Mapping and monitoring of wetlands throughout the region is critical to conserving what remains of this important ecosystem type, given the rationale that if we want to protect wetlands, we first need to know where they are.

The OBWB recognizes:

- A. Wetlands play an important role in recharging aquifers, filtering pollutants, preventing flooding and serving as habitats for aquatic and other wildlife including many species at risk; and
- B. Wetlands can play a vital role as carbon sinks and shielding communities and natural landscapes from extreme weather events under future uncertain climate conditions; and
- C. Ephemeral wetlands are particularly important as they help capture and store excess water during freshet and recharge aquifers during drier summer months; and
- D. Ephemeral wetlands are particularly vulnerable as they are often not visible and easy to destroy by agricultural or urban development; and

- E. For wetlands to be properly protected it is critical that local governments throughout the region establish and adopt a common vision of objectives on the protection and conservation of wetlands in the region; and
- F. It is important that such vision is developed to reflect the provincial requirements on wetlands protection and conservation, set forth by new Water Sustainability Act; and
- G. Information required for potential provincial authorization of impacts to wetlands under the Water Sustainability Act can be obtained through the development permit process.

Statement of value – focus on action:

1. The OBWB encourages local governments in the Okanagan to adopt best practices aimed at wetlands conservation and protection, ephemeral wetlands in particular; and
2. The OBWB encourages local governments to implement these best practices through their by-laws in order for wetland conservation to provide numerous benefits to communities and increase communities' resilience in the face of future climate trends.

Resolution: *The OBWB adopts the Okanagan Wetland Statement of Values.*

MEMORANDUM

Okanagan Basin Water Board
Regular meeting
May 2, 2017
Agenda No: 8.2

File No. 0550.04

To: OBWB Directors

From: Nelson Jatel

Date: April 26, 2017

Subject: Environmental Flow Needs Project – ONA Fishery Department Service Contract

Okanagan Environmental Flow needs – project objectives

This project is a collaboration between the OBWB, FLNRO, and other regional partners including the Okanagan Nation Alliance (ONA) Fisheries Department. The goal is to determine operationally feasible environmental flow needs (EFNs) in the Okanagan Basin for better infrastructure and development planning, and to prevent future conflict related to water shortages. Our objective is to establish EFN regimes for 19 high-priority fish-bearing streams in the Okanagan, given as a range between minimum and optimal flows.

Better EFNs are the essential next step for updating the water license allocation process for the Okanagan and across BC. During dry years, the First-in-Time, First-in-Right (FITFIR) rule of water priority - cutting off junior license holders - is typically triggered by fisheries regulators and low stream flows. While new Water Sustainability Act provisions protect essential human needs, water shortages create conflict and disrupt the economy. Accurate EFNs help ensure that water is not over-allocated in the first place, which will help communities and agricultural producers make better development and planning decisions, to better match water demands to available supply.

In this project, initiated in July 2016, we are using a range of technical approaches to establish EFNs in streams where there is limited understanding of flows and potentially high demand. We will build on the hydrological and water demand modeling from the 2010 Water Supply and Demand Project, and new systems that provide additional data such as the (Gas Tax funded) BC Water Use Reporting Centre and Integrated Hydrometric Data System. We will select key reference streams to deploy real-time hydrometric monitoring stations, and use the information from these stations to develop accurate estimates of flow regimes for streams with similar characteristics. As a related benefit, these stations may also assist with verifying surface/groundwater interactions that affect stream flow and habitat quality. New EFN assessments will support better community and infrastructure planning for new development, as well as providing a basis for negotiation to limit water conflicts among users where streams are fully allocated or over allocated.

This project has a total approved budget of \$732,000 with a Gas Tax Grant of \$397,000.

Okanagan Environmental Flow Needs Project: Work deliverables

ONA Phase II contract (proposed): Work window from April 1, 2017 to 31 March 2018 valued at \$176,000.

Project deliverables include:

- Installation of gauging stations
- Develop site specific rating curves
- Data collection: water flow, temperature
 - 11 priority Okanagan streams
- Surveying of water levels, gauging stations
- Stream reach assessment to support setting of appropriate reaches and transect locations
- Input data into Aquarius software
- Develop modeled EFN values applying Okanagan Modified Tenant method for 19 streams (Phase I EFN study)
- Determination of EFNs for 11 Okanagan streams applying Okanagan Weighted Useable Width Method as described in phase I EFN study.
- Other tasks as mutually agreed upon

Recommended resolution

THAT the OBWB enter into a service agreement with the Okanagan Nation Alliance for the provision of field work related to the Environmental Flow Needs project for the 2017-18 project year.

MEMORANDUM

Okanagan Basin Water Board
Regular meeting
May 2, 2017
Agenda No: 8.3

File No. 0550.04

To: OBWB Directors
From: Corinne Jackson
Date: April 26, 2017
Subject: **Make Water Work & Don't Move A Mussel Contracts Memo**

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

In 2012, the Okanagan Basin Water Board put out a call for proposals to develop a valley-wide water conservation campaign. After reviewing proposals, staff awarded the contract to Pulse Group who helped build out the Make Water Work (MWW) program with OBWB staff and local government partners. In 2013, Water Board staff were asked to build a similar campaign to raise awareness for invasive mussels. Again, we looked to various agencies and found Pulse to be best placed to deliver what we were looking for. As well, it was recognized that going with the same agency would allow us to leverage MWW dollars to deliver a stronger, more cost-effective mussel campaign.

Staff have since looked at other agencies, in and outside the Okanagan, but have not found the level of service available elsewhere to date. We have also spoken with other local government agencies in the Okanagan and have not found any working on projects with the kind of scope as MWW and DMM. We have spoken to others who have been using Pulse and they have also been pleased with the work.

Last year, Pulse joined Csek Creative, with Pulse providing the media planning, branding and buying, and Csek providing creative marketing, custom design and web app development.

Through this partnership, the OBWB has been able to leverage substantial in-kind support to the campaigns, from Pattison (billboards), Bell Media and NewCap (radio), and others. Staff are looking to hold an RFP process in 2018 to ensure we are receiving best value. However, these contracts will continue to build out the successful MWW and DMM campaigns for 2017 with Csek Creative – Pulse Group. Of the \$45,000 proposed for Make Water Work 2017, approximately \$5,000 is set aside for project management with the rest going directly to the purchase of advertising (e.g. billboards) and material (e.g. frisbees). Of the \$40,000 for Don't Move A Mussel 2017, approximately \$4,500 is for management with the rest going directly to purchase advertising and materials.

Deliverables for the Make Water Work campaign contract:

- Develop a plan and budget for the Make Water Work (MWW) Campaign, working within the \$45,000 contract in collaboration with the OBWB Contract Monitor.
- Manage design, production and delivery of creative materials, in consultation with the Monitor, including, but not limited to, billboards, buses, bus shelters, radio ads, Facebook ads, Frisbees, vehicle magnets, book marks, posters, seed packets, plant stakes, Plant Collection flyer banners, t-shirts, and brochure.

- Ensure delivery of book marks in time for May launch and delivery of additional items by mid-June.
- Manage updates to MWW website as required, including in lead-up to May campaign launch, during the May-mid October campaign, and then as required for time-to-time mid-October –March 31, 2018 (e.g. posting news releases, stories).
- Gather together data from the campaign and its various elements (e.g. Facebook stats, billboard impressions, costs, etc.). Design and deliver final wrap-up report by December 8, 2017.

Deliverables for the DMM campaign contract:

- Develop a plan and budget for the Don't Move A Mussel (DMM) Campaign, working within the \$40,000 contract in collaboration with the OBWB Contract Monitor.
- Manage design, production and delivery of creative materials, in consultation with the Monitor, including, but not limited to, billboards, buses, bus shelters, radio ads, Facebook ads, tank tops/muscle shirts, rack cards, posters, and sandwich boards.
- Ensure delivery of rack cards and posters by mid-late May to coincide with radio ads and billboards.
- Manage updates to DMM website as required, including in lead-up to May campaign launch, during the May-mid October campaign, and then as required for time-to-time mid-October –March 31, 2018 (e.g. posting news releases, stories).
- Gather together data from the campaign and its various elements (e.g. Facebook stats, billboard impressions, costs, etc.). Design and deliver final wrap-up report by December 8, 2017.

Requested Motion: *That the OBWB enter into a contract with the Csek Creative-Pulse Group for \$85,000 for the Make Water Work 2017 and Don't Move A Mussel 2017 campaign management and delivery.*