

## Regular Monthly Meeting AGENDA

**Please read:** Meeting Package  
 Council Work Plan 8.0 (v 1.0) | SWS

**Please bring:** Meeting Package

Meeting theme(s): **Okanagan Groundwater**

Meeting objective(s):

- (1) Review new Okanagan groundwater status, recent publications, and future research.

Committee Meetings	Chair / Presenter	Time
<i>Reservoir and Dams (OBWB office, 1450 KLO Rd, 2<sup>nd</sup> floor Kalamoior rm)</i>	<b>Dr. Bauer</b>	9:00 – 11:30
<i>Policy (Capri Hotel)</i>	<b>Dr. Guy</b>	11:00 – 12:30
<i>Flood &amp; Drought (Capri Hotel)</i>	<b>Mr. Boswell</b>	11:00 – 12:30
<i>Source Protection (Capri Hotel)</i>	<b>Ms. Clark</b>	11:00 – 12:30

Lunch

12:30

1.	Welcome and acknowledgements	<b>Denise Neilsen (chair)</b>	1:00
2.	Approve agenda		
3.	Adopt Thursday, February 13 <sup>th</sup> meeting notes		1:05
4.	Business arising from previous meeting(s): a. Sub-committee updates b. other	Committee Co-chairs	1:10
5.	Board Report: <i>March 3, 2020</i>	<b>Anna Warwick Sears</b>	1:25
6.	Presentation: Okanagan Wetlands	<b>Carrie Nadeau                      Hugh Hamilton                      Mathieu Bourbonnais /                      Tina Deenik</b>	1:35
7.	Discussion and possible action items arising from presentation: (1) Define water problems & priorities, economic feasibility of solutions, responsibility, necessary legislation and required action (2) Communicate and coordinate between levels of government (3) Present proposal and recommendations to government (4) Advise local government when proposed actions, bylaws are contrary to the Okanagan Basin Study.	Council members	2:45
9.	<i>Coffee Break</i>		3:00
10.	Member updates: roundtable [1 minute / member]	Council members	3:15
11.	Chair report	<b>Denise Neilsen</b>	4:15
12.	Next Meeting: <b>Thursday, April 9<sup>th</sup></b> , 12:30pm – 4:30pm		
13.	Adjourn		4:30

### Resources:

- Sustainable Water Strategy 2.0 [obwb.ca/sws](http://obwb.ca/sws)
- Okanagan Wetlands Action Plan [obwb.ca/wetlands](http://obwb.ca/wetlands)
- Okanagan Basin Water Quality Database [obwb.ca/wqdb](http://obwb.ca/wqdb)

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## OKANAGAN WATER STEWARDSHIP COUNCIL

A Technical Advisory Body to the Okanagan Basin Water Board  
MINUTES OF A MEETING HELD THURSDAY, FEBRUARY 13, 2020,  
AT COAST CAPRI HOTEL, KELOWNA, B.C.

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### COUNCIL MEMBERS:

#### Present

Emeritus, Chair	Denise Neilsen
BC Ground Water Association	Doug Geller
Agriculture & Agri-Food Canada	Kirsten Hannam
Agriculture & Agri-Food Canada	Jesse MacDonald (Alt)
BC Agriculture Council	Hans Buchler
BC Wildlife Federation – Region 8	Lorne Davies
City of Kelowna	Rod MacLean
Okanagan Collaborative Conservation Program, Vice-Chair	Scott Boswell
City of Kelowna	Robinson Puche
Regional District of Central Okanagan	Brittany Lange
Regional District of North Okanagan	Renee Clarke
Regional District of North Okanagan	Jennifer Miles (Alt)
UBC Okanagan	Bernie Bauer
Irrigation Industry Association of BC	Bruce Naka
Forests, Lands and Natural Resource Operations	Tony Zanotto
Interior Health Authority	Rob Birtles
BC Fruit Growers Association	Adrian Arts
Environment and Climate Change Canada	Doug Lundquist
BC Cattlemen's Association	Keith Manders
Westbank First Nation (Utility Manager)	Krista Derrickson
Ministry of FLNRORD (Ecosystems)	Ryan Whitehouse
Irrigation Industry Association of BC	Ted Van der Gulik
Canadian Water Resources Association	Brian Guy
Okanagan College	Rob St. Onge

#### Regrets

Shuswap Okanagan Forestry Association	Chris Bradford / Randy Hardy
Regional District of Okanagan-Similkameen	Zoe Kirk
Environment and Climate Change Canada	Dave Hutchinson

### STAFF:

OBWB, Water Stewardship Director	Nelson Jatel
OBWB, Executive Director	Anna Warwick Sears
OBWB, Office and Grants Manager	James Littley
OBWB, Policy and Planning Specialist	Kellie Garcia
OBWB, Communications Director	Corinne Jackson

### GUESTS:

District of Summerland, Mayor (OBWB Board Member)	Toni Boot
Pinna Sustainability	Gillian Aubie Vines
UBCO	Paula Verholen
UBCO	Meghan Reid
Recreation Sites and Trails BC	Ian McLellan
UBCO (EEGS)	Marni Turek
UBCO	Mathieu Bourbonnais
Eterna Consulting	Scott Smith
Consultant	Keith Duhaime
Independent	Glenn Sinclair
Independent	Eva Antonijevic
Independent	Lorraine Bennest

## 1. CALL MEETING TO ORDER

Denise called the meeting to order at 1:00 pm by welcoming members and guests and acknowledging that we are meeting on the unceded territory of the syilx people, the original inhabitants of the Okanagan. Introductions commenced around the table.

## 2. APPROVE AGENDA

Agenda was approved as presented.

**Moved by Bernie Bauer**

**Seconded by: Brian Guy**

***“That the agenda for the February 13th, 2020 meeting of the Okanagan Water Stewardship Council be approved.”  
All in favour. CARRIED***

## 3. ADOPTION OF MINUTES

Minutes were approved. 3 changes made (Gwen Sinclair should be Glenn Sinclair, Adrian Arts attended the Environmental Farm Plan Summit, not the Summit on Canadian Soil Health, and Rod MacLean said they “will be putting in \$1.5 to 2 million of water meters” not “will be putting in 1.5 to 2 million water meters”).

**Moved by Adrian Arts**

**Seconded by Bernie Bauer**

***“That the minutes from the December 12th, 2019 of the Okanagan Water Stewardship Council be approved.”  
All in favour. CARRIED***

## 4. Presentation- Okanagan Climate Projects Report – Gillian Aubie Vines

- The report is a first step to support regional collaboration; work started in June and a series of regional workshops were held to share projections, speak about the impacts and to form the report.
- There were some mistakes, so an amended report will be a reissued in the coming days.
- Addresses future temperature change in BC associated with global and local green house gas emissions.
- The report includes data for seasonal precipitation in specific regions including the valley bottoms, and shows 30 year averages and predictions for the 2050s and 2080s.
- If we take a ‘business as usual’ approach, then by 2100 we can expect a temperature increase by 6 degrees. If aggressive changes are taken on our part the temperature is expected to increase by 1.5 degrees by 2100.

- General trends are more variability, higher temperatures year round, more precipitation, and a longer growing season.
- Key indicators are less summer rain, more spring and autumn rain and heavier, more frequent, torrential rain events by the 2080s.
- Key temperature projections: there will be more days over 30°C on average.
- The report includes maps to demonstrate where temperature and rain increases will occur and provides insights to aid future planning and to prepare for the coming changes/ to help us to move away from emergency planning.

Presentation will be posted on: [www.obwb.ca/wsc](http://www.obwb.ca/wsc).

## 5. Discussion and Questions:

Denise: How do you define the growing season?

Gillian: The first 5 consecutive days with temperatures over 4-10? Degrees (will check reference)

Doug Lundquist: Autumn is our driest season – is 200mm an error? We don’t get close to 200mm of rain in the autumn. Also the information is too detailed/ pin-pointed. I’d like to hear more about the meteorology. It is great that you are raising awareness.

Gillian: We play with the detail/climate projections and there is a level of uncertainty; all the numbers are rounded. The change numbers are provided, not the totals, so that people need to do their own math. We will follow up about the Autumn comment.

Doug Geller: I think the extreme wet day in mm’s is equal to the cumulative long term projection. My takeaway message is that the historical manipulation of water in the Okanagan has worked but it needs to work much better and we need to make innovations.

Scott Smith: Did you use the same models for RCP projections?

Gillian: We used 12 global models and altogether they were downscaled into 800 metre blocks and then mapped and then data points were selected (hospital sites etc)

Rod: I like the report and that there is something on paper to show people the “book that they’re following”.

Lorne: Did you look at IDF curves and have there been increases in values? Have they changed from the past to the present?

Gillian: Not as part of this project, but these curves are being developed. There is a lot being done province-wide to update the curves.

Adrian: What are the chill days for apple buds?

Denise: Usually we have met chilling requirements by mid Nov to Dec and then there's a hiatus before more heat in the spring. I don't see an issue with meeting chilling requirements in the valley bottoms.

Question: What about heat in the summer over 30 degrees?

Denise: Heat is a more serious issue- around 32 for apples, 35 is a threshold for cherries. It is a real problem for fruit quality, even with grapes.

Kirsten: The warmer temperatures might inhibit the trees' ability to protect themselves during cold snaps, from disease, etc.

Brian Guy: We've been working with this data and I think this work hits the sweet spot between not enough and too much data. It's important and very useful for the purposes of education, planning and community engagement.

Gillian: Thank you for that.

Ted: The Province will be adding climate change as a factor in the calculator used to determine water required for certain crops.

Jesse: Is the Province using it officially or just because it's there?

Ted: They are using it; every water manager uses the tool.

Adrian Arts: It's absolutely problematic that the government is using that tool.

Ted: It comes down to the business plan. You're right that it (the calculator) gives good information but it can be used the wrong way. Business plans are considered.

Bernie: These are really important issues. I am really uncomfortable about misinformation. They should get someone in from a licensing branch to hear our concerns but let's not generate myths.

Hans: Based on my own groundwater licensing experience - I'm not quite sure about policy and

who are the individuals making these decisions? The ministry needs to come out with a clear written policy about this.

Ted: I think that's the issue- different regions and offices do different things, so a written policy would be a great thing.

Bruce Naka: There has to be a parameter for how much water is being used by growers- there is a finite amount of water and the ministry has to look at finding a happy medium.

Lorraine: Our water supplies and requirements are highly variable, so if you're already cut to the bone, licensing won't work. At the moment there is a cushion as everyone is being licensed for forage crops; this has been working.

James: I'm curious about temperature changes and water quality issues. Is there someone who will be taking the report and looking at the water quality issues such as an increase in bacteria?

Gillian: I will turn that back to the group

Gillian: Temperature and turbidity have come up

James: The zebra mussels will love it though

Kirsten: Is the report available online?

Gillian and Brittany: Yes- it is on the RDCO website under environmental planning and on the RDNO site too.

Anna: Could you explain the event you'll be hosting at the end of the month?

Brittany: RDCO is hosting the event Building Community Resilience in a Changing Climate from 6:30pm-9:30pm on Wednesday, Feb 26<sup>th</sup>. The keynote speaker is Sheila Watt-Cloutier at UBCO (Commons building lecture hall- opposite the UNC/building with the rainbow stairs (room COM 201)). 20 tickets are still available (on eventbrite).

Anna: Sheila is an amazing speaker- very passionate and articulate- I had the pleasure of seeing her speak in Vancouver.

Scott Smith: It is nice to see this report and that it was commissioned by regional districts but it looks like a refreshing of the message (first spoken about in the 80's), but not new information per se.

Denise: Yes we keep getting a refreshment of the message. People are braver now about making the

messages as they're more certain about the climate data. And yes we really should be getting someone in who is making decisions on groundwater applications. The climate change components for farmers now and in the future must be taken into consideration.

Ted: There is a water purveyor in BC who did a study on irrigation. They have come up with a policy now that says that if you are in the district and in the ALR, and have been paying for water, that you will be cut off and the crops you can grow will be dictated. Can they do this? I'm not sure and I hope the farmers in that area will write to the ministers. It's happening to increase domestic water supply. In Phoenix they did something similar.

## 6. BUSINESS ARISING (from previous meeting):

### a) Sub-committee updates

#### Dams and reservoirs committee (Bernie Bauer):

Committee members are working furiously to develop content for the white paper- the draft will be available next month. We have finalized the FAQ and facts document and after a bit more refinement from Nelson we will post bibliographic material for folks to look at.

#### Policy committee (Brian Guy):

The policy committee started with 6 issues, 3 have been dealt with, regarding providing advice to local governments for UNDRIP principles and agricultural water. A new committee will be set up.

There are 3 active projects: implementation of the Water Sustainability Act; influencing federal governments on the availability and sharing of sensitive satellite information; and the next steps in the Okanagan environmental flow needs project.

The committee is also working on 4 other issues: draft letters for Anna and the board to provide input to the province; a discussion paper and provincial document proposing objectives for the Osoyoos aquifer project; and modernizing the BC Emergency Program Act (a document was put together and sent last week). And there is the opportunity to provide comments on the provincial water quality guidelines for source drinking water (from the uplands before it gets to treatment).

Denise: Questions for Brian?

#### Sustainable Water Strategy (Kellie Garcia):

Kellie- the SWS is done and it is available on the OBWB website. Thank you again for all your hard work, especially to the editorial committee. It was a lot of effort and hard work.

#### Irrigation Management Committee: (Bruce Naka)

We held the irrigation workshops – most recently in S.E Kelowna. With some of the new information in the report they can use that as part of their toolkit. There will be some change in the committee and they are working on that now.

#### Source water protection committee (Renee Clarke):

We had a meeting today and will be working as a technical committee with Kellie to support the source water protection toolkit. We are working on a policy development for source protection paper – a literature review of papers from the provincial health officer, Polis, WWA, etc, bringing them together to see where collective discussion is happening.

#### Flood Protection Committee (Nelson Jatel):

Committee tasked with 2 pieces of drought and flood- the drought has been passed to Kellie. There is a lot going on for flood management throughout the Province and 3 Regional districts including a new public facing website. There will be public engagement to bring together professionals who may have not considered flood adaptation in the Okanagan and to review the toolkit.

## 7. BOARD REPORT (Anna Warwick Sears)

1. The meeting was last Tuesday and there was no January meeting. We had a presentation by Laura Neal- ecosystem head who spoke about negotiating conflict between roto-tilling milfoil and the Rocky Mountain ridged mussel. The Mayor of Vernon shared some passionate words regarding the need to keep beaches clean of invasive aquatic weeds.
2. Staff reports and presentations: Osoyoos Mayor Sue McKortoff was re-elected as Chair and Cindy Fortin was re-elected as Vice Chair of OBWB. Chief Christopher Derickson and Chief Chad Eneas from Penticton were appointed as ONA representatives to OBWB. The board appreciated the letters from council that went to the provincial government. The board read the final drafts and is pleased that members take the time and contribute to these policy papers.



3. We updated the board on the LiDAR project and they received the rest of the upper watershed LiDAR data on a hard drive last week. This year the problem with the orthophotos is that the factory processing them in China has been shut down by Coronavirus. The hard drives are being passed around the South Okanagan at the moment. Local governments are free to share the LiDAR data and need to complete data sharing agreements. It is all public data however it is not publicly available from the province. OBWB is allowed to share it but are not owners of the data. Apparently it's difficult to set up data portals with the province but we will try.
4. We are wrapping up the multi-million dollar flood mapping project.
5. Kellie and Anna helped to write a grant proposal for flood mitigation policy outreach. We're really interested in non-structural policy/planning solutions that are effective for the Central Okanagan and member communities.
6. We are partnering with a faculty member from the UBCO Engineering department, who has a background in planning, and we will have a Post Doc and a student working on flood mitigation policy; they will be looking at examples of best practices throughout the entire valley. This is an OBWB-funded project.
7. The RDCO and OBWB have set aside funds to do some public outreach when the website is launched, including valley-wide workshops.
8. The board also received a solid draft of OBWB's new 5 year Strategic Plan and we are giving the board time to come back with edits; hopefully it will be adopted at the next meeting. We have been asked to come up with solid indicators for tracking how much movement has been made on specific projects, for example, how many policy changes have been made, what the hurdles have been, how many hydrometric stations are available, etc.
9. We presented on the flood modeling project. Currently we do not have any large grant projects, so we will be working more and more with council members, to hear your thoughts, to get the next big low hanging fruit for developing grant proposals.
10. We are really pleased to see a contract being awarded for Similkameen modeling, funded by the IGC. Also, the province has flown the Similkameen for LiDAR data. The RFP required that the model be able to link to the models for

the Okanagan (the models will share the same platform and data).

11. Corinne continues with public outreach.
12. We are trying to incorporate new modeling results, to move away from 675 litres per person, per day. Now we are looking at figures per water connection and there are new figures for industrial water demand.

#### Discussion:

Denise: It is really nice to see Toni Boot and Krista Derrickson here today.

Toni Boot: Speaking specifically to letters drafted by this group (that go on to the board and then to the provincial government), there is no way that we as board of directors could have come close to the level of expertise and input that were sent in those letters. So speaking as a Director, I think the Chair would agree that all the Directors recognize the absolute value of the OWSC, as it adds a lot of credibility to the statements passed to the province.

Krista Derrickson: We've been busy over the last few years and I sit on this board and one other. It is useful to see what both groups are doing. Other groups look to this group and everyone should be proud of this; if we make performance indicators then this does allow other groups to do something similar.

#### **8. Presentation- UBCO 2020 Co-op Opportunities- Paula Verholen and Meghan Reid**

Co-op is optional for UBC students and it's very competitive as students are pre-screened and vetted; they are in at least 4<sup>th</sup> year when starting a co-op position. It's an opportunity for students to apply classroom learning to real-world experiences.

- There are students from almost every discipline and they are available to work as early as May especially in sciences (freshwater, ecology etc)
- Students are required to complete 4, 8 or 23 month work terms, starting in May, Sept or Jan. Students are happy to relocate throughout the province and sometimes across the country but are most keen to stay in the Okanagan.
- Co-op students can bring fresh ideas and talent and can be a great help in a short-term project, kick-start a project, and it's a

way of building a long term recruiting strategy.

- We assist you to craft job description, we post it on the job board then send a resume package of prescreened applications for you to short-list for interviews.
- Hiring incentives available depending on the type of organization. Contact [coop.ok@ubc.ca](mailto:coop.ok@ubc.ca)

Comment from Mathieu: students in his GIS classes who also have environmental science skills are dying for summer employment.

Denise: meeting will resume at 3:15.

## 9. COFFEE BREAK

## 10. MEMBER UPDATES

Council members and guests are invited to provide an update on their organization's activities:

- Nelson: Technical session May 21<sup>st</sup> in Kelowna at Yacht Club 10-4pm with Northwest Hydraulics on flood modeling. There will be an EFN technical workshop on April 6<sup>th</sup> at the library next to the OBWB office on KLO rd.
- James: The water conservation improvement deadline is 4pm Feb 28<sup>th</sup>.  
Aqua Hacking: We have over 150 registered participants and the semi-final is on Mar 21<sup>st</sup> 2:30 - 6pm in the Commons building at UBCO. We are working on showing on Mar 19<sup>th</sup> 7pm - a movie called Brave Blue World-highlights - about different water technologies in various fields.
- Ian McLellan: responsible for all legal recreation on crown land from the south of salmon arm to the U.S border; they have 330 recreation sites and reserves. It's a challenge to keep up with.
- Tony: the budget is coming up next week and it's anticipated they will be staying course. The ministry business will be taken into account-keeping a strong economy and advancing reconciliation. I will discuss water licensing comments with colleagues and hopefully in the future we can come up with a resolution.

- Marnie Turek: there is a new professional development p/t coordinator - rolling out the first course on wetland delineation and assessment; it's a 5 day course: 3 days in class and 2 days in the field, running from July 6<sup>th</sup>-10<sup>th</sup>. Contact [marnie.turek@ubc.ca](mailto:marnie.turek@ubc.ca) for more information. Second new class run by Xiaohua (Adam) Wei who has co-authored Forest, Trees and Water on a Changing Planet report- available online- ask Marnie. Research from Uni of Washington interested on impact of fire on watersheds- doing a survey through NASA- any water utilities who'd like to be a part of this survey let her know. They will be having a focus group via a web conference.
- Rod: There are now a couple of good years of flow data, snow data and instantaneous creek flow data, and people interpreting the data too.
  - Lorraine commented: the earlier and more open you are with your model, the more input can be provided, it's very important the data doesn't stay behind walls.
- Ryan: they are continuing to do drought planning in preparation for next year and are working with Kellie to do so. Also working on communications tools. A proposal is out to do aquatic assessments on flow-related issues and stream temperatures. Another proposal out is to look at fishery sensitive water issues in the Okanagan to see if the objectives are still valid- we will provide more detail if it goes through.
- Lorne: There is a new campaign to ban cougar, lynx and bobcat hunting. There will be more of a safety issue with peoples' pets and there's a human safety factor and potential conflict for people who live on the boundaries. BCWF supports present hunting and trapping regulations. Currently emotion is making decisions rather than science.
- Brittany: There is a new full-time environmental planner with RDCO (Dannika has moved into a more senior role). There are 20 tickets left to the event on Feb. 26<sup>th</sup> and we are getting up to date on the flood and drought planning committee. The biomass inventory was very well received and the grant application was endorsed.
- Kirsten: about 10 of the scientists, technicians

and field crew attended the irrigation workshop that Bruce put on in Kelowna. Jesse MacDonald, Lorraine and I are part of ONA's team looking at restoration of the Trout Creek watershed; we are looking at the information available and will keep the council up to date on this project.

- Brian: The date of the CWRA conference is June 15-18<sup>th</sup> in Winnipeg. The deadline for abstract submission is tomorrow. It will be a great conference.
- Hans: Snow pack update – the numbers are similar numbers to 2018.
- Bernie: Project at Welsy dam fish committee. The fish ladder was never installed; I've been working for 10 years for fish passage. We've gone through technical/engineering studies and have presented them to BCHydro, who now has created a project team, and has put out a flyer announcing that they are intending to proceed with fish passage. Geotechnically-speaking the dam isn't very stable so there is thought to decommission the dam and they are looking at the various options. They are thinking the project timeline will be 6-7 years, so we are hoping to achieve a faster timeline.
- Doug Geller: The annual conference is on April 16<sup>th</sup>. There are ongoing changes in BC industry- we are seeing business consolidation. In general people are busy.
- Bernie: (directed to Anna) Regarding the LiDAR data on the hard drive being sent around- can you guarantee it will be virus free?
- Anna- no.
- Ted: Regarding the e-blasts that OWSC puts out every 2 weeks....one was written by Mark Wei on groundwater, but it doesn't tell the whole story/the negative things that can happen to a farm if they don't get a license. The banks are now phoning the province to see if you have a license before giving you a loan-

**CERTIFIED CORRECT:**

that has just started in the last half a year or so. There will be more impacts to not having a license after 2022. If you don't put in your application in the next 2 years then a lot of things will happen.

**11. CHAIR REPORT – Denise Neilsen**

Thank you to everyone. Coop students contributed so much to my work and I highly recommend them- they can provide a real contribution to your work. There is direction required from OWSC for large research projects going into the future and we will be canvassing people for various research ideas. Nelson will send out a memo. This is a real opportunity for us to make a contribution to future work in the Okanagan. Thank you to everyone.

**12. NEXT MEETING**

The next meeting of the OWSC will be March 12<sup>th</sup>, 2020, 12:30pm – 4:30 pm.

**13. ADJOURNMENT**

The meeting was adjourned at 3:53 p.m.

**Moved by Krista Derrickson and Bernie Bauer.**

***“That there being no further business, the meeting of the Okanagan Water Stewardship Council of February 13<sup>th</sup> be adjourned.”***

**CARRIED**

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Chair

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Executive Director