

## Okanagan Basin Water Board Meeting Agenda



**DATE:** Tuesday, March 7, 2017

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

**PLACE:** Regional District of Okanagan-Similkameen  
101 Martin Street, Penticton, B.C.

1. **CALL MEETING TO ORDER**
2. **INTRODUCTION OF LATE ITEMS**
3. **APPROVAL OF AGENDA**
4. **DELEGATIONS**
  - 4.1 Bryn White of the South Okanagan and Similkameen Conservation Partnership and Scott Boswell of the Okanagan Collaborative Conservation Program: “*Biodiversity Conservation Strategy for the Okanagan Region – alignment with OBWB initiatives*”
5. **ADOPTION OF MINUTES**
  - 5.1 Minutes of the Regular Meeting of the Okanagan Basin Water Board of February 7, 2017 at Regional District of Central Okanagan, Kelowna, B.C. (page 1)
6. **STAFF REPORTS**
  - 6.1 Executive Director Report (page 8)
  - 6.2 Water Stewardship Director Report (page 12)
    - 6.2.1 2017 February WSC Monthly Report
  - 6.3 Operations and Grants Manager Report (page 17) (resolution requested)
  - 6.4 Communications Director Report (page 19)
  - 6.5 Policy and Planning Specialist Report (page 22)
7. **NEW AND UNFINISHED BUSINESS**
  - 7.1 Review of OBWB Strategic Plan Memo (page 25)
    - 7.1.1 OBWB Strategic Plan: 2014-2019
8. **CORRESPONDENCE**
  - 8.1 Letter from the Hon. Ralph Goodale, Minister of Public Safety (page 43)
  - 8.2 Letter from Rob Dickeson, resident of Summerland (page 44)
9. **NEXT MEETING**
  - 9.1 The next meeting of the Okanagan Basin Water Board will be Tuesday, April 4, 2017 from 10 a.m. to 2 p.m., at the Regional District of North Okanagan in Coldstream.
10. **ADJOURNMENT**



**MINUTES OF A REGULAR MEETING OF THE OKANAGAN BASIN WATER BOARD  
HELD FEBRUARY 7, 2017, AT THE REGIONAL DISTRICT OF CENTRAL OKANAGAN  
1450 KLO RD., KELOWNA, B.C.**

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**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 Doug Findlater	Regional District Central Okanagan
Director Cindy Fortin	Regional District Central Okanagan
Director Ron Hovanes	Regional District Okanagan-Similkameen
Alt. Director Mark Pendergraft	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

**OBWB 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
Alyssa Bougie	Communications & Outreach Coordinator

**1. CALL MEETING TO ORDER**

Dr. Sears called the meeting to order at 10:01 a.m.

**2. ELECTION OF CHAIR & VICE CHAIR**

Board Appointments and Elections for 2017

**Regional District of North Okanagan**

Director Juliette Cunningham  
 Director Doug Dirk  
 Director Rick Fairbairn  
 Alternates – Bob Fleming, Catherine Lord, Mike Macnabb

**Regional District of Central Okanagan**

Director Doug Findlater  
 Director Cindy Fortin  
 Director Tracy Gray  
 Alternates – James Baker, Wayne Carson, Patty Hanson

**Regional District of Okanagan-Similkameen**

Director Sue McKortoff  
 Director Ron Hovanes  
 Director Peter Waterman  
 Alternates – Mark Pendergraft, Tom Siddon, Toni Boot

**Okanagan Nation Alliance**

Director – Lisa Wilson

**Water Supply Association of BC**

Director Toby Pike

Alternate – Bob Hrasko

**Okanagan Water Stewardship Council**

Director Brian Guy

Alternate – Denise Neilsen

Dir. Fairbairn nominated Dir. Cunningham. Dir. Findlater nominated Dir. Gray. Dir. Cunningham declined citing other commitments. Dir. Gray accepted the nomination. There being no other nominations, Dir. Gray was elected Chair.

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

Chair Gray requested nominations for vice-chair. Dir. Fairbairn nominated Dir. Cunningham, who accepted the nomination. There being no other nominations, Dir. Cunningham was declared Vice-Chair by acclamation.

**3. INTRODUCTION OF LATE ITEMS**

8.1 Signing Authority Memo

9.1 Federal correspondence on mussels

**4. APPROVAL OF AGENDA**

***“THAT the agenda of the regular meeting of the Okanagan Basin Water Board of February 7, 2017 be approved.”***

**CARRIED**

**5. BOARD ROUNDTABLE DISCUSSION**

Dir. Wilson entered the meeting at 10:12 a.m.

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

Dir. Findlater – As West Kelowna incorporated it brought in the various area irrigation districts. The focus has been on water quality issues, including algae blooms, but also upper elevation storage. The district has identified capital and storage issues. It is hoping to bring in 83% in infrastructure money to expand upland sources.

Dir. Fairbairn – Electoral area directors attended a forum last week where they received an update on B.C.’s new Water Sustainability Act (WSA). It seems there are still issues that need to be fleshed out, including around groundwater well registering and licencing.

Alt. Dir. Pendergraft – There are questions around well registering in the rural Osoyoos area, as well as concerns about development interfering with milfoil harvesting.

Dir. Hovanes – Oliver’s irrigation canal was damaged last summer, and will be costly to repair. The municipality will be applying for BC infrastructure grant funding.

Dir. Guy – The Water Stewardship Council conducted a survey of its member organizations last fall and a follow-up workshop in November to discuss council priorities. Six priorities were identified: consistent valley-wide drought and flood planning; source water protection including wetlands; response to emerging governance issues and the need to be more proactive (e.g. with upcoming federal and provincial regulations); strengthen internal communication efforts and extend external efforts; extend Environmental Flow Needs work to assist B.C. Ministry of Forests, Lands and Natural Resource Operations on a process to improve water allocation decisions; and to update the Water Supply and Demand Study from Phase 2 in 2010. There has also been discussion about irrigation management and work on efficiencies in agricultural use, as well as an update to the Sustainable Water Strategy over the next 18 months.

Dir. Fortin – Peachland is looking consolidate its water sources. The district began universal water metering in 2010 which led to a 30% decline in use. The municipality has also been reviewing what type of infrastructure upgrades and plant it needs. The district has been saving funds in reserves to pay for this infrastructure, and is also looking to borrowing and provincial grant funding. Peachland is looking to have the province review its 4-3-2-1-0 drinking water treatment policy. A recent landslide on Highway 97 appears to have been caused by subsurface water flow. Work is underway to get the area fixed.

Dir. Pike – A new policy under the B.C. Drinking Water Protection Act requires new operators to have Level 2 certification which Water Supply Assoc. of BC (WSABC) members are saying is costly. Perhaps this should be offered as a post-secondary program, Dir. Pike suggested. Also, water suppliers have long been required to assess risks, but now they're being told to create plans to mitigate these risks with no additional resources, he added. There also seems to be a need for more provincial staff support to assist with the new groundwater licencing regulations. This should be self-funded with the licences helping pay for staff, he noted. WSABC members are also concerned about the potential for invasive mussels and are thinking about preparing now and building protection efforts in at the beginning of a project.

Dir. Dirk – Coldstream is following up on issues identified as part of its Sensitive Habitat Inventory and Mapping (SHIM) efforts.

Dir. Cunningham – Invasive mussels are a huge concern on Kalamalka Lake. In response, Greater Vernon Water has created a deeper intake. Mud bogging in Duteau Creek is also an issue so fencing was put up and it's hoped that this will deter this type of activity. Water rates have been an issue. A sustainable infrastructure plan is underway to look at mitigating leaking pipes.

Dir. Waterman: Summerland is proceeding with twinning its water systems, separating agricultural from domestic water use. An Asset Management Plan is also underway for the upgraded water system and its potential costs. The irrigation flume is open so there is concern about water quality and the possibility of tampering, he added.

Dir. Gray: Kelowna has 27 water purveyors with City of Kelowna responsible to 50% of city customers. There are four more large utilities and the rest are small. The province is looking to have the city take in some of these. The city wants consistent water for residents. The city has submitted a funding application to assist with this process. Sediment accumulating at the boat launch is a problem and the city wants to ensure, with ongoing development, that milfoil operators have continued access.

Dir. Wilson – Water is sacred and it's not being managed that way. It seems water is often looked at from an infrastructure perspective, but this attitude must change. There was discussion around the table about what various communities are doing to partner with local

bands to address water quality issues. There was further discussion about the advocacy of the OBWB and council on provincial and federal water policy, and communication and governance issues related to the Okanagan Nation related to this advocacy. Dir. Findlater added that having technical staff from the ONA on the Council, an advisory body to the board, is valuable for technical matters, acknowledging that these staff aren't expected to represent the ONA on policy matters. Chair Gray acknowledged Dir. Wilson's concerns about the focus on infrastructure, and assured that although fellow directors were talking to specific issues, that the board is committed to water protection in all aspects. There was mutual agreement around the table on the value of water, and its extreme importance to all people, communities and the environment.

## 6. ADOPTION OF MINUTES

- 6.1 Minutes of the Regular Meeting of the Okanagan Basin Water Board of Dec. 6, 2016 at the Regional District of Okanagan-Similkameen in Penticton.

An amendment was noted. That 5.5 - the Agricultural Drought Outreach project is being piloted with RDNO-Greater Vernon Water and City of Penticton, not RDOS.

***"THAT the minutes of the regular meeting of the Okanagan Basin Water Board of Dec. 6, 2016 at the Regional District of Okanagan-Similkameen be approved as amended."***

**CARRIED**

## 7. STAFF REPORTS

- 7.1 Executive Director Report

Dr. Sears told the board that the milfoil equipment title transfer to RDOS is moving ahead, with some minor potential revisions.

Staff have submitted an application to the province for a Constructed Wetlands Planning Grant application for \$10,000 matched by the OBWB's wetland project funding. The application requires a resolution of support from the board.

***"THAT the OBWB supports the Infrastructure Planning Grant application, "Guidebook for establishing constructed wetlands in the Okanagan."***

**CARRIED**

The board was told that the province has extended its waiving of fees to Dec. 31 for non-domestic groundwater users to get their wells licenced. There has been some confusion for residents who are on well water for domestic use. As such, staff have created a web page with information for residents regarding groundwater well registration. Dir. Dirk asked if local governments are on a referral list to give input to groundwater well licence applications. After some further discussion, Dr. Sears offered to ask the province about referring such applications to communities and First Nations for input. Dir. Gray added that water restrictions don't apply to groundwater but this needs to be looked at. Staff were asked to come back with more information at the next board meeting.

Dr. Sears noted an update on the Hullcar aquifer was provided by the province and included in the report to the board.

***"THAT the Executive Director's Report, dated February 1, 2017, be received."***

**CARRIED**

## 7.2 Water Stewardship Report

Mr. Jatel provided an update on the Dec. 8 council meeting, noting presentations by West Coast Environmental Law's Linda Nowlan and Environment and Climate Change Canada's Stewart Cohen, and discussion about council committees. The Feb. 9 meeting will include presentations by UBCO's Lael Parrott and ONA's Richard Bussanich.

Work on the wetland project is continuing and the guidebook will be launched as part of the OBWB's AGM in September.

***"THAT the Water Stewardship Director's report, dated January 31, 2017, be received."***  
**CARRIED**

## 7.3 Operations and Grants Manager Report

Mr. Littley explained that milfoil operators are rototilling in the Central Okanagan until ice break-up. A five-year asset replacement plan has been approved by all three Okanagan regional districts so an RFP has now gone out for a harvester and rototiller, he added.

Staff reviewed the cost of purchasing two shop trucks, rather than paying mileage and recommended the purchase.

***"THAT the OBWB authorize the anticipated 2017 and 2020 shop truck purchases to be made in the current fiscal year, to a maximum price of \$30,000 per unit."***  
**CARRIED**

The OBWB received an application for new grant funding from the City of Vernon to install a sewer line in the Smith Road Area. The board was told that the project passed provincial review, and meets all OBWB requirements.

***"THAT the SFA application for the City of Vernon Smith Road project be approved as outlined above."***  
**CARRIED**

There was discussion about next steps in addressing the invasive mussel issue, following discovery of the bivalve in Montana waters. The board was told that the province is looking to extend its hours and include some night inspection trials, but that depends on their budget.

The board discussed sending a letter to the province with a number of recommendations to address ongoing concerns around inspection hours, funding, and tightening legislation. It was suggested that the letter be sent soon, ahead of the provincial budget, and be released to media.

***"THAT staff draft a letter to the Province of B.C. calling for: legislative changes to require all boats entering B.C. to report to an inspection station prior to launching in provincial waters; adding invasive infestations as a hazard under B.C.'s Emergency Program Management Regulation; and, immediately fund extended inspection hours, monitoring and education."***

**CARRIED**

***"THAT the Operations and Grants Manager's Report, dated February 1, 2017, be received."***

**CARRIED**

#### 7.4 Communications Director Report

Ms. Jackson introduced Alyssa Bougie, Okanagan WaterWise Communications and Outreach Coordinator, hired in part through a grant from the UN Assoc. of Canada and Social Development Canada's Green Corps program. Ms. Bougie will be helping with various outreach efforts, including Canada Water Week, Make Water Work (MWW), Don't Move a Mussel (DMM) and more.

The board was provided with final reports for MWW and DMM 2016 campaigns. Ms. Jackson noted that with a budget of \$48,000 for MWW (\$1-3,000 from local government and utility partners, matched by OBWB-Okanagan WaterWise), and more than \$32,000 provided in-kind by contest and media partners, the 2016 campaign was worth more than \$80,000. As for DMM, OBWB's OkWaterWise spent a little over \$47,000, and with more than \$58,000 provided in-kind, the program was worth over \$105,000.

Efforts for 2017 are already underway, with 12 of the 14 MWW utility partners already confirming interest in matching funds. Discussions for DMM 2017 are also underway. New boat decals were created and sent to F1 tunnel boat racer Mike McLellan who was already promoting the DMM message at the Vancouver Boat Show in January.

Other communication initiatives include a partnership with RDCO's Waste Reduction Office to sell rain barrels as part of their composter sale event.

***"THAT the Communications Director's Report, dated February 1, 2017, be received."***  
**CARRIED**

#### 7.5 Policy and Planning Specialist Report

Ms. Garcia told the board she would be assisting the WSC with an update to its 2008 Sustainable Water Strategy, taking into account new water-related issues (e.g. mussels) and new regulations such as the Water Sustainability Act, and more.

Staff have been asked to assist with the development of a Farm Water Planning Toolkit for the Okanagan, funded through the Climate Action Initiative.

***"THAT the Policy and Planning Specialist's Report, dated January 30, 2017, be received."***  
**CARRIED**

### 8. SIGNING AUTHORITY MEMO

8.1 Dr. Sears noted that a new signing authority resolution was required with the election of a new board chair. An updated signing authority resolution was presented.

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

### 9. CORRESPONDENCE

- 9.1 Letter from PMO as federal Min. of Intergovernmental Affairs re: invasive mussels
- 9.2 Letter from Min. of Small Business and Tourism re: invasive mussels

There was discussion about next steps with the federal government including meetings with local MPs, and work with PNWER on a joint letter calling for action.

***“THAT the letters from the Prime Minister’s Office, and Small Business and Tourism Canada, to the Okanagan Basin Water Board regarding invasive mussels be received.”***

**CARRIED**

**10. NEXT MEETING**

The next meeting of the Okanagan Basin Water Board will be Tuesday, March 7, 2017 at the Regional District of Okanagan-Similkameen in Penticton at 10 a.m.

**10. ADJOURNMENT**

***“THAT there being no further business, the regular meeting of the Okanagan Basin Water Board of February 7, 2017 be adjourned at 1:06 p.m.”***

**CARRIED**

Certified Correct:		
Chair		Executive Director



## MEMORANDUM

Okanagan Basin Water Board  
Regular meeting  
March 7, 2017  
Agenda No: 6.1

File No. 0550.04

To: OBWB Directors  
From: Anna Warwick Sears  
Date: March 1, 2017  
Subject: **Executive Director Report**

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### Meeting with Stephen Fuhr

Chair Gray, James Littlely and I have a meeting scheduled with M.P. Stephen Fuhr on the afternoon of March 1<sup>st</sup>, about federal support for invasive mussel prevention. We will provide a verbal report at the meeting.

### Groundwater update

At the last meeting, directors asked about the referral process for groundwater licensing – whether local governments would be notified if a groundwater license was issued within their boundaries. The staff member I spoke with at Front Counter BC (who handles the license requests) said that local governments definitely receive referrals for any significant license. If the request is for a very small volume (he gave the example of a butcher shop), then they may not issue a referral. Ministry staff at FLNRO also provided me with the following section of the Water Sustainability Act.

**WSA 13 (1)** *A decision maker must direct that an applicant for a licence, use approval or change approval, or for an amendment to any of them involving a change of works, give notice of the application in accordance with section 117 [delivery and publication of documents and information] or the regulations to*

**(a)** *any of the following whose rights the decision maker considers are likely to be detrimentally affected if the application is granted: (i) an authorization holder; (ii) a change approval holder; (iii) an applicant for an authorization or change approval; (iv) a riparian owner, and*

**(b)** *a land owner whose land is likely to be physically affected if the application is granted.*

The Front Counter BC staff member noted that there are still many details to be worked out, and local governments receive e-referrals, but it isn't consistent where these e-referrals go within the local government. Some go to planners, some to public works staff. He recommended that the local government administration check whether the groundwater referrals are going to the correct staff member. He also said that they would welcome feedback on how the process is going, and that can be sent to their general email, where it would be re-directed to the appropriate regional staff: [frontcounterbc@gov.bc.ca](mailto:frontcounterbc@gov.bc.ca)

### **Milfoil equipment transfer**

The plan to transfer legal ownership of the milfoil control equipment to RDOS is moving forward. I am waiting for the CAOs of RDCO and RDNO to review the revisions they requested, and I am still anticipating the transfer will happen in March.

### **CWRA Workshop for 2018**

Nelson Jatel, Dir. Brian Guy and I had a conference call with representatives from the Canadian Water Resources Association (CWRA) B.C. branch. They've asked for our involvement in the planning of the national CWRA conference, to be held in May or June 2018 in Victoria, and possibly to have an Okanagan water-specific conference session or stream. CWRA-BC has also agreed to co-host a potential one-day workshop in the Okanagan in October 2018. We are interested in focusing on water science and policy for environmental stream flows, both to highlight our work (cutting edge in B.C.), and to hear from experts from other provinces. The workshop we co-hosted with CWRA on the Columbia River Treaty in Osoyoos in 2015 was a great success, and we would like to have something of similar caliber in 2018.

### **BC Water Funders Water Monitoring Scan**

The BC Water Funders are in the process of organizing a gap analysis for what kinds of water quality and water supply monitoring data are available in B.C., from all different sources. The Funders Group (OBWB is a member because of our WCQI grants program) hopes that this scan will help grant makers determine the best, highest-value ways to direct funding for monitoring efforts, and increase access to data for all who need it. The first phase of the project will focus on collecting information on non-senior government water monitoring. A description is given below:

***Project Description:*** *To conduct an inventory and landscape scan of water monitoring initiatives in BC. Project to be completed through a literature review, on-line research and telephone interviews with key resource people to identify: (i) current data collection initiatives currently underway in BC, (ii) key resource people, (iii) type of data/information collected, duration of the monitoring (season and number of years), the quality of the data, and where it is stored, (iv) geographical representation of monitoring initiatives and (v) gaps in current monitoring.*

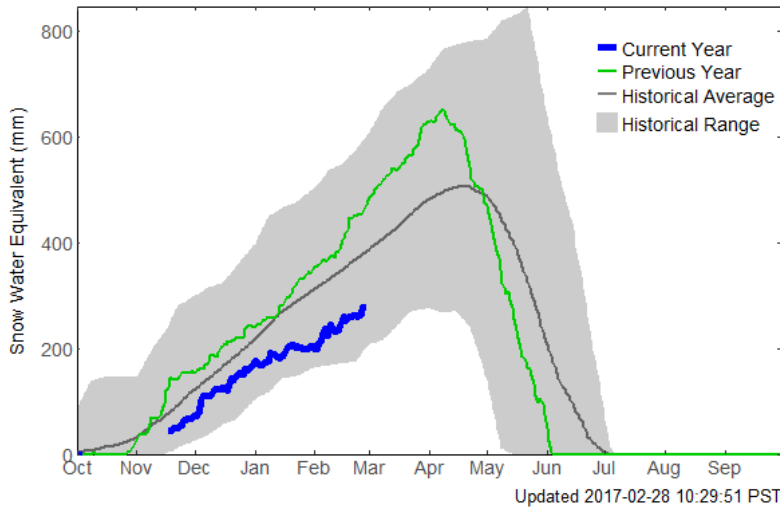
A second phase of the project is planned to integrate data sources from the province and federal governments to create a master database of who is collecting what data, where, when, and how in B.C. This database will be available for any local governments, researchers, or community groups who wish to know more about the quality and supply of water in their area. It will not hold the actual data, but will provide the sources, identify gaps and improve the effectiveness of grantmaking in B.C.

I have tentatively agreed for the OBWB to administer the funds for this project and oversee the contractor, with support from a technical working group of water data experts. I believe this work will be very helpful to us in the Okanagan – although we've made great progress coordinating water supply data, water quality data is dispersed and often hard to track down. We are waiting for funding confirmation from other funders before the project moves forward, but there is great interest from many agencies and organizations, including B.C. Ministry of Environment and Environment Canada.

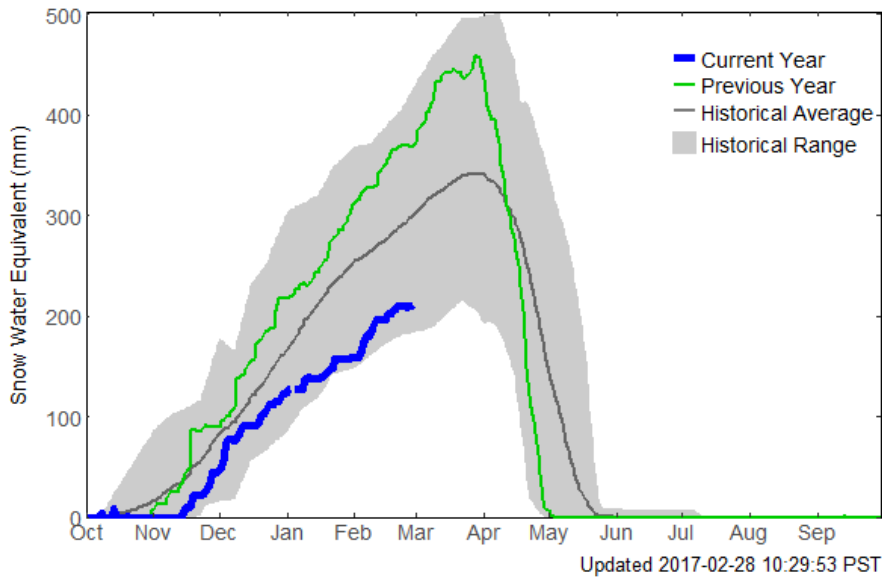
**Weather update**

Okanagan snow packs are below average. As of February 15, the Mission Creek snow pillow was 72% of normal, and Brenda Mines was 71% of normal. Long-term weather forecasts continue to predict above normal precipitation and below normal temperatures for B.C. and Washington State.

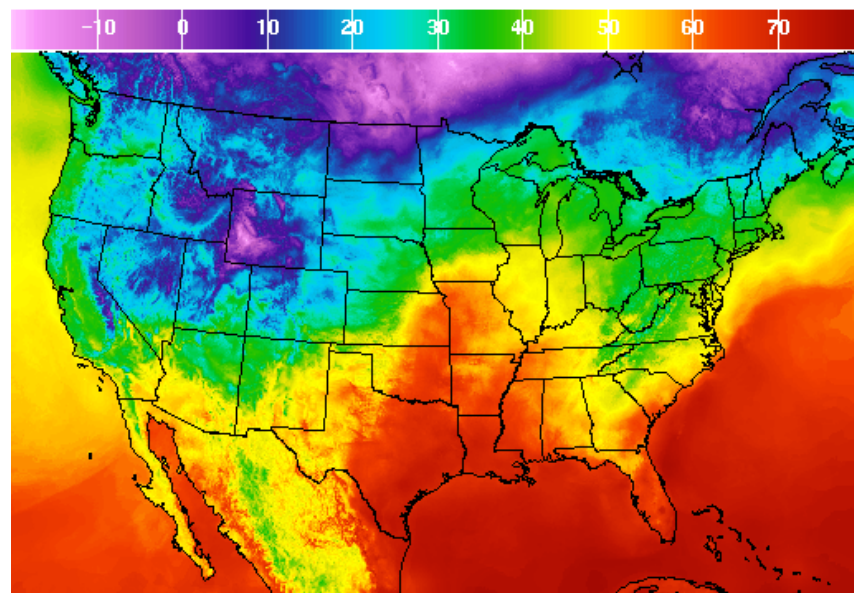
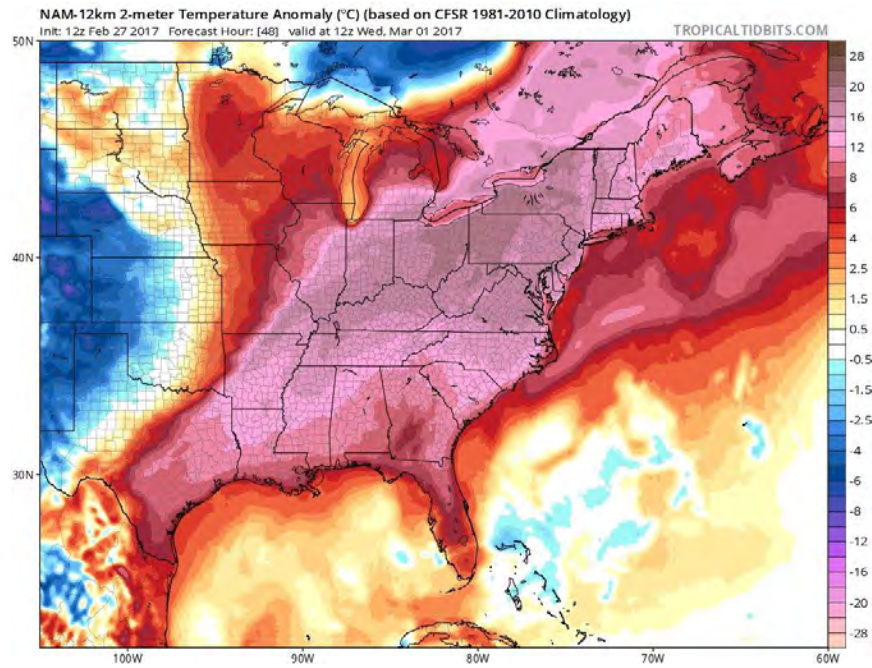
Mission Creek Snow Pillow – February 28<sup>th</sup>, 2017 (Elevation 1794m)



Brenda Mines Snow Pillow – February 28<sup>th</sup>, 2017 (Elevation 1,453 m)



Meanwhile, in the east/southeast U.S. and southeastern Canada there are record high February temperatures, up to 40F (4.4C) above normal. There is an interesting February 15 story on this from the Washington Post: <http://tinyurl.com/hkur2da>.



Temperature(F) Tue Feb 28 2017 7AM EST  
(Tue Feb 28 2017 12Z)  
**Real-Time Mesoscale Analysis**  
Graphic created-Feb 28 8:27AM EST



## MEMORANDUM

Okanagan Basin Water Board  
Regular meeting  
March 7, 2017  
Agenda No: 6.2

File No. 0550.04

To: Board of Directors  
From: Nelson R. Jatel  
Date: February 28, 2017  
Subject: Water Stewardship Director's Report

### Water Stewardship Council (Council)

[Also included with this report is a one page monthly Council report intended for broad distribution. Please feel free to share the attached Council report with friends and colleagues.]

At our February 7<sup>th</sup> council we had two engaging speakers: **Dr. Lael Parrott** (UBCO) presented on natural capital; and **Mr. Richard Bussanich** (ONAFD), presented on the Okanagan River Ecosystem Valuation case study. Highlights from the meeting discussion included:



- Estimate of Okanagan natural capital for greenbelt: \$2.6 billion/yr. (Dr. Lael Parrott)
- Okanagan River near Osoyoos has a 17km un-disturbed section that is the only natural section remaining on the entire Columbia River system. The Okanagan natural section accounts for 90% of Columbia River sockeye spawning habitat.
- Seven new council committees were established [char]:
  - Communication [Kirk]
  - Environmental Flow Needs [Edwards]
  - Okanagan Supply & Demand Study [Neilsen]
  - Irrigation Management [Naka]
  - Source Water Protection / Wetlands [Clark]
  - *Drought & Flood* [Boswell]
  - *Policy* [Birtles]
- Interior Health releasing (May) a state of drinking water in the Southern Interior report
- Upcoming conferences on water:
  - Canadian Aquatic Biomonitoring Network Science Forum, Edmonton, Feb 28 – Mar 1
  - Annual BCWWA annual spring conference, Quail Ridge, Kelowna: April 6 - 7
  - CWRA National Water Conference, Lethbridge: June 5 – 7

All board members are encouraged to attend our March 7<sup>th</sup> council meeting at the Coast Capri Hotel from 12:30 pm – 4:30 pm. Council will be exploring: (1) collaborative opportunities with regional collaborative conservation leaders (SOSCP and OCCP) and (2) Mission Creek water management.

## Project updates

### 1) Okanagan Environmental Flow Needs project – 2017 data collection workshop

The Okanagan Environmental Flow Needs project ([www.obwb.ca/EFN](http://www.obwb.ca/EFN)) is a partnership between the OBWB, ONAFD and BC Government FLNRO. The mandate of this project is:

On February 22<sup>nd</sup> the OBWB hosted a technical EFN project workshop that included our partner leads, Okanagan Nation Alliance Fishery Department and the BC Government Forest, Lands and Natural Resource Operations.



Workshop highlights included:

- **River Modeling Workshop** [Ryan Whitehouse, FLNRO]
- **Okanagan Water Allocation Tool** [Anna Warwick Sears, OBWB]
- **2017 data collection (w site locations) work plan** [Elinor McGrath, ONAFD]
- **Project Water Data Management – Aquarius** [Nelson Jatel, OBWB]
- **Okanagan Naturalized Stream Flow project** [Drew Lejbak, AE Consulting]

Figure 1. EFN Project work flow.

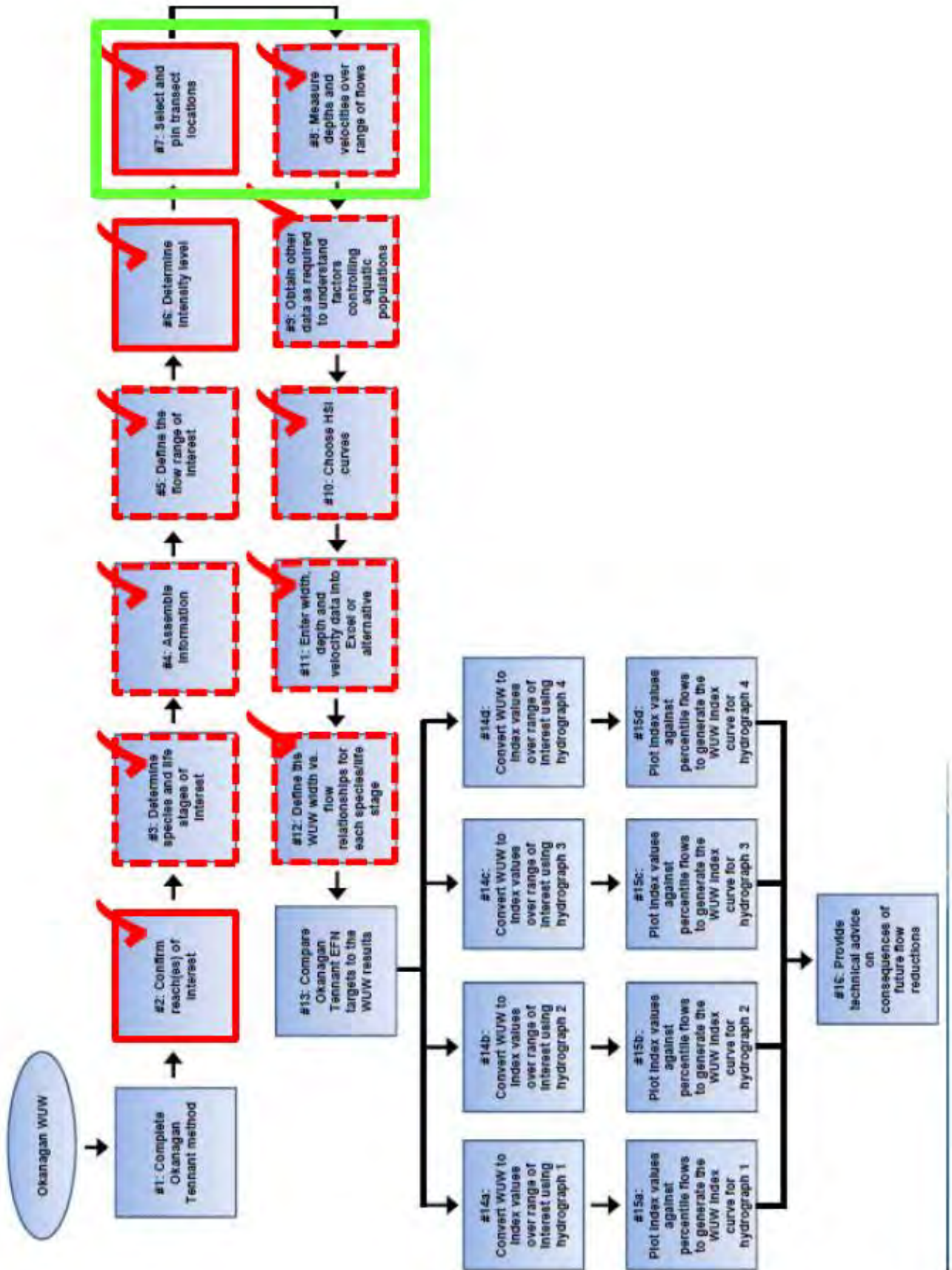
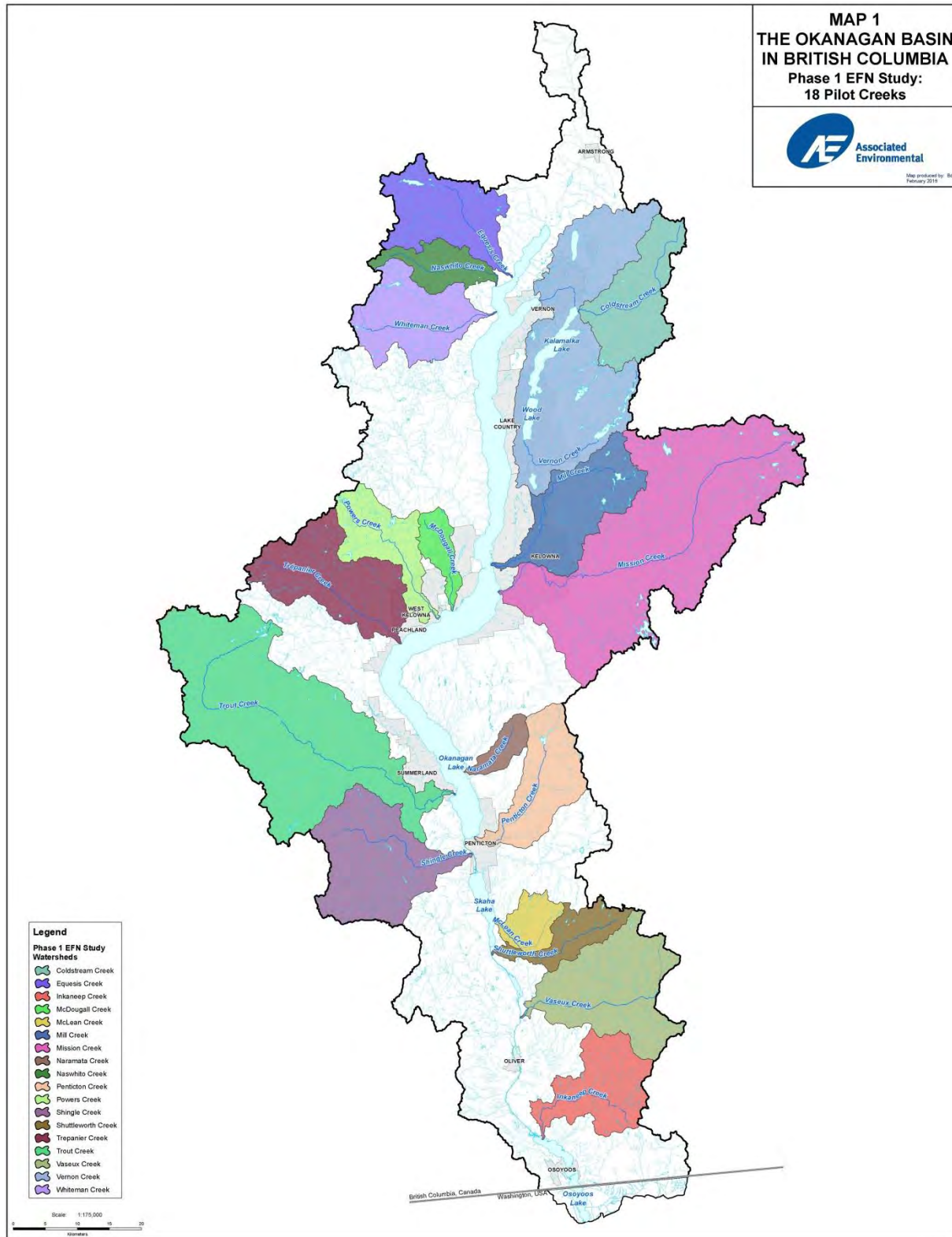


Figure. 2. Pilot creeks for EFN investigation





# Okanagan Water Stewardship Council

technical advisory committee



February 2017

## Council Members:

(Term 7: November 2016 – April 2018)

Appointed representatives / alternates

- **AAFC, Research Branch**  
Denise Neilsen / Scott Smith
- **APEGBC**  
Don Dobson / Sue Lapp / Shawn Badasha
- **BC Agriculture Council**  
Hans Buchler
- **BC Cattlemen's Association**  
Lee Hesketh / Linda Allison
- **BC Fruit Growers Association**  
Kevin Day / Richard McDonald
- **BC Ground Water Association**  
Marta Green / Remi Alard
- **BC Ministry of Agriculture**  
Andrew Petersen / Stephanie Tam
- **BC Water Supply Association**  
Bob Hrasko / Patti Meger
- **BC Wildlife Federation – Region 8**  
Doug Flintoff / Lorne Davies
- **Canadian Water Resources Association**  
Brian Guy/ Rod MacLean/ Dwayne Meredith
- **City of Kelowna**  
Andrew Reeder/ Jason Angus
- **City of Vernon**  
Ed Stranks / Rob Miles
- **Environment Canada – Pacific & Yukon**  
Kendall Woo / Ian Rogalski
- **Fisheries and Oceans Canada**  
Doug Edwards
- **Interior Health**  
Rob Birtles / Judi Ekkert
- **Irrigation Council of BC**  
Ted Van der Gulik / Bruce Naka
- **Kelowna Chamber of Commerce**  
Caroline Grover / Tom Dyas / Jeff Robinson
- **Ministry of FLNRO: Fish/Wildlife**  
Grant Furness / Lora Niell
- **Ministry of FLNRO: Resource Mgmt**  
Robert Warner / Ray Crampton
- **Okanagan Collaborative Conservation**  
Scott Boswell / Tanis Gieselman
- **Okanagan College**  
Allison MacMillan / Rob St Onge
- **Okanagan Mainline Real Estate Board** David O'Keefe / Howard Newfeld
- **Okanagan Nation Alliance**  
Zoe Eyjolfson / Elinor McGrath / Natasha Lukey
- **RD of Central Okanagan**  
Margaret Bakelaar / Chris Radford
- **RD of North Okanagan**  
Renee Clark / Jennifer Miles
- **RD of Okanagan –Similkameen**  
Zoe Kirk / Evelyn Riechert
- **Shuswap Okanagan Forestry Association**  
Murray Wilson / Michael Bragg
- **UBC Okanagan**  
Bernard Bauer / Carolina Restrepo-Tamayo

## Council Report Highlights

- Council theme: *Exploring natural capital valuation*  
The Okanagan Valley is rich with natural capital that provides us with enormous benefits to our well-being and quality of life but which are taken for granted until they are gone.
- Estimate of Okanagan greenbelt natural capital estimated at \$2.6 billion / year (Dr. Lael Parrott)
- Richard Bussanich, ONA Fisheries Department provided an excellent presentation outlining the partnered project with the OBWB developing an Economic Analysis of the Okanagan River (2015) which was presented to the United Nations for a food security discussion in Italy. The 17 km natural section of the Okanagan river analyzed is the only natural section left on the Columbia River and accounts for 90% of Columbia River sockeye spawning
- New Council committees were established [chair]:
  - Communication [Kirk]
  - Environmental Flow Needs [Edwards]
  - Okanagan Supply & Demand Study [Neilsen]
  - Irrigation Management [Naka]
  - Source Water Protection / Wetlands [Clark]
  - Drought & Flood [Boswell]
  - Policy [Birtles]
- Annual BCWWA annual spring conference being held April 6-7 at Quail Ridge, Kelowna.
- CWRA National Water Conference, June 5-7 Lethbridge.
- Interior Health releasing (May) a state of drinking water in the Southern Interior report

## WSC Working Committees: 2016-18 term

Committee	Progress Status				
	None	Fair	Good	Excellent	Complete
Communication, extension and outreach	✓				
EFNs Phase III – decision making framework	✓				
Update Okanagan Supply and Demand Study	✓				
Irrigation Management	✓				
Update Okanagan Sustainable water Strategy 2.0	✓				
Source water protection	✓				
Drought and flood planning	✓				
Policy	✓				

For more information contact:

**Nelson Jatel**, Water Stewardship Director

Okanagan Basin Water board

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## MEMORANDUM

Okanagan Basin Water Board Regular meeting March 7, 2017 Agenda No: 6.3
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File No. 0550.04

To: OBWB Chair and Board  
 From: James Littlely  
 Date: February 28, 2017  
 Subject: Operations and Grants Manager Report

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### Milfoil Control Program Update

As part of the Asset Management Plan, in January we released an RFP for the design of an aquatic harvester and rototiller that meet Transport Canada regulations, with a view to purchasing a new harvester in this fiscal year, and a new rototiller in 2020. We received no proposals on this RFP, but did get feedback that manufacturers did not want to design a machine unless they also were guaranteed the contract to build.

Following the RFP closing, milfoil staff discussed the next steps for the program, and agreed that the next immediate need is for a new rototiller, which will allow us to provide treatment in Vaseux Lake, and will greatly enhance our program flexibility and ensure the more effective treatment is available in more areas, more often. This new rototiller will allow us to offset some of the work currently being done by our oldest rototiller, built in 1984. I am preparing an RFP for rototiller design and build, to be released by mid-March, anticipating final delivery by winter 2017, which should allow us to treat in Vaseux Lake with minimal disruption to other areas. A recommendation for awarding a contract will be brought to the board for approval.

### SFA Grant Program

The OBWB has received the following application for new grant funding from the District of Summerland. This is an application to install a sewer line in the Juniper, Miltimore, Willow and Tait Roads Area. The total eligible budget for this application was \$386,764 servicing 100% pre-1978 development. The total annual OBWB grant for this project would be \$3,602.52.

#### **Recommendation:**

***“THAT the SFA application for the District of Summerland Juniper, Miltimore, Willow and Tait Roads project be approved as outlined above.”***

### Invasive Mussel Update

Last week we received a reply to the board’s December letter to the Federal government from the Minister of Public Safety. The letter indicates that CBSA is working to enforce import prohibitions on invasive mussels, receiving aquatic invasive species sessions from the B.C. Ministry of Environment, and allowing temporary inspection and education stations to be set up by Conservation Officers near land border ports

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of entry in the Okanagan and Kootenays. The letter did not directly address previous OBWB calls to action for increased training and funding for CBSA, increased funding for containment to provinces that are already mussel-infested (Quebec, Ontario and Manitoba), increased funding to mussel-free provinces for prevention, and a commitment to research and education for prevention, containment, control and eradication methods. The letter also made no mention of assigning senior public servants to participate in forums such as PNWER's Invasive Species Working Group to demonstrate that the federal government takes this issue seriously. A copy of the letter is provided under correspondence.

#### **Water Conservation and Quality Improvement Grants Update**

This year we've received a total of 25 eligible grant applications calling for over \$467,000 in funding. The table below shows the breakdown by regional district. Recommendations for funding will be brought to the board for consideration at the April meeting.

Region	Number of Applications	\$ Requested	\$ Available	% of available funds requested
RDNO	4	\$87,660.78	\$55,800.00	157%
RDCO	12	\$251,021.00	\$182,760.00	137%
RDOS	9	\$128,667.00	\$61,440.00	209%

## MEMORANDUM

<p>Okanagan Basin Water Board Regular meeting March 7, 2017 Agenda No: 6.4</p>
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File No. 0550.04

To: OBWB Directors  
From: Corinne Jackson  
Date: March 1, 2017  
Subject: **Communications Director Report**

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### Make Water Work and Don't Move A Mussel 2017

Work is underway for the re-launch of our outdoor water conservation campaign (Make Water Work) and our invasive zebra and quagga mussel prevention campaign (Don't Move A Mussel). Meetings are planned with some of the Make Water Work Plant Collection partners next week to discuss next steps and we will be meeting with local government/utility partners soon as well.

BC Wildlife Federation (BCWF) will be attending the BC Boat and Sportsmen Show in Abbotsford March 3-5, as well as the BC Interior Sportsmen Show in Kelowna, April 7-9. They have kindly agreed to provide DMM information at their booth.

### Other communication initiatives:

#### Mussels

Following up on last month's board meeting and discussions about invasive mussel prevention being included in the provincial budget, a news release was sent out along with the letter to the province. The story was picked up by a number of media outlets. (Some of the stories are noted below.)

As we have done in the past, we forwarded the news release and letter to the Kelowna Chamber of Commerce which has shown continued interest in this issue, concerned about an infestation and the impacts to the local economy, tourism and more. The chamber took the opportunity to raise the issue with Premier Christy Clark at last week's chamber budget luncheon. You can find more on that conversation here: <http://globalnews.ca/news/3272421/premier-fields-calls-to-boost-b-c-s-defenses-for-invasive-mussels/>.

#### Rain Barrels

As noted last month, the OBWB's Okanagan WaterWise program has partnered with the RDCO's Waste Reduction Office to join their composter sale and offer rain barrels for \$75. Pre-sales began today, March 1, and will run to March 31. Only 200 rain barrels are available with a limit of two per household. Find more information at [www.OkWaterWise.ca](http://www.OkWaterWise.ca).

### UN World Water Day/ Canada Water Week (CWW)

A number of activities are being planned for Canada Water Week (March 19-25). Our ever-popular **public forum** is set for March 21, 6 - 8 PM at Okanagan College's Kelowna campus (1000 KLO Rd) in the Centre for Learning Atrium (Room E100). We will be adopting the UN theme this year "Why Waste Water?" - and look at wastewater but also the importance of conservation and not wasting water. We are pleased to have AM1150's Phil Johnson back as MC. We will also have a number of relevant display tables, providing

information to residents on issues related to water protection and conservation, including the City of Kelowna with wastewater and pollution prevention info., BCWF with their new Conservation App, and more.

We are also very pleased to announce the **film screening** of *RiverBlue*. This award-winning documentary follows B.C.-based Mark Angelo, an internationally-celebrated rivers conservationist, as he explores the textile industry and the resulting pollution in waterways around the world. The film was also directed by Kelowna's own David McIlvrde who will be attending and participating in a Q&A following the screening. The film will be shown at Landmark Cinemas – Grand 10 in Kelowna on March 22, 7-9 PM.

More details on our various CWW activities will be provided at the board meeting.



### BCWF Conservation App Video

I was pleased to participate in the filming of a video regarding the BCWF's Conservation App. The app received funding through the OBWB's Water Conservation and Quality Improvement Grant program and support through the OkWaterWise program. To date, there have been 3,000 downloads of the app by iPhone users. The group is hoping to launch an android version this summer. The how-to video will be shown at various outreach events, as well as be available online, helping ensure effective use of the tool.

### Summary of Recent Media

- Feb. 1 "Vaseux Lake water quality study needs funding," *InfoNews Kelowna*
- Feb. 7 "New chair for regional water board," *Kelowna Capital News*
- Feb. 7 "Water board remains focused on mussels," *Vernon Morning Star*
- Feb. 7 "Replacing the rototillers," *Castanet*
- Feb. 8 "Gray new chair of water board," *Kelowna Daily Courier*
- Feb. 8 "Province can do better to fight mussel invasion, water board says," *InfoNews Kelowna*
- Feb. 9 "[A look at milfoil control in winter.](#)" *CBC Daybreak South (tune it at 12:00)*
- Feb. 9 "Milfoil control equipment getting old," *AM1150*
- Feb. 9 "Spawning bed proposed," *Castanet*
- Feb. 17 "New regulations say Okanagan well water users should register," *InfoNews Kelowna*
- Feb. 17 "[Wading through new water regulations.](#)" *Kelowna Capital News, Vernon Morning Star*

- Feb. 20 "More cash sought to fight mussels," *Kelowna Daily Courier*
- Feb. 21 "Invasive mussels spotted closer to the Okanagan," *Kelowna Capital News, Vernon Morning Star*
- Feb. 21 "Mussel fight heats up," *Castanet*
- Feb. 21 ["Okanagan Basin Water Board pushes province to make invasive mussels a priority."](#)  
*InfoNews Kelowna*
- Feb. 21 "Board wants 'mussel money' in budget," *Kiss FM Vernon*
- Feb. 22 "OBWB aids with water regs," *Lake Country Calendar*
- Feb. 22 "Okanagan Basin Water Board hoping province will make invasive mussels a priority,"  
*Westside Weekly*
- Feb. 24 "Boost Your Soil, Save Water," *InfoNews Kelowna*
- Feb. 28 "Budget leaves mussel plan unclear," *Kiss FM Vernon*

## MEMORANDUM

<p>Okanagan Basin Water Board Regular meeting March 7, 2017 Agenda No: 6.5</p>
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File No. 0550.04

To: OBWB Directors  
From: Kellie Garcia  
Date: February 28, 2017  
Subject: **Policy and Planning Specialist Report**

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### **Sustainable Water Strategy Action Plan 2.0**

The work plan for the Sustainable Water Strategy update is complete and the Editorial Board, a small group of council members that will provide leadership and guidance for the project, is almost established. I'm designing a survey to gather input from the council to help summarize the status of the actions in version 1, and identify what new priorities, issues, and actions should be considered for the update.

### **Planning Toolkits: Streamlining and Outreach Project – Survey Results**

Many planning toolkits and guides are available for local government staff, designed to help support sustainable water management and land use. The OBWB has written several, including the *Groundwater Bylaws Toolkit*, the *Topsoil Bylaws Toolkit*, and *Slow It, Spread it, Sink It! A Homeowner's Guide to Rainwater Management in the Okanagan*. However, we've noticed that their uptake has been very slow. The OBWB is working on a project, with an Infrastructure Planning Grant from the Ministry of Community, Sport, and Cultural Development, to develop a streamlined delivery strategy that supports increased use of the toolkits and fosters collaboration between the different groups producing these documents.

I recently conducted a survey to help identify what planning toolkits and guides are being used in B.C., obstacles to their widespread use, and possible solutions. The project working group provided input and helped distribute the survey through their email and social media networks. The working group is made up of local government planners and people from the Fraser Basin Council, Columbia Basin Trust, Partnership for Water Sustainability in BC, and Stewardship Centre for BC.

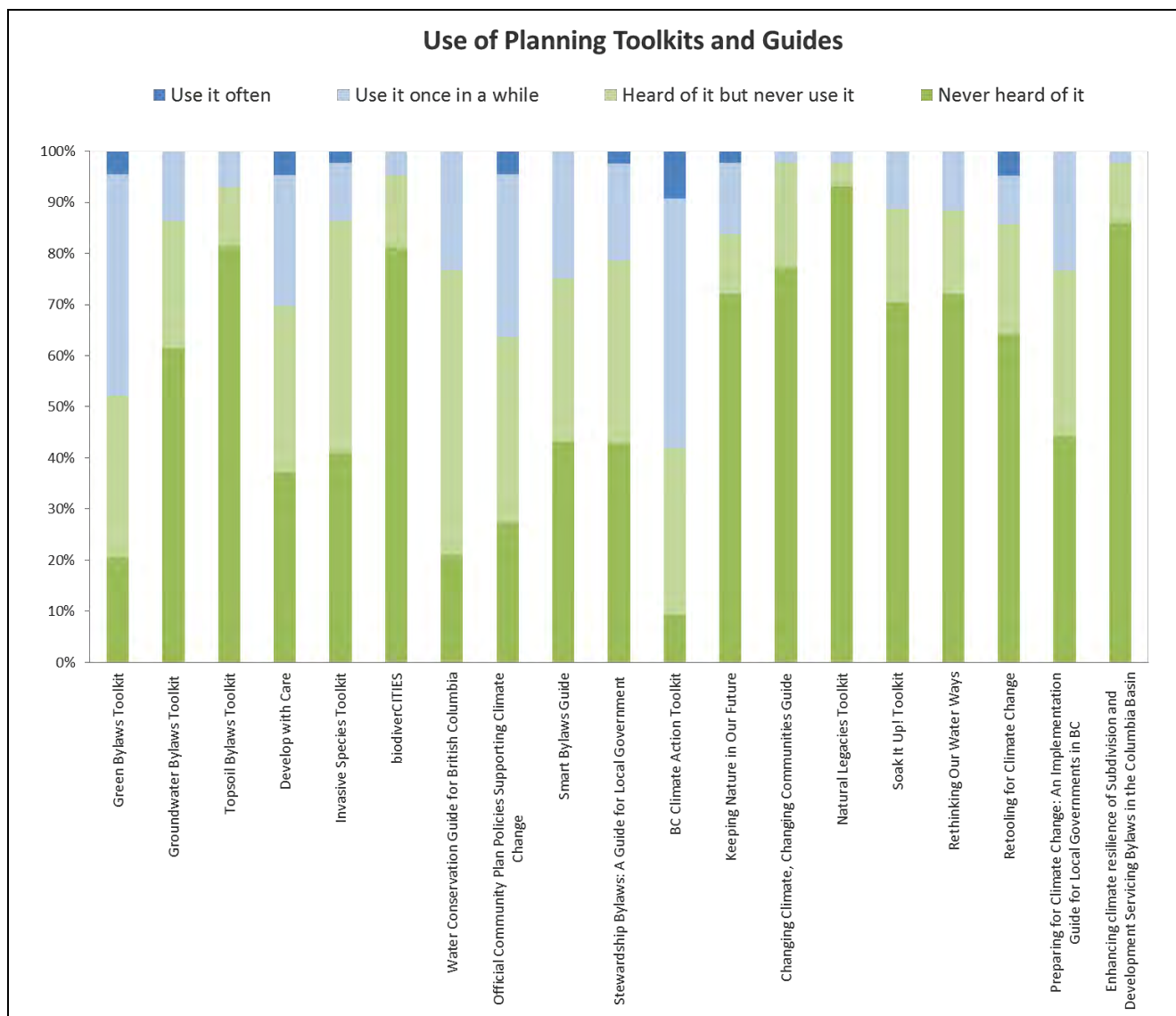
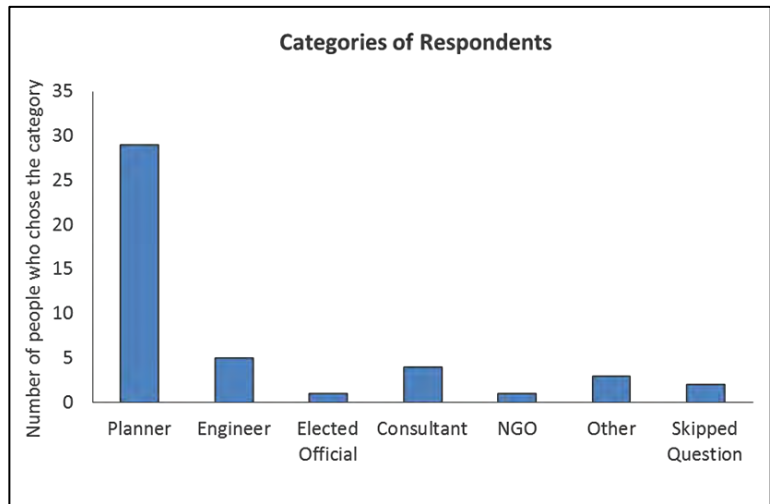
The results of the survey, which are included below, confirmed the need for the project by showing that most toolkits are not well-known or well-used. The main barriers to the widespread use of the toolkits were identified as a lack of time and resources to consider the information in the documents and a lack of outreach after the toolkits are released. An online information hub that provides access to all of the toolkits was the clear choice as the best solution. Putting the hub on a website that planners are already aware of (e.g. PIBC or CivicInfo BC) was supported by the respondents. Webinars, workshops, and a "guide to the guides" handout each received a similar number of votes as 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> best

solutions, demonstrating the need for us to develop a multi-faceted delivery strategy to drive people to the information hub.

Survey Results

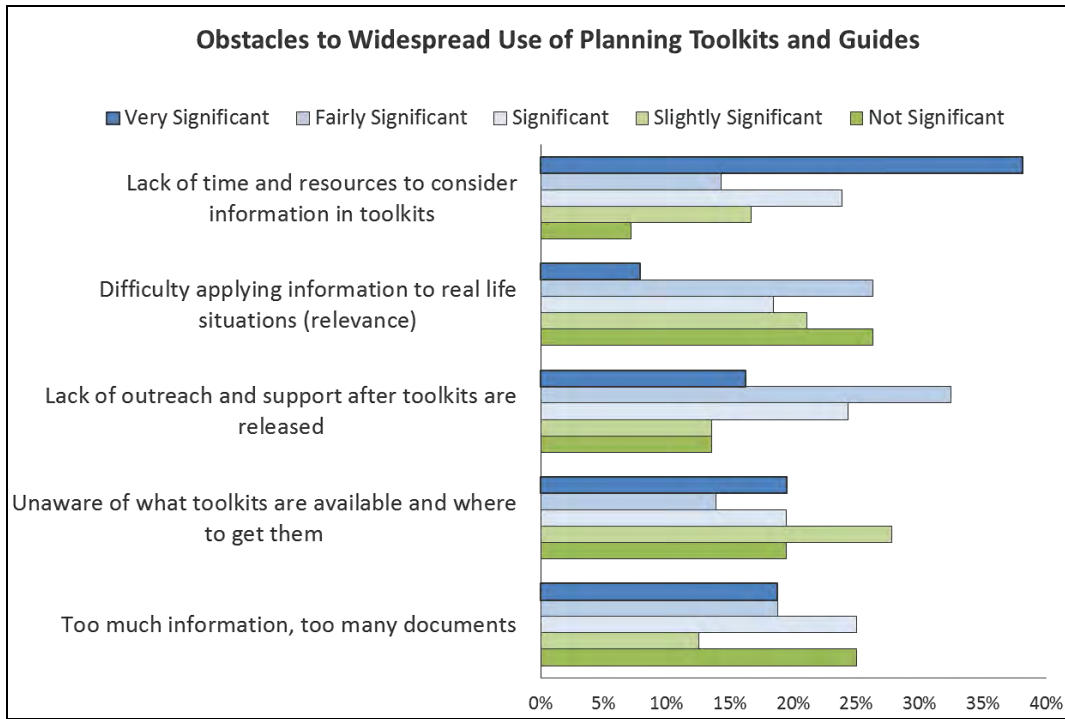
**Forty-five people** participated in the survey. Most respondents were planners.

Respondents were asked what toolkits and guides they use. Of the 19 documents listed, the BC Climate Action Toolkit is the only document that more than half of the respondents use. The Green Bylaws Toolkit is the second most used document. Most respondents do not use the other toolkits, and many they have never heard of.

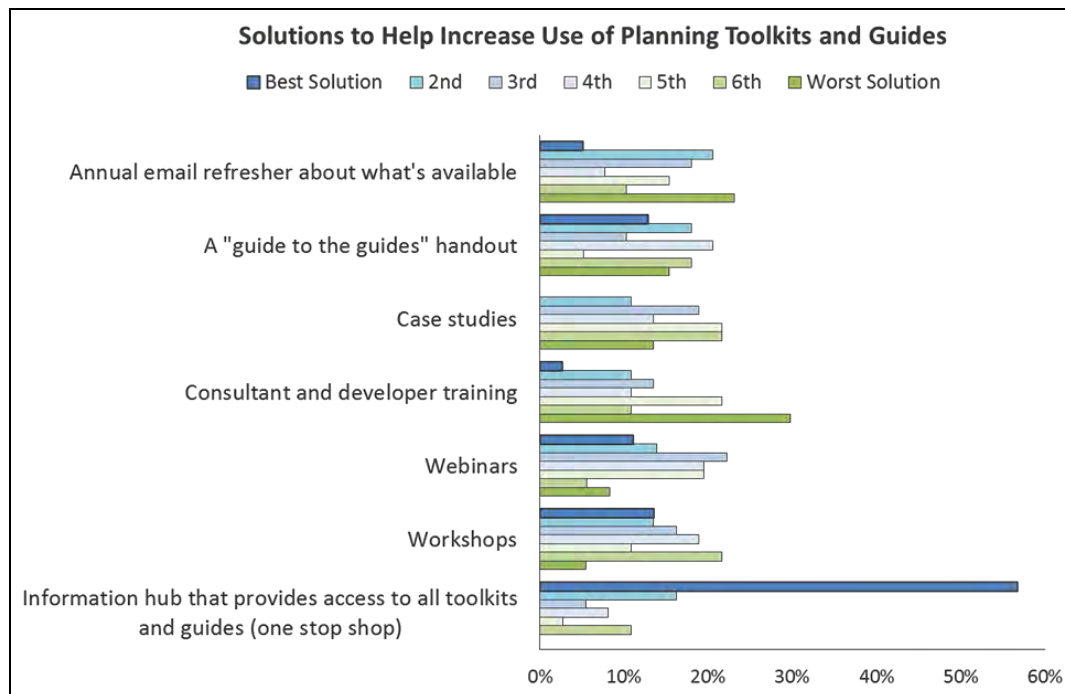




Respondents were asked to rank possible obstacles to widespread use of planning toolkits. **The most significant obstacle was identified as a lack of time and resources.** A lack of outreach and support after toolkits are released was considered the second most significant obstacle. Several other obstacles were identified in the open-ended part of this question, including lack of political will and difficulty translating the technical information to decision-makers.



Respondents were asked to rank seven possible solutions to help increase use of planning toolkits. An **online information hub** that provides access to toolkits and guides was identified as the best solution and **webinars** as the second best solution. Webinars, workshops, and a “guide to the guides” handout each had a similar number of votes for 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> best solutions. Consultant and developer training was considered the worst solution.



## MEMORANDUM

<p>Okanagan Basin Water Board Regular meeting March 7, 2017 Agenda No: 7.1</p>
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File No. 0550.04

To: OBWB Directors  
From: Anna Warwick Sears  
Date: March 1, 2017  
Subject: **Executive Director Report**

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Chair Gray suggested that it would be a good time for the board to review our strategic plan, and how it relates to our current initiatives. Without going into a lot of detail, we will touch on the highlights of the plan, talk about how our current work fits within it, and discuss priorities moving forward.

The OBWB is a unique agency; the best example of a “watershed” board in British Columbia. As is shown in our mandate, below, we were established to facilitate and coordinate actions for water management in the Okanagan, and improve communications between all levels of government, without having rule-making authority. As a partnership of the regional districts, our primary focus is to support local communities, maintaining a focus and involvement on local needs, while providing a consistent, non-partisan voice to senior government.

**The Vision of the OBWB** is for the valley to have clean and healthy water in perpetuity, meeting the needs of natural ecosystems, residents and agriculture—now and in the future.

**The OBWB’s mandate** was established in 1969 through the Municipalities Enabling and Validating Act and Supplementary Letters Patent to the Okanagan regional districts, in order to:

- I. Organize or receive proposals from private interests, organizations or agencies and all levels of governments regarding best practices for water use and management;
- II. Define water problems and priorities, economic feasibility of solutions, responsibility, necessary legislation and required action;
- III. Communicate and coordinate between levels of government and their agencies about water use and management;
- IV. Present proposals and recommendations to local or senior governments, according to jurisdiction and responsibility;
- V. Participate financially or otherwise, in surveys, investigations or projects on behalf of Okanagan local governments;
- VI. Coordinate implementation of the Okanagan Basin Study Plan (1974)—for water management activities that affect the Valley as a whole;

- VII. Advise local or senior government agencies when proposed actions, regulations or bylaws are contrary to the Okanagan Basin Study Plan or the OBWB recommendations; and to
- VIII. Participate in an aquatic weed control program for Okanagan lakes.

**Operating Principles** have been developed over time, that express our values for our programs and interacting with our partners and the public.

- One Valley – One Water
- Collaboration
- Credibility
- Sharing
- Leaving a Legacy
- Transparency
- Informed Action
- Balance
- Innovation

**Key Strategies and Desired Outcomes** –The Goals and example actions, below, are accomplished by a number of cross-cutting key strategies that are all intended to lead to long-term desired outcomes consistent with our Vision. These are given on page 7 of the Strategic Plan.

**Strategic Goals** reflect the big-picture, long-term goals of the OBWB, which are reflected in our strategic plan. These may change somewhat in form when we update the strategic plan, but as they reflect our core interests and vision, the essence of the goals will likely remain. Each goal has sub-goals that provide more detail, and I've given a few examples of some of the many OBWB projects that work toward them.

**Goal #1: Adequate Supplies of water for all human and environmental uses**

- (a) The Okanagan has sufficient, accessible, water science and data to plan for changing conditions in climate, economy, and population growth

Examples: *Mission Creek Groundwater/Surface Water Study; Okanagan Land Use Inventory and Water Demand Model; BC Water Use Reporting Centre; Groundwater monitoring network;*

- (b) Water licence allocations support the environment, agriculture, and urban growth over the long term

Examples: *Environmental Flow Needs Study; Water Supply and Demand Project*

- (c) Groundwater and surface water are regulated as one source

Examples: *Mission Creek Groundwater-Surface Water Study; Advocacy on groundwater policy in the BC Water Sustainability Act*

- (d) Water efficiency in all sectors

Examples: *Make Water Work Campaign; Streamlined Water Bylaws Toolkits*

**Goal #2: Excellent source water – drinkable, swimmable, fishable**

- (a) That we understand risks to source waters and how to manage them

Example: *Water Conservation and Quality Improvement Grants for pollution source assessments*

- (b) Government policy promotes appropriate land use in upper watersheds to protect water quality

Examples: *Advocacy to prohibit sale of lease lots on crown lands surrounding water sources; work with BC Cattlemen's Association and water purveyors to promote off-channel watering policy in the Water Sustainability Act*

- (c) Pollution is reduced in developed areas through infrastructure improvement and policies limiting contamination of surface and ground waters

Examples: *Sewerage Facilities Assistance Grants; Wetland Strategy; WCQI grants for improved stormwater management; "Slow It, Spread it, Sink It! An Okanagan Homeowner's Guide for Rainwater Management" Guide*

- (d) Harmful new invasive aquatic species, including zebra mussels, are kept out of the Okanagan, and Eurasian watermilfoil continues to be controlled

Examples: *Milfoil Control Program; Don't Move A Mussel Campaign; active engagement with PNWER on invasive mussel policy and advocacy to senior governments*

**Goal #3:** Okanagan local governments, First Nations, water purveyors and stakeholders have up-to-date coordinated plans and policies to protect water quality and water supply

- (a) Local government have capacity to prepare and respond to population and climate change

Examples: *Providing local governments and the Okanagan Nation with water data to support planning and engineering, Okanagan Regional Drought Strategy, Support for individual local government Drought Planning; Water Conservation and Quality Improvement Grants for water conservation planning and infrastructure improvements*

- (b) Diversifying funding sources, and securing new external funding partners to support Okanagan water initiatives by local governments

Examples: *Involvement in the B.C. Water Funders Group, and the Canadian Environmental Grantmakers Network; supporting grant applications by Okanagan local governments, university researchers, and other partners; and providing matching funding or in-kind where possible*

- (c) A knowledgeable public, with widespread commitment to science-based planning, water conservation and reducing pollution

Examples: *Okanagan WaterWise education and outreach program, including World Water Day events and summer outreach; Make Water Work campaign; Okanagan Waterscape Curriculum Development; Agricultural Drought Outreach project*

**Goal #4:** OBWB has excellent relationships, a defined role, and clear communications with stakeholders and other levels of government

- (a) The OBWB is respected as an advocate for Okanagan water concerns

Examples: *Respectful, science-based advocacy on water allocation, source protection, invasive mussels, and other issues to senior governments*

- (b) The OBWB has a strong working relationship with Okanagan First Nations communities

Examples: *Partnership with the ONA on Mission Creek Groundwater/Surface Water Study and Environmental Flow Needs Study, and stream flow monitoring, as well as providing data for ONA planning and science projects on request*

- (c) The OBWB, working with the Okanagan Water Stewardship Council, maintains excellent communication with local stakeholders

Example: *Eleven years of strong and consistent participation by the Okanagan water sector, senior government agencies, and other partners on the Council who share ideas and concerns and bring information from the Council to their respective groups and agencies.*

Okanagan Basin Water Board  
Regular meeting  
March 7, 2017  
Agenda No: 7.1.1

# Okanagan Basin Water Board



Strategic Plan  
2014–2019



## BOARD OF DIRECTORS

Chair Stu Wells  
Regional District of Okanagan-Similkameen  
Mayor, Town of Osoyoos

Vice-Chair Rick Fairbairn  
Regional District of North Okanagan  
Director, RDNO Electoral Area 'D'

Director Juliette Cunningham  
Regional District of North Okanagan  
Councillor, City of Vernon

Director Doug Dirk  
Regional District of North Okanagan  
Councillor, District of Coldstream

Director Keith Fielding  
Regional District of Central Okanagan  
Mayor, District of Peachland

Director Doug Findlater  
Regional District of Central Okanagan  
Mayor, District of West Kelowna

Alternate Director Allan Patton  
Regional District of Okanagan-Similkameen  
Director, RDOS Electoral Area 'C'

Director James Pepper  
Okanagan Nation Alliance  
Manager, Natural Resources Department

Director Toby Pike  
Chair, Water Supply Association of BC  
Manager, South East Kelowna Irrigation District

Director Tom Siddon  
Regional District of Okanagan-Similkameen  
Director, RDOS Electoral Area 'D'

Director Gerry Zimmermann  
Regional District of Central Okanagan  
Councillor, City of Kelowna

## EXECUTIVE DIRECTOR

Anna Warwick Sears, PhD

## INTRODUCTION: THE OKANAGAN BASIN WATER BOARD

*The Vision of the OBWB is for the valley to have clean and healthy water in perpetuity, meeting the needs of natural ecosystems, residents and agriculture—now and in the future.*

The OBWB’s mission is to provide leadership to protect and enhance quality of life in the Okanagan Basin through sustainable water management. The OBWB was initiated in 1968, as a collaborative local government agency, to identify and resolve critical water issues in the Okanagan. We connect water initiatives throughout the valley.

The OBWB’s strength is in building partnerships: bringing people and resources together, and providing a means for joint strategic action. We advocate for local water concerns to senior governments, and are a public voice for water education. Our financial

structure lets us trigger funds from many sources and match them to local dollars—creating new opportunities based on regional collaborations and regional goals. Our administration and project management capacity allows us to deliver complex, multi-partner projects.

The Okanagan is called the “canary in the coal mine” for Canada’s water issues. We have among the lowest water availability per person, and many water-dependent industries. With less water available, we must protect water quality, so it can be accessed, used and re-used for many purposes—while preserving environmental flows. Being the canary means that there are few examples to follow and the valley must lead the way with innovations in water policy and practices. This has been our history, and this will be the key to our future.







## OBWB PURPOSE OR MANDATE

The OBWB's mandate<sup>1</sup> was established in 1969 through the Municipalities Enabling and Validating Act and Supplementary Letters Patent to the Okanagan regional districts, in order to:

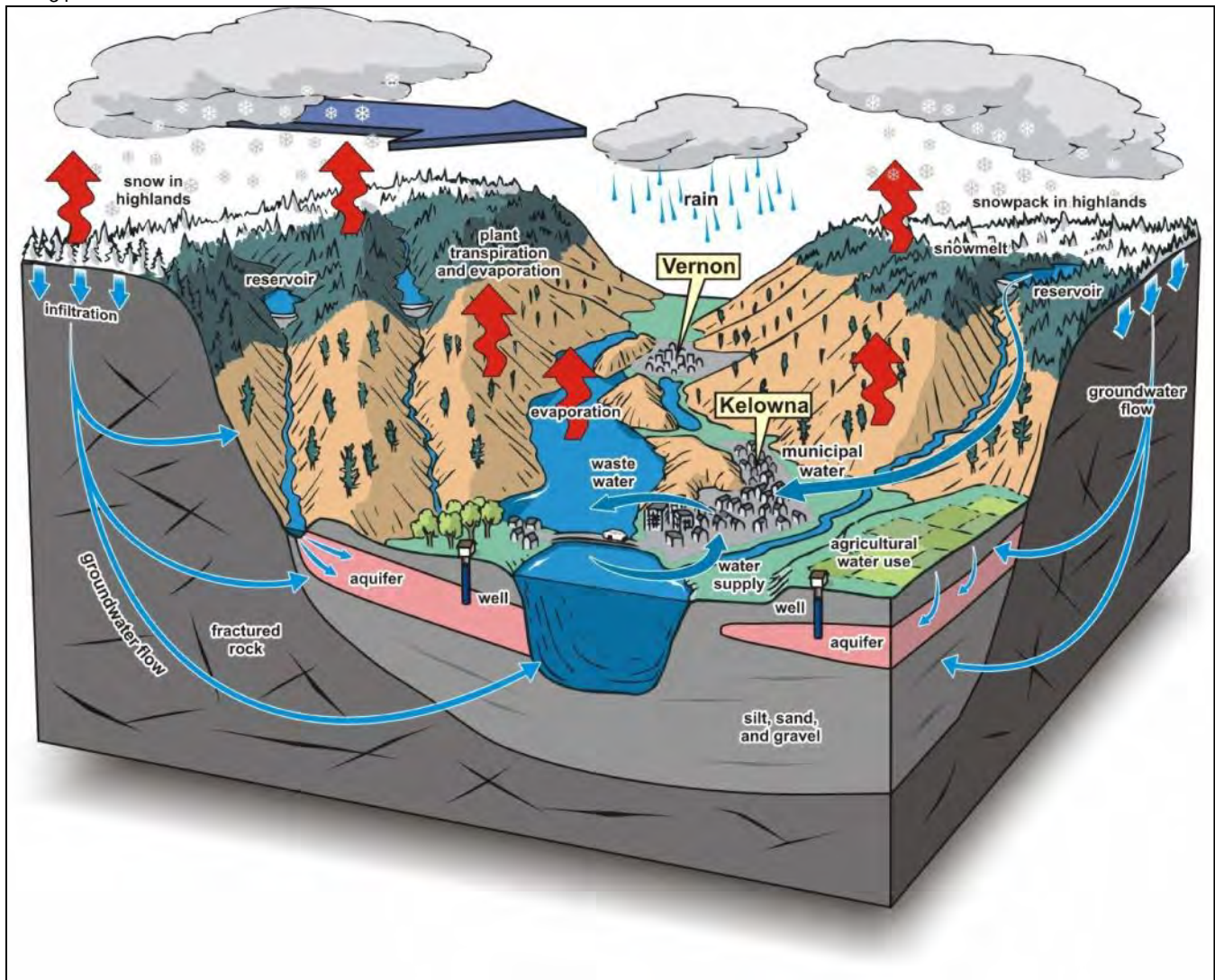
- I. Organize or receive proposals from private interests, organizations or agencies and all levels of governments regarding best practices for water use and management;
- II. Define water problems and priorities, economic feasibility of solutions, responsibility, necessary legislation and required action;
- III. Communicate and coordinate between levels of government and their agencies about water use and management;
- IV. Present proposals and recommendations to local or senior governments, according to jurisdiction and responsibility;
- V. Participate financially or otherwise, in surveys, investigations or projects on behalf of Okanagan local governments;
- VI. Coordinate implementation of the Okanagan Basin Study Plan (1974)—for water management activities that affect the Valley as a whole;
- VII. Advise local or senior government agencies when proposed actions, regulations or bylaws are contrary to the Okanagan Basin Study Plan or the OBWB recommendations; and to
- VIII. Participate in an aquatic weed control program for Okanagan lakes.

<sup>1</sup> See [www.obwb.ca/board-of-directors/governance/](http://www.obwb.ca/board-of-directors/governance/)

## OBWB OPERATING PRINCIPLES

- ◆ [One Valley – One Water](#). All water in the Okanagan is connected, in all its forms and sources, and our actions will recognize this principle, benefiting the entire valley.
- ◆ [Transparency](#). The actions and decisions of the OBWB, including those of the Board of Directors, staff, and advisory committees, will be transparent and open.
- ◆ [Collaboration](#). We seek collaborative solutions to water concerns, to bridge the interests of all Okanagan citizens and orders of government, and to help resolve water conflicts.
- ◆ [Informed Action](#). We will undertake actions that are informed by the best available science and the expertise of the community.
- ◆ [Credibility](#). We will be a reliable source of water science and information for the Okanagan, and a hub for water research.
- ◆ [Balance](#). We will take a non-partisan approach, and balance environmental, social, and economic interests.
- ◆ [Sharing](#). We will share knowledge, data and information, contributing to the creation of resilient community water plans, and educating citizens.
- ◆ [Innovation](#). We are committed to innovation, seeking out new ideas and approaches.
- ◆ [Leaving a Legacy](#). We will consider the needs of our children and grandchildren, as well as those of the present, looking ahead to protect the valley's water in times of change.





## INTRODUCTION TO THE PLAN

The 2014-2019 Strategic Plan is intended to guide the OBWB's work for the next five years. The Plan reflects our priorities, our unique strengths for contributing to water sustainability, and the way we carry out our work. The Plan is a framework for future work plans, programs, partnerships, and decisions.

*This Plan focuses on actions that can be undertaken by the OBWB, complementing the 2008 Okanagan Sustainable Water Strategy. The Plan describes our special role and key activities intended to catalyze and support actions by diverse partners and other levels of government.*

Our **goals** reflect priorities for water sustainability, science-based decision-making, the transfer of knowledge, and making needed changes. We will

reach these goals through **strategies** that involve collaboration, advocacy, education, funding, science, data collection and policy development. We work with many partners, and benefit from the expertise and community perspectives of the Okanagan Water Stewardship Council.

The OBWB will **measure success** in a variety of ways, tracking the work of the Board and Council, and our contributions to other's efforts. Real success is progress toward a sustainable water future for the valley. Healthy water depends on healthy partnerships: communities and stakeholders working together to increase capacity and understanding, improving water quality and conservation, and adapting to changing environmental, social and economic conditions.

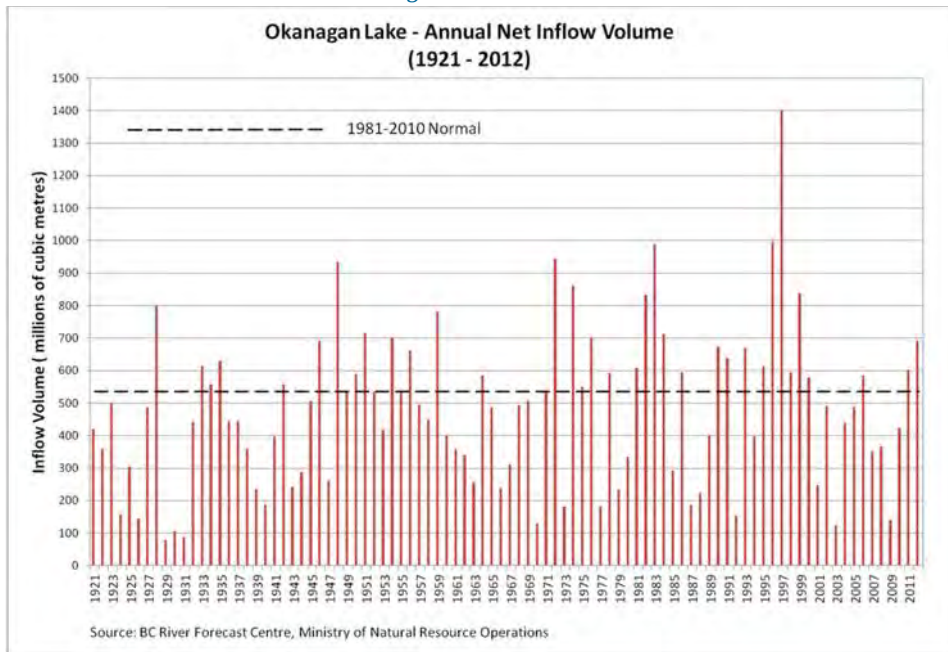
## WHY A STRATEGIC PLAN?

The world is changing rapidly. The global economy is bringing unexpected stresses, global climate change is creating unpredictable weather swings, and within the next 30 years the global population will grow from seven to nine billion people. Although these are world-wide processes, their effects on water are local. We enjoy healthy water locally—from the drinking water in our taps to the clear blue waters of our lakes. We also experience water problems locally—from pollution and shortages, to flooding—and the solutions are local.

Okanagan communities are strongly committed to water sustainability, but given the number of issues, and limited time and resource budgets, we must focus efforts on areas of highest strategic impact and importance without duplicating the work of other levels of government. This Plan will also create clarity for our partners. *The biggest risk we face as an organization is becoming spread thin on many small projects, and missing opportunities for major progress.*



FIGURE 1: Annual Flows into Okanagan Lake

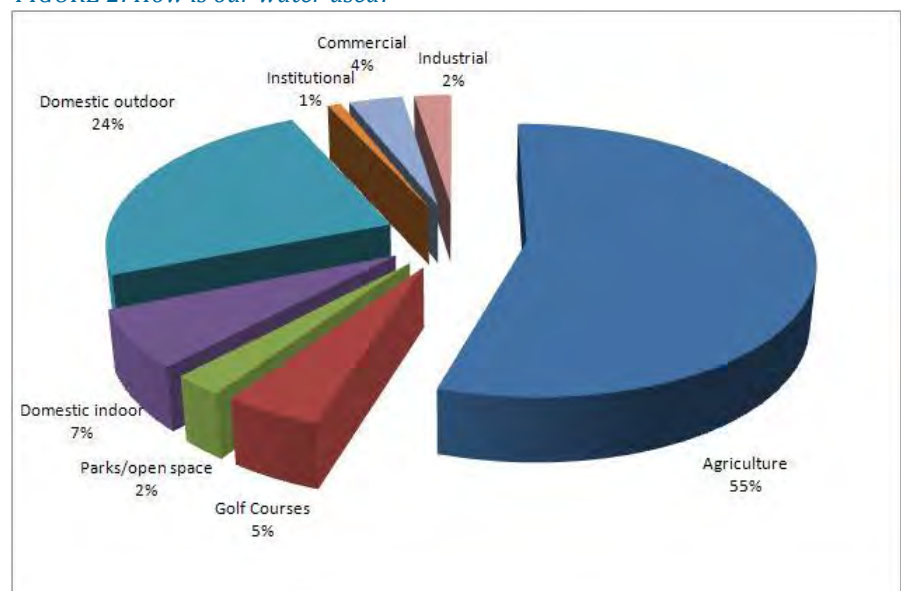


### CURRENT SITUATION

The Okanagan’s big blue lakes ringed with dry grass and sage brush hillsides tell a complex story about our water supply. The valley is semi-arid, and includes Canada’s only desert—surrounding Osoyoos Lake. The apparent abundance of lake water has slowly accumulated over many decades. To sustainably manage the water, we can only use what flows in every year. **Figure 1** shows that the amount available each year fluctuates wildly. Average years (dashed line) are rare. Instead, we must plan for recurring dry years and wet years, and changing conditions.

**Figure 2** illustrates that the vast majority of Okanagan water is used for irrigation—for farms, residential landscaping (domestic outdoor), golf courses, and parks. Indoor water use, whether for domestic, commercial, or industrial, is mostly cleaned and returned to the system, while irrigation water is fully consumed by crops or evaporated from plants and soils. To make room for a growing population, while protecting food security and shielding our industries from drought, we’ll need to improve irrigation efficiency—especially on the home front.

FIGURE 2: How is our water used?



## KEY STRATEGIES

Each of the long term goals in this Plan has specific strategies and success measures. However, the following key strategies bridge many different goals:

- ◆ Engaging with local government leaders and staff about their water concerns, and presenting information on current projects, findings and new opportunities;
- ◆ Improving access to water data and information for staff, planners and engineers of local communities, as well as senior government, and researchers;
- ◆ Coordinating water planning and policy-making among Okanagan communities, supporting development of common plans and standards;
- ◆ Advocating to senior governments on Water Act modernization and other key laws and policies;
- ◆ Informing the public about Okanagan water issues and engaging them in solutions;
- ◆ Working with the Okanagan Water Stewardship Council to identify critical information gaps and strategic solutions;
- ◆ Collaborating with researchers to improve technology and practices for water monitoring and management;
- ◆ Facilitating information-sharing and conflict resolution among diverse groups in the water sector;
- ◆ Connecting with provincial and national groups to gain leading information and trends for water and water systems; and
- ◆ Diversifying funding sources and strategies, and reducing costs through partnerships.



## DESIRED OUTCOMES

- The Okanagan has a secure, sustainable water supply for human and environmental needs, supporting healthy communities and a robust economy into the future.
- Okanagan communities work together to create common approaches and reduce fragmentation in water management.
- Each jurisdiction has plans in place to reduce risks of drought and flooding, improve water efficiency and protect water quality. These plans are coordinated and reflect links between water supplies valley-wide.
- The public knows the value of water; they are meaningfully engaged in decisions and solutions, and support initiatives for water sustainability.
- Water management in the Okanagan is not limited by funding or capacity, and costs are minimized through partnerships, leveraging, and advance planning.
- Strong partnerships with First Nations, water stakeholders, and the governments of B.C. and Canada create strong, harmonized, and proactive plans and policies.



## LONG TERM GOALS/STRATEGIC PRIORITIES

### GOAL 1:

#### ADEQUATE SUPPLIES OF WATER FOR ALL HUMAN AND ENVIRONMENTAL USES

*Water shortages are common in dry years. Under extreme conditions, with high environmental needs, high irrigation demands, and reduced snow pack (expected in the future), we risk mining our lakes—drawing them down during multiyear droughts. Many conflicts can be avoided with careful management, planning and efficient water use.*

#### SUB GOALS

**a) The Okanagan has sufficient, accessible, water science and data to plan for changing conditions in climate, economy, and population growth**

We can't manage what we don't measure. To ensure water security, and equitable water sharing between sectors, we must understand how much water enters the valley, in what location, where it is needed, and how these factors change from year to year. This information forms the backbone of future planning.

**Information gathering and sharing is a core OBWB activity, and there is no other agency or level of government performing these functions.**

**b) Water licence allocations support the environment, agriculture, and urban growth over the long term**

Water licensing is under provincial jurisdiction. The actual amount of water available for allocation depends on environmental data, and the frequency we accept for water shortages. Local communities and stakeholders have a role in advising what risk levels are acceptable for water utilities, agriculture, and the environment.

**OBWB has models and data that can inform risk assessments, and can help update standards and practices for water allocation policy in the valley.**

**c) Groundwater and surface water are regulated as one source**

For more than 100 years, B.C. has licensed surface water, but we do not yet have effective groundwater regulation. Surface and groundwater are tightly linked, and groundwater pumping can deplete licensed surface sources. To protect existing water rights, environmental needs, and availability for future users, all water should be regulated through the same system.

**OBWB has a role to support groundwater monitoring, planning by local communities, and to work with the province to ensure the future regulations meet local needs.**

**d) Water efficiency in all sectors**

The least costly way of expanding water availability is to reduce demands by reducing waste. In this way, improving water efficiency is insurance against harm caused by shortages. Reducing demand also saves the costs and energy required to pump, treat, and deliver water.

**OBWB can help water utilities, local governments, agriculture and other industries secure funding and improve systems, and support planning by sharing data and information.**

## GOAL 2:

## THE OKANAGAN HAS EXCELLENT SOURCE WATER QUALITY—DRINKABLE, SWIMMABLE, FISHABLE

*Water quality is difficult to manage because small sources of pollution can add up to big problems. Source protection falls into three areas: upper-watersheds around reservoir lakes and streams (mostly Crown land); agricultural runoff; and developed areas, where it's called "stormwater." Different actions are needed for each. Healthy riparian areas protect water quality, and reduce runoff from roads, agriculture and development. Aquatic invasive species are a special kind of water pollution.*

### SUB GOALS

**a) That we understand risks to source waters and how to manage them**

Source protection is one of the most complex issues facing the Okanagan. We rely on healthy lakes and streams for the health of our drinking water, but we have multi-use watersheds under provincial jurisdiction, and our main valley lakes and most productive aquifers are surrounded by urban development and agriculture. Risk assessment, planning and response are ongoing challenges, as our population increases.

**OBWB's main role in source protection assessments is to support water utilities in their efforts, facilitating collaboration and coordinated planning.**

**b) Government policy promotes appropriate land use in upper watersheds to protect water quality**

Many source protection conflicts can be reduced by good provincial policy and management in upper watersheds. OBWB has a mandate and history making recommendations to government that balance resource development and recreation with healthy drinking water sources.

**OBWB coordinates and reinforces the collective voice of local governments, water utilities, and First Nations, advocating to senior government for water-friendly policies.**

**c) Pollution is reduced in developed areas through infrastructure improvement and policies limiting contamination of surface and ground waters**

OBWB was founded as a way to take action on water pollution. As wastewater treatment has reduced sewage pollution overall, the population has grown—increasing the need to reduce pollution from stormwater, and to better understand emerging contaminants. Infrastructure improvement and best planning practices are essential, supported with good policies by local and provincial governments.

**OBWB's role is to share information, to help coordinate planning and policies to protect water quality, and to help secure new funding for infrastructure improvement.**

**d) Harmful new invasive aquatic species, including zebra mussels, are kept out of the Okanagan, and Eurasian watermilfoil continues to be controlled**

As we found with watermilfoil, it is impossible to eradicate harmful invasive aquatic species if they enter the lake system. Only the provincial and federal governments have authority to inspect boats and equipment at B.C.'s borders. The province is coordinating efforts to educate boaters and recreational users who can unknowingly spread invasive species.

**OBWB has a role to advocate for inspections, regulations and controls; and also to educate the public and raise awareness of the potential threats and future costs of new invasive species. We have a long-standing mandate to manage watermilfoil.**



## GOAL 3:

## OKANAGAN LOCAL GOVERNMENTS, FIRST NATIONS, WATER PURVEYORS AND STAKEHOLDERS HAVE UP-TO-DATE COORDINATED PLANS AND POLICIES TO PROTECT WATER QUALITY AND WATER SUPPLY, AND PREPARE FOR EXTREME EVENTS

*Most of the risk for water problems in the Okanagan—from droughts to floods to pollution—can be well managed with solid plans, based on up-to-date information. The OBWB has been focused on gathering the science for better water plans, and it is time to place new effort on linking and strengthening local government plans into a truly regional approach.*

### SUB GOALS

**a) Local government have capacity to prepare and respond to population and climate change**

By coordinating local efforts, securing external funding, and sharing information and best practices, we can help local governments create better plans at lower cost. The Okanagan Water Stewardship Council has been preparing a framework for an Okanagan-wide water plan, linking regional growth strategies and other plans to enhance water security without duplicating activities of local governments.

**The OBWB has a key role to coordinate individual plans by local government, First Nations and utilities, and to be a leader in valley-wide planning efforts.**

**b) Diversifying funding sources, and securing new external funding partners to support Okanagan water initiatives by local governments**

As both a grant maker and recipient of senior government funding, and by tapping the expertise of the Okanagan Water Stewardship Council, the OBWB has accelerated funding for water in the valley. Seed funding and in-kind contributions to our partners—local governments, universities, improvement districts and other organizations—triggers funds from many sources.

**Leveraging funding is a unique strength of the OBWB. The OBWB also has a role to identify and advocate for new funding policies to support water initiatives by local government and utilities.**

**c) A knowledgeable public, with widespread commitment to science-based planning, water conservation and reducing pollution**

The general public is an essential partner for all of our work. By bridging the water communications of local utilities, the OBWB can reduce costs and increase the impact of our partner's work. Giving information to our citizens helps reduce waste, and builds support for water system protection and improvements.

**The OBWB has a key role to create a common understanding of Okanagan water challenges, countering the myth of abundance.**

## GOAL 4:

## OBWB HAS EXCELLENT RELATIONSHIPS, A DEFINED ROLE, AND CLEAR COMMUNICATIONS WITH STAKEHOLDERS AND OTHER LEVELS OF GOVERNMENT

*The OBWB is a unique water agency in Canada, without rule-making authority, but with a special capacity for forming partnerships, communicating with all levels of government, and aligning resources to meet shared goals and priorities. We are effective because we focus on equity, and on outcomes with valley-wide benefit, and by being a trusted broker of information. Strong relationships and trust are our greatest assets and allow us to serve the valley's needs.*

### SUB GOALS

**a) The OBWB is respected as an advocate for Okanagan water concerns**

The OBWB has a mandate to make recommendations to local and senior governments, to improve water management in the Okanagan. To be effective in this role, the OBWB seeks to provide information of the highest quality, maintaining a balanced approach and professional standards.

**Advocacy is a central role of the OBWB, and it is critical to maintain close communication with all levels of government—to understand needs and challenges; and with our network of water experts—continuously developing the quality of information we provide.**

**b) The OBWB has a strong working relationship with Okanagan First Nations communities**

It is essential to have strong relationships and shared planning processes with the Okanagan Nation. We are 19 communities sharing a narrow valley, each affecting the others. Although the structures, resources, and responsibilities differ between forms of government, we have shared interests in protecting Okanagan water sustainability. We can learn from each other, and build on each other's strengths.

**The OBWB has a unique opportunity to support the integration of water planning and management of all Okanagan communities.**

**c) The OBWB, working with the Okanagan Water Stewardship Council, maintains excellent communication with local stakeholders**

The national award-winning Okanagan Water Stewardship Council is an essential partner for the OBWB. Members share expertise across a wide-range of water issues. As each member represents a different organization, they reach all corners of the water sector. These experts and industry groups provide strategic information, and share information back to a much wider network.

**The Okanagan Water Stewardship Council improves the quality of the OBWB's proposals, diversifies our partnerships, and increases credibility with the community at large.**



OBWB Strategic Plan 2014-19

## Okanagan Basin Water Board

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Okanagan Basin  
WATER BOARD

Minister of Public Safety



Ministre de la Sécurité publique

FEB 15 2017

Ottawa, Canada K1A 0P8

Mr. Doug Findlater  
Chair  
Okanagan Basin Water Board  
1450 KLO Road  
Kelowna, British Columbia V1W 3Z4

Dear Mr. Findlater:

Thank you for your co-addressed follow-up correspondence of December 15, 2016, concerning invasive zebra and quagga mussels. The Office of the Prime Minister also forwarded to me a copy of the same correspondence.

The Canada Border Services Agency (CBSA) continues to work with Fisheries and Oceans Canada (DFO), Environment Canada, the Canadian Food Inspection Agency, and the provinces and territories to prevent the importation of invasive alien species and plant and animal diseases into Canada.

As I indicated in my response to you of April 7, 2016, the CBSA's role under the DFO's *Aquatic Invasive Species Regulations* is to enforce the import prohibitions listed in Column 4 of Part 2 of the Schedule of the Regulations, which include zebra and quagga mussels.

The Agency is also working with various western provincial authorities to address the movement into British Columbia (BC) of zebra and quagga mussels. Part of this collaboration has included aquatic invasive species sessions held by the BC Ministry of Environment for CBSA officers.

In addition, as I indicated in my previous response, the CBSA is co-operating with BC Ministry of Environment conservation officers and has allowed temporary inspection and education stations to be set up near land border ports of entry in the Okanagan and Kootenay District.

I appreciate your continued interest in this important issue.

Thank you again for writing.

Yours sincerely,

The Honourable Ralph Goodale, P.C., M.P.

Canada

Robert Dickeson

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Summerland BC V0H 1Z6

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February 27, 2017

Tracy Gray, Chair  
Okanagan Basin Water Board  
1450 KLO Road  
Kelowna BC V1W 3Z4

Dear Tracy Gray,

I am writing the Board because of a recent decision made by the Summerland municipal council which I believe runs counter to the vision and goals of the Okanagan Regional Water Basin (ORWB), the District of Summerland's (DOS) Master Water Management (MWM) goals and objectives, the protection of public health and safety and the commitment to preserve and protect the Rocky Mountain Ridged Mussel, a Schedule 1 Species of Special Concern.

Representatives from the DOS that are members of the ORWB would be expected to share the same values, vision and goals as stated by the ORWB. Unfortunately, on July 12, 2016 those members voted in a unanimous decision to allow horses access to Okanagan Lake through a municipal public beach to allow horseback riding in the water. No other jurisdiction (municipal, regional or provincial) allows horses to access the lake via its property. During the July 12, 2016 meeting the Director of Corporate Services did suggest no jurisdiction prevented horses from being in the lake. What he failed to acknowledge was that no jurisdiction would allow access. To be in the lake you would need access, which as mentioned above, does not exist. My neighbors and I have observed manure (and can only imagine the amount of urine) in the water on numerous occasions. We have seen it floating in the water and washed up on the shore.

The DOS is not following two of its 2008 Master Water Plan Water Supply Guiding Principles:

- 1) Recognize the Inherent Value of Water
- 2) Control Pollution at the Source

While the lake is a large body I do not believe the cavalier approach to this pollution i.e. the solution is dilution, is appropriate in the context of the commitments to the ORWB and the DOS's comprehensive MWM working outline.

Claims by the DOS and Interior Health (IH) that monitoring of the water by IH for E. coli will prove that the public is safe are unfounded as water will only be tested for E. coli and according to American Water Works Association (AWWA) 2010 (Is E. coli an appropriate surrogate for Cryptosporidium occurrence in water?) the answer is **no**. According to the AWWA there is a poor correlation between E. coli and protozoan parasites, and therefore low E. coli levels do not necessarily mean low levels of other pathogens. Consequently, low infectious doses and environmentally resistant stages, which are consistent with organisms like Giardia and Cryptosporidium, will remain a public health concern in spite of the work of IH. In a summer of 2015 conversation with Interior Health's Jennifer Jacobson she said that she would not allow her children to swim in water containing horse waste. She suggested that I should go to a different beach if I was uncomfortable swimming in the water contaminated with horse waste.

I am confused by the double standard that exists with respect to public health and safety. Horses are not permitted at any other public beach in the DOS. Bylaw 95-013 Parks Regulation Bylaw section 3d states "no person shall cause or permit any animal to be on any Park except where permission has been granted by Municipal Bylaw or has been obtained from Council". On July 12, 2016 Council passed a resolution (brought forward by Councilor Barkwill who has participated in this activity) permitting transitory crossing of the public beach to allow horse access to the lake. Council discussion, prior to the vote, centered around information brought forward by Robert Hacking, who provided Council with a non-referred internet article (Does Horse Manure Pose A Significant Risk to Human Health). This information was referenced by Councilor Barkwill as evidence that this activity poses no risk. Councilor Barkwill, in December 13, 2016 interview in the Penticton Herald, stated "fortunately, I believe reading and digesting information is a forte of mine. Inconsistencies and contradictions jump off the page at me. If you don't like reading, you should not run for council". Unfortunately, in this particular case Councilor Barkwill did not complete his reading or failed to acknowledge its findings as the non-referred article only suggested that manure posed no significant risk when encountered on public trails. Had he continued to research additional writing by the same author he would have found evidence of safety concerns associated with horses eliminating in surface water. An article written in Wildlife and Environment by the same author previously referenced states "Excrement or wastes of any type should never be deposited or disposed of in water bodies". In a personal communication, January 11, 2016 with Dr. Robert Atwill, Water and Foodborne Zoonotic Disease Laboratory, University of California Davis, he suggested that the horseback riding in the lake is "not without zero risk". I mentioned that this activity frequently occurs in the backcountry lakes, and Dr. Atwill suggested movement of this activity to the backcountry would reduce the risks as potential pathogens are destroyed by the characteristics associated with stream activity. This is a manageable situation that the municipality has chosen to do nothing about. Director of Corporate Services suggested during the council

meeting that no other alternate location could be found for this activity. In the summer of 2016 I met with BC Conservation Officer Jeff Hanratty and he confirmed that horses frequently access backcountry lakes and ponds. If this needs to happen based on the information provided by Dr. Atwill the backcountry seems to be the best location.

In addition to public health and safety concerns the DOS has failed to honour its commitment ensuring measures are in place to protect and avoid impacts on the Rocky Mountain Ridged Mussels (RMRM). The beach area of concern (Houseboat Beach) has been found to have a significant population of these Schedule 1 Species of Special Concern living in close proximity to where this activity takes place. In communication with Dr. Andre Martel, Malacologist- Canada Museum of Nature, he suggested that mussels could be crushed and that the sediment generated by horse activity is detrimental to the mussels as well as the benthic community. Damaged shells were collected and presented to Brian Levitt (DOF) during a July 2016 visit to the site. It is also very possible that the horse activity has rendered viable habitat uninhabitable as a result of the wastes released, the physical trauma and the increase in sediment. RMRM are found at a beach south of this location at a considerably shallower depth. Ministry of FLNR's response to my concerns suggested there would not be significant a risk to the mussels. I am wondering why we would allow any risk from this activity if an alternative location to allow horses would better protect this Schedule 1 Species of Special Concern.

In 1999 residents of the DOS spent over 25 million dollars to install a sewage system, in part, to reduce inputs into the lake. Horses have been known to carry E. coli, Cryptosporidium, Giardia, Leptospirosis, and other pathogens. This is not a situation where horses are entering the lake of their own free will. These animals are being trailered to this location with the express purpose of entering the water to considerable depths. I believe it is in everyone's best interest for the Board to use its influence to request the DOS reconsider its decision to allow horses to access the lake at a public beach in the middle of a residential community. In closing I am more than willing to present to the Board or work with DOS to find a mutually agreeable solution to this situation.

Sincerely,



Robert L. Dickeson

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Summerland BC