

OKANAGAN WATER STEWARDSHIP COUNCIL

A Technical Advisory Body to the Okanagan Basin Water Board

MINUTES OF A MEETING HELD THURSDAY, February 12, 2015, AT OKANAGAN REGIONAL LIBRARY, 1430 KLO ROAD, KELOWNA, B.C.

COUNCIL MEMBERS:

Present

Assoc. of Professional Engineers & Geoscientists of B.C.
BC Agriculture Council
BC Ground Water Association
BC Min. Forests, Lands, Natural Res. Ops. (Resource Mgmt)
BC Min. Forests, Lands, Natural Res. Ops. (OSNR)
BC Min. Forests, Lands, Natural Res. Ops. (OSNR)
BC Water Supply Association
BC Wildlife Federation – Region 8
Canadian Water Resources Association
Canadian Water Resources Association
City of Kelowna
Environment Canada – West and North
Interior Health Authority
Okanagan Collaborative Conservation Program
Okanagan Nation Alliance
Regional District of Central Okanagan
Regional District of North Okanagan
UBC Okanagan

Don Dobson, Chair
Hans Buchler
Marta Green
Grant Furness
Bob Warner
Ray Crampton
Toby Pike
Lorne Davies (alt)
Brian Guy
Dwayne Meredith (alt)
Jason Angus
Ian Rogalski
Rob Birtles (Vice Chair)
Carol Luttmmer
Natasha Lukey
Margaret Bakelaar
Jennifer Miles
Bernie Bauer

Regrets

Agriculture & Agri-Food Canada, Research Branch
BC Cattlemen's Association
BC Fruit Growers Association
BC Ground Water Association
BC Ministry of Agriculture
BC Wildlife Federation – Region 8
City of Kelowna
City of Vernon
Fisheries and Oceans Canada
Okanagan Mainline Real Estate Board
Okanagan Nation Alliance
Okanagan College
Okanagan Forest Sector
Regional District of North Okanagan
Regional District of Okanagan-Similkameen

Denise Neilsen
Lee Hesketh
Denise MacDonald (alt)
Remi Allard
Andrew Petersen
Doug Flintoft
Jason Ough
Rob Miles
Doug Edwards
David O'Keefe
Zoe Masters
Leif Burge
Kerry Rouck
Renee Clark
Evelyn Riechert

STAFF:

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

Anna Warwick Sears
Nelson Jatel
James Littley
Corinne Jackson
Ted Wannop

GUESTS:

Regional District of Okanagan Similkameen
UBC-O
UBC-O
UBC-O
UBC-O
UBC-O
UBC-O
Water Cycles
WaterSmith Research
Westcoast CED Consulting

Zoe Kirk
Craig Nichol
Grace Phan
Jeff Curtis
John Janmaat
Jonathan Beppe
Natasha Neuman
Christine Mettler
Russell Smith
Karol Hansma

1. CALL MEETING TO ORDER

Don Dobson called the meeting to order at 1:00 p.m. and welcomed members and guests.

2. APPROVE AGENDA

Don Dobson brought the group's attention to item #9 on the agenda and asked that the group think about what they are hearing in today's presentations and ask themselves what they see as emerging issues that the Council may want to consider. The Council will take some time to discuss this at item #9.

**Moved by Rob Birtles
Seconded by Bernie Bauer**

"That the agenda for the February 12, 2015 meeting of the Okanagan Water Stewardship Council be approved."

CARRIED

3. ADOPTION OF MINUTES

Bernie Bauer thanked those responsible for recording the minutes indicating that he felt they were an accurate reflection (largely) of the information presented at the meetings and good for the historical record of the Stewardship Council.

Corinne Jackson had a few changes that she would like to see made to the Okanagan WaterWise communication and outreach presentation as well as a noted correction to the spelling of her name. The December 11, 2014 minutes have been updated to reflect her comments.

**Moved by Bernie Bauer
Seconded by Lorne Davis**

"That the minutes from the December 11, 2014 meeting of the Okanagan Water Stewardship Council be approved with the above concern noted."

CARRIED

4. BOARD REPORT—Dr. Anna Warwick Sears

Last week was the first meeting of the Board since the municipal election in November. There are a few new Board members. It is going to be a good strong board and they have a lot of respect for the interaction with the Council and how the Council balances the Board and provides it with information.

As of last week, the 2015 Osoyoos Lake Water Science Forum (October 7-9, 2015) has been finalized. There has been a lot of interest and many people have signed up to be on the Steering Committee. This is a great forum on shared water

issues and brings in presenters from both sides of the border. It brings together a great mixture of people.

The Washington State Department of Ecology has applied for a grant for a water movie on Osoyoos Lake and OBWB has been asked to help write the script and recruit speakers.

OWBW and FLNRO have had a lot of engagement about the water allocation tool. They are hopeful about the idea of doing a collaborative water allocation tool with FLNRO. Ms. Warwick Sears is hoping to apply for a gas tax grant (April) to get funding for this. This is the next step in taking all the work done on water supply and demand and making an operational tool for water. There is still a lot of consultation that needs to happen on this.

OBWB is receiving (looks like) funding from the Ministry of Environment to do a model by-law on stormwater infiltration in support of their Guidebook they have put forward on Stormwater Infiltration Best Practices.

OBWB is in the information gathering stages of developing protocol agreements with First Nations. They are meeting with the RDs/ONA to see if it would be helpful to have formal protocol agreements in place and how they would move forward with this. There have been some good discussions at the Board level on this matter with the result being that more information is required in order to progress.

There is a very rich report out there on the different communication things going on and the most recent report is particularly good as it contains information on the outcome of Make Water Work and Don't Move a Mussel final reports. These communication campaigns were effective for getting the message out and the making the general public aware of the issue. The Federal Government has finally passed a law making it illegal to bring zebra and quagga mussels over the US/Canadian border which empowers the border agents to stop and turn back boats that are suspected of being infected. The media has played a huge role in getting the message out with large in-kind investments in both campaigns.

This year OBWB is completing the update of the land use inventory for the Okanagan. Last year, the North Okanagan and Central Okanagan were completed and the data processing for those areas is almost complete. The Board has approved the funding to finish the project (South Okanagan).

There has been discussion about zebra and quagga mussels and the next steps needed. A lot of talk has centred on how to "up our game". In a

recent webinar by PNWER Invasive Species Working Group, it was noted that BC has the lowest budget at \$20,000/year for inspection. Washington State has a budget of approximately \$175,000 and Alberta's budget is around \$530,000. In 2014, BC performed 132 boat inspections compared to 3747 in Alberta and 49300 in Idaho. There were 11 positive hits in Idaho. More needs to be done. Mr. Littley has helped the District Lake Country draft a resolution to the Southern Interior Local Government Association. There is a lot of appetite at the Board level to push advocacy at the Provincial level. More training is needed at the Federal level. The US Geological Survey has maps that are updated daily showing the spread of mussels. Don't Move a Mussel website has a link to those maps.

5. Committee Reports—Nelson Jatel

The Water Use Planning committee met in the morning. Toby Pike provided a presentation on the Water Use Plan for Mission Creek. They spent some time discussing how they can focus on some projects throughout the region and came up with some possible funding opportunities through the Infrastructure Grant program to look at tools that they might be able to have applied at sub-basins throughout the Okanagan for water use plan and in particular look at trigger graphs and seeing whether they can develop some specific trigger graphs per sub-basin as a means for starting up conversations around water use plans. Don Dobson attended the meeting and noted that it is critical that we are involved in these discussions. Environmental flows are a complicated issue with regards to how water is apportioned for all its various uses. There are a variety of interests in the room and Mr. Pike's presentation was very instructive. This morning's meeting was a good start to the discussion but there is a lot more to cover.

GUEST PRESENTATIONS—

6. Dr. Jeff Curtis—UBC Okanagan - Emerging Research: Spray Irrigation in the Okanagan

Dr. Curtis is with the Freshwater Science program at UBCO and he is discussing spray irrigation and some of the research gaps that exist in the Okanagan and some opportunities to fill those gaps.

Dr. Curtis got involved in spray irrigation, to an extent, as a result of their examination of endocrines disruptors in the Mackay Reservoir through the distribution of water as it is supplied to the landscape. The question of phosphorous (P) is one Dr. Curtis has been interested in for two decades. He has done work on P and watersheds around Canada but never locally. One of the

motivating factors to this research was the priority attached to P in the Okanagan Basin study as well as targeting P removal from wastes. An example of how wastewater might be repurposed is irrigating with recycled wastewater. Gala Wineries are irrigating a portion of their land with recycled wastewater. The future for water scarce regions is recycling water which has proven to be effective and successful in creating new, reliable water supply. This is moving towards integrating water supply and wastewater management. Non potable reuse is a widely accepted practice that will continue to grow. However, we are still far behind but there are some advantages to not being out in front. In the US, Australia, Singapore, lots of work has already been done on water reuse. Water reuse can be really expensive, i.e. creating bottled water for consumption from wastewater using reverse osmosis and there is no more expensive way to treat water than reverse osmosis.

We are implicitly reusing water right now. We recycle and indirectly reuse waste water when we extract and discharge to the same place, i.e. Okanagan Lake where we supply ourselves with drinking water from Okanagan Lake and we discharge wastewater into Okanagan Lake. This can be done because the environment polishes the effluent to reuse standards.

Another component that is constantly being dealt with is that we are a growing population. We put in place an infrastructure to try and mitigate some of the problems to our environment but as we continue to grow we put increase pressure on that infrastructure. In the past, we have relied on mainstream lakes in our valley to polish wastewater and we have run into limitations. There are beautification problems and capacity issues in polishing water.

Part of the understanding of the limitations, motivated Vernon, 30 years ago, to decide to spray irrigate wastewater onto the landscape rather than put it directly into wastewater. The effectiveness of this is not well documented which is partly where this research will go but another reason it is not well documented is that it lacks the hydrology and geochemistry to support the assessments of effectiveness. Vernon has a BNR plant which likely has an effect on the nutrient removal efficiency of the watershed but we don't know that right now.

At present, we are managing wastewater separately from water supply and a step that needs to be taken is considering reuse as part of the supply. Another step is taking a look at where are the growing water supplies in our region. The only growing water supply is that of reuse water because we are using more and more water as our

population grows. The City of Vernon has pursued provincial approvals for reuse on alternative crops (at present it is largely used on golf courses, playing fields, pastures, and forage crops). Approval for alternative use is a key step towards integrative management.

Phosphorus is readily absorbed by soils and readily recycled in the biogas in soils which means that the turnover time for phosphorus in soil is centuries. There is a huge capacity for retention of phosphorus in the soils. There is also retention that takes place in the wetlands in the irrigated landscapes where there is permanent burial. Depth in the soil has not been determined yet but it will vary by soil.

This research will look at phosphorus removal using orthogonal methodologies which means using a number of different approaches that estimate the same thing to make findings more robust. Every technique that one might bring to the table will have weaknesses and strengths and they are going to use a number of different techniques thereby compensating for one another; for example, estimating the retention of phosphorus by soil and wetland sediments by inventory analysis. This method will compare the irrigated and non-irrigated portions of watersheds and determine what the difference of the phosphorus accumulation is in those parts of watersheds. That difference is retention which is then divided by 30 years to give the annual retention rate. Another method, which is the conventional approach, is retention of phosphorus by hydrologic mass balance in which you develop a measure of inputs (atmospheric, weather, irrigation) and a measure of outputs (mainly hydrologic) and come up with an estimate of retention. They will also be using geochemical tracers to help estimate what is retention of phosphorus. This technique relies on wastewater which is enriched in chloride and natural drainage which is enriched in fluoride (uncommon but found in this watershed). The following are the objectives of this research: coming up with what would be the long term phosphorus retention in irrigated lands and wetlands, hydrologic mass balance for irrigated watershed, nutrient polishing performance for irrigated watershed, and then trying to close the loop and bring it back to integrated water management (estimates on what would be reasonable costs to bring water to observed standards using alternative technologies). The idea is to understand the value of spray irrigation. This research will start in the spring and they have a one year commitment from a Master's student to work on the project in the field.

Some discussion followed the presentation regarding the practical application of the research; and what marketing efforts are in order to tie in water shortages or water pricing to make the use of reclaimed water more desirable. There was a question about whether the research will also track air quality and Dr. Curtis indicated that it will. Finally, this research will be conducted over watersheds that contain various types of land uses, i.e. treed area, seed orchard, forages (hay), and pasture.

7. Ray Crampton—FLNRO: Priorities and Projects

Mr. Crampton is the District Manager of the Okanagan-Shuswap, part of the Thompson/Okanagan Region of FLNRO. There are six response centres in the region with the Okanagan-Shuswap district being one of them. Mr. Crampton provided a presentation on programs and priorities of FLNRO, specific to the Okanagan-Shuswap District within which the Okanagan Basin lies. The resource management team (Pam Shumka) looks after the range program, corporate services programs, forest stewardship program, and the new, amalgamated Tenures and First Nations team. Bob Warner (water) looks after water allocation, public safety and protection, forest road engineering, new lands team, and forest revenue. There are 50 employees in the District, 250 in the region.

There are 56 community watersheds in the TSA and there are cows in every one of them. There are about 155 range tenures and a very vibrant beef industry in the district. FLNRO's mandate is 50% environmental stewardship and 50% economic opportunities for sustainable economic development. Some of the issues faced by the range team include: cattle being in the watersheds and developing a common understanding of what is going on and what the risks are of cattle in the watershed. FLNRO works towards managing the environmental risks and have great working relationships with the water purveyors at Interior Health to help manage the risks.

In the coming months, there is going to be a Forest Practices Board audit on natural range barriers and how effective they are, or are not, in 10 districts in the province, including the Okanagan-Shuswap. The Okanagan TSA has worked hard to develop best management practices for their range tenure holders and forest licensees that remove the barriers to streams through logging and work cooperatively to make sure that barriers are re-established after natural ones are taken out. They also have best management practices for managing herds, and grass seeding harvesting cut blocks in the vicinity of wetlands and marshes.

This summer there is a forest hydrology symposium that will take place and one of their range officers is working with a presenter on *Cryptosporidium* counts and some of the best practices we can employ to avoid *Cryptosporidium* in the water. Q: With all indications that the beef industry is increasing and going to continue to increase is there a potential for resourcing within the ministry to respond to the likelihood of increasing pressure from cattle due to the rapid growth. A: For every range tenure holder and every pasture area, FLNRO has calculated the maximum capacity and the maximum number of cow calf pairs that can be there.

Forest Stewardship is responsible for the Timber Supply Review and looking after the reforestation of the trees. They ensure that when trees are removed through harvesting that they are replaced with seedlings. Timber Supply Reviews are conducted every five years with inventory and GIS work being done to calculate a new AAC. With the new round of reviews, AAC's will be decreasing throughout the province. This region will feel the decrease but it will not be as great of an impact as other areas.

The Tenures and First Nations team has merged as a result of budget squeezes. In 1998, there was not one First Nation involved in harvesting activities in their traditional territories. Now, of the 11 bands in the OKTSA, 10 of them have harvesting agreements and forest tenure opportunity agreements with government and are expanding their own capacity for crown forest to timber extraction. Q: Are these agreements on a band to band basis or through a centralized organization like ONA? A: These are at the Band level. Back in 2008, Bill 28 provided for a one-time "take-back" of volume from the tenures of larger licensees and some was given to FNs.

The engineering team looks after 1000 of forest roads under permit in the Okanagan TSA and many more 1000s of km of wilderness road that are not under permit. They manage water and sedimentation of the permit roads quite well but the Wilderness Roads give them issue from time to time. The Resource Road Act is a rewrite of the legislation and it will essentially change the some of the maintenance responsibilities based on primary users.

The Lands Team (old ILMB became part of FLNRO) does land authorizations. Private moorage (docks) is one of the most contentious issues. Prior to becoming part of FLNRO, there was some regulation and certification in the Okanagan system and FLNRO has pushed it further. Trying to get a vision of what the Okanagan foreshore will

look like 50 years from now. Right now they are in the throes of regulatory review and streamlining the authorization process for general permissions (docks that are within acceptable parameters and locations). Q: What about the density of docks? There is one dock allowed per private property for residences and there are setback restrictions and size restrictions. There is a large lake protocol on Okanagan Lake which was developed for the fish sensitive pieces of foreshore. There has been extensive outreach done with local government, the dock builders, the public, and organizations like the Real Estate Board about dock regulations. Q: Has there been any consideration given to the cumulative impact/raising the risk levels of water quality by having a lot of docks within a given area, particularly areas that are close to water intakes. A: It is not regulated. There is a large gap that needs to be filled with regard to carrying capacity of Okanagan Lake.

Q: What happened to the natural resource road act? It is still in the works. It is a complicated piece of work and there it a lot of passion from different user groups and it is a tough contentious piece of legislation to get through. Q: How will it be determined who gets the delegated authority the road? Primary use need—there will be a primer user that will be delegated with the main responsibility and if that does not occur those roads will eventually revert to wilderness road (deactivated). Talked about the possibility of having Lyle come in and give an overview of the natural resource road act.

The water team is headed by Bob Warner. There have been significant changes in the teams. The water allocation teams deals with 1000s of water licenses. Conrad Price (section head of water allocation) is working on WSA right now. There is a team of four water stewardship officers that look after allocations and licensing amendments. They have been busy trying to get a handle on water licenses and decrease the number of water licenses that are not being used. Much discussion occurred on this point. For example—What is the philosophical approach to this problem—there are licenses that are unused and a backlog of applications for new licenses and a clawing back of the potential to reserve water for environmental flows/conservation flows; is there an overall discussion of the long-term game plan? A: In the applications, a number were rejected or not relevant any longer. Comment—If there is an actual strategy to reserving water to environmental flows then maybe the unused licenses can be reallocated into environmental flow priorities. Comment—When issuing new licenses and amending existing licenses they are taking the

environmental flow into account. Comment—There needs to be more reflection on the allocations. Comment—Tools like the one they are working on with Dr. Warwick Sears (conceptually) and the NE water tool (built for NE BC) are being used in the interest of understanding environmental flow needs and the carrying capacity of streams before they are licensed. They are putting rigour around the decision making process and how much they allocate.

8. James Littley—Invasive Mussels

Mr. Littley provided an update on the state of invasive mussels based on a recent PNWER conference call he attended. The first slides were maps which show how quickly zebra and quagga mussels have spread across North America and the jump into Lake Winnipeg in 2012/13. PNWER is a public/private non-profit created by statute in 1991 by the states of Alaska, Idaho, Oregon, Montana, Washington, BC, Alberta, Saskatchewan, North West Territories, and Yukon.

The goals of the regional framework for the PNW are to: prevent the introduction of dreissenids and other aquatic invasive species to the PNW; prevent the spreads in North America; improve surveillance and monitoring; improve rapid response and management capabilities; create an aware and informed and educated public; develop and enhance protection response tools and technologies; improve communication information about key vectors and pathways (the way these are spread and where they are spread).

The source of the majority of fouled water craft in the PNW is from the Great Lakes and Lake Mead but the lower Colorado Region (Lake Powell to the Mexican border) is the leader in high risk, fresh boats and likely a greater threat than the great lakes. For example, of the boats that have been contaminated with live mussels or viable mussels, the majority come from the lower Colorado region.

Utah and Colorado both have containment strategies and everything coming out of the infested lakes is being inspected and decontaminated as a matter of a law in those states. In Utah, 106,000 boats were inspected; in Colorado 428,000. In the un-infested states, Idaho had 49,000 inspections compared to BC at 132 and Alberta 3700.

The methods of inspection on being (or they are trying to) standardized. In Idaho, inspection stations have been around for 6-7 years and there is a standard protocol for inspection and decontamination. The process has been refined based on other jurisdictions and what they have learned. It wouldn't be that difficult to adopt here in Canada. Of the boats inspected that are

contaminated, the ones in BC are only inspected and decontaminated because they have been notified by other jurisdictions (Alberta, States) of when an infested boat is coming here. In Idaho, if a boater comes through and there is clearly dreissenid mussels on board and they say they are going to BC they can't stop them. They do not have jurisdiction to order decontamination so they phone our provincial people and they respond. In 2015, there is currently no roadside inspection stations planned in BC. FLNRO/MOE have been doing roaming inspections and OBWB has been promised that there are some big announcements coming soon so they are hoping that will mean some more permanent inspection stations. A lot of the invasive species groups want to help with inspections and decontaminations but they are not able to as it is a regulatory matter and there is a matter of liability.

One of the long term questions is if we do get an invasion then who will be responsible for the cost of dealing with the shells on the beach, decontaminating water intakes for local governments, decontaminating infrastructure, i.e. the Bennett Bridge, because they leach calcium out of concrete? Everything points to an early detection/rapid response plan but that doesn't address what happens once they are established and who bears that cost. The answer is basically local governments/industry/property owners will be responsible for their own property. In other jurisdictions, containment is locally funded. There are also user pay systems.

The decontamination process is very in depth. They require better than seasonal staff and overlapping inspection stations. There have been boats that have been inspected, decontaminated and subsequently inspected down the road only to find more mussels.

The amount of work that has been happening around this issue is very impressive. Industry is involved. Down in the States there are having a boat manufacturer's conference and they are developing new technologies to stop the mussels from getting into ballast water. There are big ideas out there. Here in BC, we know what we need to do and the work has been done by other people so now we need to convince the decision makers to reallocate some funds so we can get more staff, more help, more stations. The original request was for to match the Alberta funding at \$530,000 each year to run seasonal inspection stations. *Comment: important thing is that a business plan needs to be developed and that is not a big cost (~\$30,000) to figure out what the program will cost and look like. This request has been made by OBWB.*

9. ROUNDTABLE – MEMBER UPDATES

Council members and guests were invited to provide an update:

- Mr. Meredith (CWRA): Has heard through the Ministry of Justice that there is going to be a new national committee on floodplain mapping coming soon and for local government there will perhaps be some funding associated with this initiative. The Ministry of Justice is leading this initiative with Neil Peters.
- Ms. Neumann (guest): private consultant working in the areas of ecohydrology, hydrometric data, estrogens, pharmaceutical and water. Hydrometric data component of BWUERC is ready to be populated with locally collected data. It is the central repository of water data for the Okanagan. It has been built and populated with links to the Water Survey of Canada data and a few locally collected data sets are already inputted.
- Mr. Pike (BCWSA): The upper watersheds of the SE Kelowna irrigation district is starting to melt which is six weeks ahead of time. Usually, the area is accumulating snow well into April. For any watersheds relying on any kind of diversions, a lot of water may be missed. From the WSA point of view the Spring Workshop is April 9-10 in Kelowna. Provincial staff will be up to talk about new water pricing/water licensing regime. IHA will be there to talk about new IH initiatives on the regulatory end of things. Fern Schultz of Sustainable Resource Secretariat is giving a talk on the permitting process.
- Ms. Green (BCGWA): BCGWA have a convention coming up on March 5-6 at the Delta Grand in Kelowna. Three documents have been released by the BC Ministry of Health for public consultation: 1) Guidance Document for Determining Ground Water at Risk of Containing Pathogens; 2) Groundwater Treatment Objectives; and 3) Secondary Disinfection. There are four public consultation sessions on those documents. The closest session is February 17th in Kamloops.
- Mr. Littley (OBWB): Friday was the deadline for the WCQI Water Conservation Quality Improvement Grants. There were 34 applications totalling approximately \$643,000 in requests. There is \$300,000 in available funding. Typically, they are able to grant about 20 projects in some form. Q: About asked the rototiller—back in November the rototiller at Osoyoos was vandalized which set them back about five full operating days while they were waiting for the equipment to come in.
- Ms. Bakelaar (RDCO): Community Services has put their workplan out for 2015, subject to board funding approval, and it is outlined in the 2014 annual plan and highlights the anticipated work to be done in 2015. They plan to complete the major amendments to the subdivision and servicing and water system fees and regulation bylaws. They will be doing some pretty substantial water system improvements for the Killiney system and they will be moving forward on regional floodplain management plan. They are also looking at pursuing measures with the Province and other utilities/water purveyors in looking at additional protection for upland reservoir lakes in RDCO. Looking at developing a restoration monitoring program for Joe Rich Creek.
- Mr. Agnus (City of Kelowna): They have a number of consulting projects that are coming to a close. The Mill Creek Study (trying to mitigate the flood issues throughout Kelowna) has been a big, complex study. They are consulting with A&E right now in establishing a water license on Vernon Creek to get rid of the concrete footing and restore it back to natural habitat. They are looking for a license to maintain and not a license to allocate water.
- Ms. Kirk (RDOS): Their business plan is still in front of the Board. Their engineering/public works manager is retiring this month so they are in a bit of a flux until that takes place and new people come in. Happy to hear that the land use inventory is going to be done this year. With regard to protocol agreements, they will be coming up to their second anniversary in June for the protocol agreement they have signed with three bands in their area (Lower Similkameen, Penticton, Osoyoos). This has been very beneficial to have in place and they are working on how best to bring in Upper Similkameen and are hopeful that it will happen on this anniversary.
- Mr. Bepple (UBCO): Masters at UBCO working on a project using a methodology known as agent based or individual based modelling to try and get a handle on what types of demand side management strategies can be used to reduce residential water use in Kelowna given the range of future growth scenarios.
- Ms. Mettler (guest): New to the Okanagan. This is her 2nd council meeting. Currently working at establishing a consulting company.
- Ms. Miles (RDNO): Ms. Miles is the Water Sustainability coordinator. Currently working on the Coldstream Creek and Kalamalka Lake watershed management and are committed to doing more stormwater management. As part of that, they are hoping for OBWB funding to do better mapping and rain drop analysis for Kalamalka Lake and Coldstream Creek. They are also looking at drainage bylaws and

working with the municipalities. Also approaching OBWB for a grant to help with landowner contact in the hopes of providing a one stop shop for landowners/farmers as to what tools are available to them to be better stewards of their land and the water. Working with Corinne on getting the message out about Make Water Work.

- Mr. Birtles (IHA): The Province is circulating three documents around groundwater. Water suppliers should be looking forward to the opportunities to participate in the sessions as we haven't had anything like this in the past and he thinks this is quite interesting. IH is in the business planning process stages right now. Continue to do monitoring for algae.
- Ms. Lukey (ONA): Excited about the new season. They built six new ponds in the fall so they are looking forward to seeing how that goes. The hatchery is pretty much all moved and things are going well. Salmon emergence is just around the corner and they are hoping to move forward on more Penticton spawning channels/platforms this year.
- Mr. Davies (BCWF): Two successful youth learn to ice fish events. They partnered with Fresh Water Fisheries Society and FLNRO; 300 youth at Yellow Lake; 125 at Beaver Lake.
- Ms. Phan (UBCO): Her work is almost complete and she is almost ready to submit it to the journals. Her recent interest is the knowledge gap between FN knowledge versus typical western knowledge and she is thinking of pursuing some studies on this.
- Ms. Luttmer (OCCP): There focus right now is on realizing the vision in the Biodiversity Conservation Strategy (a large 104 page document). She has a 16 page document on the strategy if anyone is interested. The main vision is for there to be healthy ecosystems and habitat networks throughout the Okanagan. Over the next couple of years, they are focussing on supporting their partners that have projects that realize that vision. The Okanagan Institute for Biodiversity, Resilience and Ecosystem Services will be hosting FLNRO who will be presenting a workshop on Assessing and Using the Provincial Forest Cover and other Natural Resource Data Sets - February 27th at UBC.
- Mr. Furness (FLNRO): FLNRO hosting a workshop on March 9 with the Real Estate Board in the Central and North Okanagan regarding waterfront property. They are working on an update of the large lakes protocol; the zoning they have of the large lakes in the Okanagan will be updated in the context of Federal Fisheries Act changes that have occurred November 2014. With regard to the Rocky Mountain Ridge Mussel, they have an ongoing partnership with UBC/DFO/ONA in an effort to understand what is going on with the host fish. Ombudsperson's office has identified the need for the Province to do a better job in the delivery of the riparian areas regulation. They got 1/2 FTE to help them deliver. They are working on identifying any recurring issues and are working to resolve those issues. The Forest Hydrology International Conference at UBCO is July 2-4, 2015.
- Mr. Janmaat (UBCO): They have had 350 responses to their survey measuring values associated with Central Okanagan Community Services. The second phase will involve bringing people together that participated in the survey and giving them the opportunity to talk about some of the issues.
- Mr. Warner (FLNRO): The Safety Protection branch is working on vegetation management and protecting the integrity of the dikes. They are checking the structure of Okanagan Lake dam and McIntyre dam as far as underwater integrity. On February 24-25, 2015, they are having a regional COP with the water staff to discuss issues. They are working on a water amendment process to make it more efficient. Also, working on an emergency response process for a single point of contact.
- Mr. Crampton (FLNRO): Shawn Reimer is taking over the Flood Hazard Protection (Public Safety) team. He will continue to manage the fish water management tool. They will be coming together with Emergency Management BC, local government and Emergency Response folks to make sure they hold tight to the model for response to environmental disasters during freshet.
- Mr. Rogalski (EA): They will be removing evaporation buoys on Okanagan Lake in the next 4-6 weeks and wrapping up the project. He is hoping to bring some information back to the Board for the next meeting. They feel quite confident about the robustness of the model that's been produced and feel it will give some credence to the original estimations that were developed. There was discussion centered around the removal of the buoys and if there was a way to keep them out on the water. Risk exposure and assumption of liability a problem.
- Mr. Bauer (UBCO): UBCO is well represented at the Council and the work continues. Hoping to receive funding for some work up near Armstrong on a sub-watershed looking at how farmers' respond to climate change around the way they manage small creeks that run through their property in terms of riparian restoration,

and rechannelization. If they get the funding, it will be a 3 year project.

- Ms. Jackson (OBWB): Canada Water Week in March. There will be a panel and kids' contests through Okanagan WaterWise. The theme is wetlands. There is a possibility of including a wetlands movie. Plans for the next Don't Move a Mussel campaign are underway. Looking at getting the message outside of the Okanagan. Contacted SunCruiser Magazine and Champion Boats who were heading down to Vancouver and Seattle Boat Shows and were happy to take materials with them. TOTA/OMRB/CofC event that reaches out to the business community to raise awareness and ramp up awareness. The new season for Make Water Work is underway and all of the partners are back at the table. They are doing a Make Water Work in your yard project and OXA & Bylands are working on a pallet of MWW plants that garden centres can carry this summer. MWW demonstration gardens are being set up. Looking at updating and creating new Okanagan specific water materials for teachers.
- Ms. Warwick Sears (OBWB): BC Water and Waste Association is having their annual conference in Kelowna in May. It is the biggest water conference in BC. The theme is the Value of Water. Consulting firms should consider the sponsorship options. Others should consider attending and use it as a networking opportunity. Working with water funders in BC and the MORE Foundation in US has been heavily funding projects related to freshwater and salmonid restoration in the ocean. They are pulling out of that area of granting but leaving a large amount of the money with Tides Canada and the Real Estate foundation is matching those funds. This will be a fund that is available for water related projects that need a quick turnaround time. Available to those in this area but the projects will be more policy related.
- Mr. Guy (CWRA): What happens in the aftermath of extreme climate events conference was held January 30th. June 2-4 is their 68th National Conference—Preparing for Extreme Events—in Winnipeg. The 3rd International Workshop on Instream Flows is happening April 28-30 in Portland Oregon.

Mr. Buchler (BCAC): He attended a WSA 1 ½ day session talking about ground water licensing issues. He has found the whole process to be exemplary and consultative and very beneficial. A good example for future processes.

- Mr. Dobson (BCAPEG): He is part of a public advisory group for the Okanagan Sustainable Forest Management and is leading a small group on the review of one of the CSA indicators looking at water quality and quantity. The process they are using is based on work done in 1995 and hasn't been updated. He is recommending that the work needs to be revisited and because it is a quantity and quality indicator has recommended that they need to include channel stability. Looking ahead, we may be into a dry summer and possible increased fire hazard season. Discussion regarding hydrometric stations and getting the number of stations up. Still looking for three opportunities. Talked about the need to get non-integrated data into the database and get the involvement from others.
- Mr. Jatel (OBWB): Typically does a State of the Basin Water in April or May but will look at doing it earlier this year—March. Next meeting will feature Piscine Energetics (fishes for Mysis shrimp on Okanagan Lake) as well as Ted Wannop with a summary on his research around FN Government Co-Governance.
- Mr. Wannop (OBWB): Technical writer. Talked about the environmental flows web page. There is a bunch of information on their including different water use plans and a document comparing water use plans and water sustainability plans.

10. NEXT MEETING

The next meeting of the Okanagan Water Stewardship Council will be Thursday, March 12, 2015 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 Hans Buchler

"That there being no further business, the meeting of the Okanagan Water Stewardship Council of February 12, 2015 be adjourned."

CARRIED

CERTIFIED CORRECT:



Chair



Executive Director