

# OKANAGAN WATER STEWARDSHIP COUNCIL

*A Technical Advisory Body to the Okanagan Basin Water Board*

## MINUTES OF A MEETING HELD THURSDAY, January 14, 2016, AT OKANAGAN REGIONAL LIBRARY, 1430 KLO ROAD, KELOWNA, B.C.

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### COUNCIL MEMBERS:

#### Present

Agriculture & Agri-Food Canada, Research Branch  
Assoc. of Professional Engineers & Geoscientists of B.C.  
BC Agriculture Council  
BC Ground Water Association  
BC Water Supply Association  
BC Wildlife Federation – Region 8  
BC Wildlife Federation – Region 8  
Canadian Water Resources Association  
City of Kelowna  
Environment Canada – West and North  
Fisheries and Oceans Canada  
Interior Health Authority  
Interior Health Authority  
Ministry of Agriculture  
Ministry of Forests, Lands, Natural Res. Ops. (OSNR)  
Ministry of Forests, Lands, Natural Res. Ops. (Resource Mgmt)  
Okanagan College  
Okanagan Forest Sector  
Regional District of Central Okanagan  
Regional District of North Okanagan  
Regional District of Okanagan-Similkameen  
UBC Okanagan

Denise Neilsen/Scott Smith (alt)  
Don Dobson  
Hans Buchler  
Remi Allard (alt)  
Toby Pike  
Doug Flintoft  
Lorne Davies (alt)  
Dwayne Meredith  
Andrew Reeder  
Ian Rogalski (alt)  
Doug Edwards  
Rob Birtles (Chair)  
Judi Ekkert (alt)  
Andrew Petersen  
Robert Warner  
Grant Furness  
Allison MacMillan  
Murray Wilson  
Margaret Bakelaar  
Renee Clark  
Zoe Kirk  
Bernie Bauer

#### Regrets

BC Cattlemen's Association  
BC Fruit Growers Association  
City of Penticton  
City of Vernon  
Kelowna Chamber of Commerce  
Okanagan Collaborative Conservation Program  
Okanagan Mainline Real Estate Board  
Okanagan Nation Alliance

Lee Hesketh/Linda Allison  
Denise MacDonald/Glen Lucas  
Andrew Martin  
Ed Stranks/Rob Miles  
Tom Dyas (alt)  
Carol Luttmmer  
David O'Keefe  
Natasha Lukey

### STAFF

OBWB, Executive Director  
OBWB, Water Stewardship Director  
OBWB, Office and Project Manager  
OBWB, Communications Director

Anna Warwick Sears  
Nelson Jatel  
James Littley  
Corinne Jackson

### GUESTS

BC Fruit Growers' Assn  
FLNRO  
Irrigation Association of BC  
UBC-O  
UBC-O  
UBC-O  
UBC-O  
UBC-O  
Westcoast CED Consulting

Martin Stewart  
Tom Walker  
Niel Dendy  
Ryan Whitehouse  
Bruce Naka  
Craig Nichol  
John Janmaat  
Jonathan Beppele  
Nicole Pyett  
Nargiz Rahineova  
Karol  
Hansma

**1. CALL MEETING TO ORDER**

Rob Birtles called the meeting to order at 1 p.m. and welcomed members and guests.

**2. APPROVE AGENDA**

**Moved by Hans Buchler**

**Seconded by Andrew Petersen**

***“That the agenda for the January 14, 2016 meeting of the Okanagan Water Stewardship Council be approved.”***

**CARRIED**

**3. ADOPTION OF MINUTES**

**Moved by Allison MacMillan**

**Seconded by Doug Edwards**

***“That the minutes from the December 10, 2015 meeting of the Okanagan Water Stewardship Council be approved.”***

**CARRIED**

**4. BOARD REPORT—Dr. Anna Warwick Sears**

The OBWB did not meet in January. Anna was asked to report on OBWB Priorities for 2016. The Board will continue with drought planning work and working with local government and water utilities to reduce the problems faced this past year and be better in sync with the Province. Work continues on the Environmental Flow Needs project and pending the results of their gas tax grant application they will be moving ahead on measurement gathering. Wetlands are another area of focus. They are developing more wetlands for habitat quality and to help with water pollution problems. Communication is always ongoing and as part of the drought work they will be looking to further integrate the MWW program with drought awareness. They are also continuing work on maintaining/increasing public awareness on zebra and quagga mussels.

**5. New Groundwater Research on the Kelowna Aquifer—Nicole Pyett (UBCO MSc Graduate).**

Ms. Pyett made a presentation to the Council on her graduate work which looks at the movement of water from Kelowna area aquifers to Okanagan Lake. Specialized monitoring equipment was set up along the shoreline at three long term stations. They were measured weekly over a two year period. The measurements are now being used to

determine what is seeping into the lake from underneath the City of Kelowna, between Knox Mountain and just north of Okanagan Mountain Park. The measurements provided good information about what has happened at an exact point in time and space and led to the following needing to be answered: 1) how to make the one point measurement representative of flow on that location over the entire year; 2) figure out how to extrapolate the point measurements taken along the shoreline to cover the whole study area; and 3) whether all of the flow is being captured. The project enabled them to get a number for the amount of water moving from the aquifers to Okanagan Lake and they learned that there is some large inter annual variation between the two years. The information will become part of the Okanagan Water Supply and Demand Study in terms of providing some numbers for calibrating the supply and demand model. The study also provides groundwater flow information for contaminants research and demonstrates the use of seepage meters in estimates.

**6. Improving the Okanagan Water Demand Model—Jonathan Bepple (UBCO).**

Mr. Bepple is a Masters’ student at UBCO working on a project using computer modeling/individual based modeling to simulate residential water use in Kelowna and how residential water use can be affected by a range of different demand side management options. The model being used is an agent based model and it is modeling residential irrigators within the Kelowna city boundaries. These irrigators have a number of traits including: personality type, rate of learning, social connections, occupancy, and knowledge. The following different growth scenarios were modeled 1) current or baseline model to compare other scenarios to, 2) restrictive growth; 3) densification; and 4) urban sprawl. The project also looked at policy scenarios using high and low pricing schemes. The policy scenarios are: 1) control/baseline; 2) education (raising awareness); 3) subsidies (for water technology upgrades); and 4) leasing/centralized irrigation. Finally, they looked at rations and reducing the allowable volumes in each of the pricing tiers. Some of the questions being looked at include: what can be done to strengthen the resolve of water savers so

they don't give up and what can be done to put pressure on water wasters to they are more likely to change, and where would it be best to target efforts to bring about change. The next steps of this study are: to improve the economic/moral based decision making of the agents; have other sources of personality shifts (i.e., response to drought, climate change awareness), explore drought year scenarios, more linking with the Okanagan Water Demand Model, and feedback on the project.

## **7. ROUNDTABLE DISCUSSION**

One of the topics put forth for discussion was the issue of whether people are accurately assessing their own water use. In terms of Mr. Bepple's study, they were not able to link specific survey results with specific water usage rates. The model looks at the overall average of the system versus individuals. However, Mr. Reeder commented that Kelowna has very specific growth projections for the different parts of the city if Mr. Bepple is interested in the information.

There was a comment made about Okanagan residents being huge water users relative to the average Canadian but if we were to compare indoor water usage only to the average across Canada, how would the Okanagan compare? Urban Systems did some work on water conservation in the Columbia Basin and found that, generally, indoor water usage numbers are similar across Canada. Further discussion ensued on other water issues such as unaccounted water usage with the concluding comments being that outdoor watering is the biggest demand for water other than irrigation. Most of OBWB's messaging is focused on outdoor watering. Work needs to continue in finding ways to engage change, i.e. there is water-smart software available for those utilities that have meters. This software has numerous options targeted to individual homeowners regarding their water consumption.

## **8. COUNCIL WORK PLAN: Committees and Comments**

Some time has been spent looking at the committee structure with the thought of having committees meet more often and having fewer committees. Seven committees were identified in the work plan and those have been

reworked/combined into four committees. The Stormwater Management and Wetlands committees have been combined into one. There is also the WSA and Groundwater Regulations committee. The Hydrometric Monitoring committee has become part of the Drought Management committee. It will also form part of the Environmental Flow Needs committee. Instead of having a committee for First Nations relationships, those types of discussions will happen at the Council level. The plan is to incorporate some field tours, i.e. Forestry tour and possibly a source water protection tour.

The Stormwater/Wetlands committee met in the morning. They are looking at putting a survey out to the local government engineering and planning departments to see 1) what projects are being worked on, and 2) see what interest there is in forming a workshop to bring Okanagan planning and engineering professionals together to talk about rain water, storm water and wetlands and how they interact on the landscape.

The WSA/Groundwater committee meeting was well attended. There are some gaps in terms of people that should be at the table, i.e. Ground water professionals. The group is in a good position to respond to the Province when the groundwater regulations come out. There will be a level of influence they have and opportunities to look at the groundwater regulations and how the province responds to Okanagan water needs.

Concerns have been raised as to whether there is a potential conflict of interest for provincial staff members to sit on a committee? This is not an issue because any recommendations a committee puts forth are to the OWSC. The OWSC then presents their findings to OBWB. The Board then communicates with the Province. The committees are enriched by having government staff participate.

Nelson was asked to provide an update on the EFN. They are in the process of finalizing Phase 1 work. Associated Engineering has been hired and Brian Guy is the project lead. They are also in the process of putting together a workshop for February. The Phase 1 work is co-chaired by OBWB and ONA Fisheries department. Phase 2 funding has been applied for through the

Infrastructure Grant Program.

Does Nelson know when the groundwater regulations will be passed? He is not sure but indications are that they are on track for early this year. He is not sure what internal review process needs to happen before they become public.

## 9. ROUNDTABLE – MEMBER UPDATES

Council members and guests were invited to provide an update:

- Mr. Dobson (APEGBC): MCRI is well underway with 500 m of new dike to be completed by the end of the month and ready for the new freshet.
- Mr. Furness (FLNRO): Work continues on their water course development and soil removal by-laws discussions with local governments for the conservation of wetlands. There has been a significant update to the large lakes zoning protocol map (Okanagan Lake).
- Ms. Bakelaar (RDCO): work has been done on changing water rates and rate structure. The tiered system came into effect on January 1<sup>st</sup>. Thought maybe this could be a potential research opportunity: to see if increases in rates, based on the amount being consumed, makes a difference. Consultants have been hired to put RDCO's Regional Flood Plan Management Plan Phase 1 together. They will be recommending priority areas for further work in floodplain mapping for a Phase 2 project. The project completion date is anticipated for April.
- Mr. Bauer (UBCO): nothing to report.
- Mr. Petersen (MAG): time is being spent following up on the drought, educating producers. News within the Ministry is that his boss is retiring.
- Mr. Reeder (City of Kelowna): finishing up a UV risk assessment project. Phase 2 of the project is in the works with funding being put aside. Bio-solids strategic review being completed for Vernon, North Okanagan, Kelowna and Lake Country. They are in the process of replacing their water meters and have finished a cost analysis and benefits review.
- Mr. Wilson (OFS): the Chief Forester conducts a Timber Supply Review every 10 years and the predication is that there will be some significant decreases in cuts. The Okanagan determination should be available in 2017. Over the next few months, they will be having meetings with the Irrigation Districts and range tenures holders on joint practices in watersheds.
- Ms. Pyett (UBCO): MoE awarded two water budgets (Oliver and Kelowna). The reports should be out by the end of March.
- Mr. Whitehouse (guest): he has been hired by FLNRO Kamloops to look at environmental flow needs. He is providing input to EFN questions as they come up in the transition to WSA. He is also working on drought response planning.
- Mr. Davies (BCWF): there was an ice fishing day on Beaver Lake. There will be another coming up on Yellow Lake.
- Mr. Pike (BCWSA): nothing to report.
- Mr. Warner (FLNRO): looking to present to OWSC regarding the drought plan.
- Mr. Naka (IIABC): nothing to report.
- Ms. Ekkert (IHA): nothing to report.
- Mr. Edwards (DFO): The Recreational Fisheries Conservation Partnership Program has been put on hold. The new government is reviewing some of the programs. First Nations' program funding has been approved to proceed. The Pacific Salmon Foundation has a call out for proposals with a due date of February 15<sup>th</sup>. The deadline for the Habitat Stewardship program is January 15<sup>th</sup>.
- Mr. Rogalski (ECCC): Their part of the HSP deadline is January 15<sup>th</sup>. The Wetlands Conservation Fund deadline is January 15<sup>th</sup>. The new government is working on building their first budget and has instituted a pre-budget consultation process ([budget.gc.ca](http://budget.gc.ca)) to try and inform the development of the budget.
- Ms. Clark (RDNO): have a couple of water meter programs in the works right now: 1) encoder/receiver transmitters, 2) commercial meter program which will replace the older meters (about 20/year). Working with Recs and Trail BC to put in good barriers at the Grizzly Reservoir recreation site and get the sites set up.
- Mr. Meredith (CWRA): there is a BC Branch Workshop and AGM in May titled Wacky Weather and Hard Hydrology. The National Conference, titled Water Management at Different Scales Reducing Vulnerability and Increasing Resilience, is being held in Montreal May 24-27, 2016,
- Mr. Janmaat (UBCO): talked about the value of education especially in ways that we may not normally think about. For instance, education may make people as a whole willing to have new

policies implemented but not necessarily change individual responses.

- Ms. Rahineova (UBCO/OBWB): nothing to report.
- Mr. Littley (OBWB): the Water Conservation Quality Improvement Grant deadline is Feb 12<sup>th</sup>. Applications can be sent to James.
- Ms. Jackson (OBWB): with regard to MWW, a survey has been sent out to the garden centres to get feedback on the plant campaign from the spring/summer. The final touches on the MWW Pledge Survey are almost complete and hoping to get an email sent out next week to all those who took the pledge. She has been providing help too many organizations interested in spreading the word on mussels. Working on the Wetland website.
- Mr. Jatel (OBWB): working with OBWB on a submission to the Habitat Stewardship Group to fund the creation of new wetlands in the Okanagan. Funding is being requested for the following projects: 1) ONA–three years worth of funding to create two wetlands/year on reserve lands next to schools, complimented by OBWB with the construction of a wetland by Sunset Golf Course (RDCO); 2) support for the building of a wetland that will intercept waters that have high concentrations of nitrate before going into Coldstream Creek ; and, 3) a project at Giant

**CERTIFIED CORRECT:**

Head School in Summerland.

- Mr. Birtles (IH): in December, the province rolled out their new Groundwater at Risk Pathogens document (an assessment tool for people or water systems that have wells). They plan to have the Groundwater Disinfection Tool Guidelines available in January. Health Canada is reviewing manganese and recommending a maximum acceptable concentration.
- Mr. Dendy (BCFGW): pruning is going well and expecting a bumper crop in the valley this year.

**10. NEXT MEETING**

The next meeting of the Okanagan Water Stewardship Council will be a joint meeting with the Okanagan Basin Water Board on Thursday, February 11, 2016 from 12:30 to 4:30 at Okanagan Regional Library, 1430 KLO Road Kelowna.

**11. ADJOURNMENT**

The meeting was adjourned at 4:30 p.m.

**Moved by Don Dobson**

***“That there being no further business, the meeting of the Okanagan Water Stewardship Council of January 14, 2016 be adjourned.”***

**CARRIED**

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Chair

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Executive Director