

**OKANAGAN WATER STEWARDSHIP COUNCIL**  
*A Technical Advisory Body to the Okanagan Basin Water Board*

**MINUTES OF A MEETING HELD ON THURSDAY, JUNE 10, 2010, AT THE KELOWNA AND DISTRICT FISH AND GAME CLUBHOUSE, 4087 CASORSO ROAD, KELOWNA, BC**

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**COUNCIL MEMBERS:**

**Present**

UBC Okanagan	Bernie Bauer, Chair
Ministry of Agriculture and Lands	Ted van der Gulik, Vice Chair
Agriculture & Agri-Food Canada, Research Branch	Doug Edwards
BC Agriculture Council	Hans Buchler
BC Cattlemen's Association	Lee Hesketh
BC Fruit Growers Association	Lorraine Bennest
City of Kelowna	Mark Watt
Environment Canada – Pacific & Yukon Region	Dan Millar
Interior Health Authority	Rob Birtles
Ministry of Environment, Fish and Wildlife Science	Steve Matthews
Oceola Fish and Game Club	Lorne Davies
Okanagan Collaborative Conservation Program	Carolina Restrepo-Tamayo
Regional District North Okanagan	Laura Frank
Water Supply Association of BC	Bob Hrasko

**Alternates present**

Interior Health Authority	Bryn Lord
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**Regrets**

Agriculture & Agri-Food Canada, Research Branch	Denise Neilsen
BC Ground Water Association	Doug Geller
Canadian Water Resources Association	Brian Guy
Community Futures	Don Main
Ministry of Environment, Water Stewardship	Ken Cunningham
Okanagan College	Douglas MacLeod
Okanagan Nation Alliance	Gwen Bridge
Osoyoos Lake Water Quality Society	Mark McKenney
Shuswap Okanagan Forestry Association	Kerry Rouck
Regional District of Central Okanagan	Chris Radford
Regional District of Okanagan-Similkameen	Jillian Tamblyn
Urban Development Institute	Bal Poonian

**STAFF:**

OBWB, Executive Director	Anna Warwick Sears
OBWB, Water Stewardship Director	Nelson Jatel
OBWB, Office and Grants Administrator	Genevieve Dunbar
OBWB, Communications and Research Coordinator	Corinne Jackson
OBWB, Outreach and Education Assist./O&G (mat lv.)	Melissa Teche

**GUESTS:**

Hay and Co. Consultants	James Stronach
Kelowna Capital News	Judie Steeves
Ministry of Environment, OWSC Source Protection Cttee.	Solvej Patschke
Ministry of Environment	Skye Thomson
Ministry of Environment	Oleg Ivanov
UBC Okanagan	Tricia Brett

## 1. CALL MEETING TO ORDER

Chair Bauer called the meeting to order at 1:02 pm and welcomed members and guests.

## 2. APPROVAL OF AGENDA

Amend to include 7. 5 – Presentation by Dr. Anna Warwick Sears and Mr. Ted van der Gulik regarding their water policy tour of Australia.

Moved by Doug Edwards

Seconded by Hans Buchler

*“That the agenda for the June 10, 2010 meeting of the Okanagan Water Stewardship Council be approved as amended.”*

**CARRIED**

## 3. ADOPTION OF MINUTES

3.1 Minutes of a regular meeting of the Okanagan Water Stewardship Council held May 13, 2010, at Kelowna and District Fish and Game Club clubhouse, Kelowna

Amendments: A small amendment to the minutes was suggested and incorporated.

Moved by Carolina Restrepo-Tamayo

Seconded by Ted van der Gulik

*“That the minutes from the March 11, 2010 meeting of the Okanagan Water Stewardship Council be approved as amended.”*

**CARRIED**

## 4. BOARD REPORT

Dr. Warwick Sears reported on the June 1, 2010 Okanagan Basin Water Board meeting, noting that it included a discussion around her tour of Australia and a presentation by Ms. Restrepo-Tamayo on the Sustainable Planning for Okanagan Environment (SPOKE) web-based tool project which, as a result of some changes, will now be referred to as the Okanagan Conservation Planning (OKCP) web tool.

The board approved sewerage grants for wastewater treatment plants in Vernon, Penticton and OK Falls to improve water quality treatment in these communities.

Also, the board voted to send a letter to the province voicing its concerns around the sale of reservoir lots. The moratorium on the sale of the lots expires this summer, noted Dr. Warwick Sears. The issue has received a lot of attention in Lake Country in particular, with cabin owners supporting the sale and the district voicing concern around the potential health risks to its drinking water supply.

In response to questions about studies being done on the lots, Dr. Warwick Sears noted that the Okanagan Water Supply and Demand study emphasizes the importance of the reservoirs to meet storage needs and support environmental flows for aquatic habitat. Additional hydrologic studies are also being done on various reservoirs, she added.

## 5. ROUND TABLE – MEMBER UPDATES

Council members provided an update on their organization’s activities.

- Mr. Hrasko: The Water Supply Association (WSA) of B.C. is concerned about the request from mudboggers to acquire a crown land tenure for their activities. The WSA is also looking at this

year's reservoirs. Some are in better shape than others, and hopefully the drought we were all fearful of will not occur this year.

- Mr. Buchler: BC Agriculture Council has provided input to the Water Act Modernization process and is opposing the commodification of water and Water Markets.
- Mr. Ivanov: The Ministry of Environment participated in the OBWB's Drought Webinar yesterday and reported that it has no immediate concerns around water levels this year. Work is continuing with the OWSC's subcommittee that is looking at groundwater and observation wells in the Okanagan Basin.
- Mr. Edwards: The Canadian government is following up on the Copenhagen climate change meetings as part of a global effort to address the issue. The impact on agriculture is being included as a matter that needs to be addressed. The government is looking at proposals and will be looking for input from external sources, for example the B.C. Ministry of Agriculture and Lands.
- Mr. van der Gulik: B.C. Ministry of Agriculture is looking to implement the Okanagan Irrigation Management Program in various Okanagan communities, and has funding for two years. South East Kelowna Irrigation District was consulting with irrigators about using the tool, which is important since it's not the people who developed the tool but the people who will be using it who see the value. The tool allows one to record their water use and their allocation to determine how much is left and to help plan what they should use, considering climate, soil and crop type.
- Ms. Restrepo-Tamayo: The Okanagan Collaborative Conservation Program held its AGM May 12. The group has developed an Okanagan Conservation Planning (OKCP) website which shows conservation efforts in the Okanagan, as well as Foreshore Inventory Mapping results and the wildlife Connectivity Corridor. A land use planning document will also be provided on the site. It can be viewed at [www.okcp.ca](http://www.okcp.ca).
- Mr. Birtles: Interior Health is working with small water systems to help them improve drinking water treatment and as a result, remove the standing "Boil Water Advisories" that exist for them.
- Ms. Patschke: Hydrologic risk assessments have been done in Peachland and Trepanier, looking at the effects of Mountain Pine Beetle and the risk on drinking water and fish. Similar work will be done at Lambly Creek and Duteau Creek.
- Ms. Jackson: The Okanagan WaterWise team has been meeting with staff who are working in water and public education in various Okanagan communities, gathering feedback on the WaterWise Outreach Strategy and Action Plan and determining partnership opportunities. The team attended the Mayor's Environmental Expo in Kelowna and had children decorate one-litre bottles to be placed, with adult help, in the back of an old toilet to conserve water. The activity was well-received. The team is looking at other ways to spread the WaterWise message this summer.
- Ms. Dunbar: Water Board staff attended the recent Canadian Environmental Grantmakers' Network (CEGN) conference to further develop OBWB partnerships. The Water Board is in a unique position in that it awards grants and also receives grants. Last week, staff went to Washington State to share information on milfoil control efforts.
- Ms. Frank: Vernon recently held an Environment Week and gave away rainbarrels and low drip irrigation systems. It also hosted a Duteau Creek planning meeting to help identify areas for remediation projects.
- Ms. Bennest: Thanks to recent rains, those in agriculture are using much less irrigation water than usual.
- Dr. Warwick Sears: Staff have been discussing a request from AM1150 to air a radio talk series on water. The CEGN conference provided an opportunity for the Water Board to promote granting foundations partnering with local government. The Okanagan Water Supply and Demand project team is working on how to improve access to the study's results. The Water Board is also planning its Annual General Meeting, set for Sept. 10<sup>th</sup>.
- Mr. Matthews: Ministry of Environment is pleased with recent precipitation in the Okanagan but is not walking away from its drought planning. As part of its drought plan, the ministry is developing a stream list, looking at water needs and identifying criteria to move from one drought level to another. Phase 1 of the Okanagan River Restoration project is completed and a ceremony was held June 5 with 100 people in attendance, including Environment Minister Barry Penner and Parliamentary Secretary for Water Allocation John Slater.

- Mr. Millar: The International Osoyoos Lake Board of Control has lifted the drought declaration on Osoyoos Lake thanks to recent rains.
- Mr. Hesketh: The Farmland Riparian Interface Stewardship Program has a small budget, but is still looking to partner with the Environmental Farm Plans on southern interior projects. Mr. Hesketh is a recent member of the Salmon Enhancement and Habitat Advisory Board. Anyone with thoughts or concerns on this issue should contact him.
- Mr. Watt: The City of Kelowna has been working with the Kelowna Joint Water Committee to develop common drought response criteria. The city has also developed a Landscape and Irrigation Standards document that is now available.
- Mr. Davies: The Ocoala Fish and Game Club has been doing restoration work along Winfield Creek, as well as work on the Winfield Creek Wildlife Habitat Preserve.
- Dr. Bauer: An advisory committee on B.C.'s Water Science Strategy is developing a symposium to be held Aug. 30 to Sept. 1 concurrently at UBC-O, University of Northern BC and University of Victoria. Parts of the conference will be webcast simultaneously at the three sites. There will be two keynote speakers and a reception. The next day will include a panel discussion and then break-out sessions. The purpose is to determine how to best translate scientific and traditional ecological knowledge through policy. Local organizing committees are being formed and Stewardship Council members are encouraged to get involved.
- Mr. Jatel: The sub-committee looking at the groundwater monitoring project is identifying sensitive aquifers, as well as researching funders and developing a work plan. The need for a technical committee has been identified and we will be looking at this further.

## 6. PRESENTATIONS

**Dr. Jim Stronach**, Hay and Company Consultants

*Okanagan Lake Limnology – deep lake limnology and foreshore limnology models*

Mr. Watt introduced Dr. Stronach, noting his work for the City of Kelowna and its relevance to the Okanagan valley.

### Drinking Water Source Protection

Dr. Stronach noted that his work included a source water protection study on Okanagan Lake which resulted in four technical memos: a hazard inventory and review, a review of chemical limnology (observed data – nutrients, contaminants), another which categorized and rated risk, and one that addressed source delineation and pollution transport modelling.

His company, Hayco, prepared a report in 2001 looking at the limnology of Okanagan Lake, including a hindcast look at the 1996 Cryptosporidium outbreak. And then, two years ago, Interior Health – in reviewing the report – suggested additional issues to be addressed using the same modelling. In particular, Interior Health suggested the development of a watershed control-type program, and the study of the costs/risks/benefits associated with source improvement efforts. They also wanted a report to include trends in water quality and pathogen concentrations, and recommendations for protection.

As part of its work, the company recorded depth and temperature. In May 1998, during a windstorm, it was noted that surface currents (carrying contaminants) were heading north, but that at 40 to 50 metres depth it was moving south. At 26 to 30 metres depth water was also noted to be moving up and down, noted Dr. Stronach, adding that the current seems to die down at various depths but it still moves.

In Summerland, district staff were trying to determine the best location for their intake. As such, Hayco looked at the currents, said Dr. Stronach. In response to a question about the modelling and the temperature of effluent being considered, he added the model accounted for this, and the Summerland study determined that there can be concentrations of effluent at various depths which

seemed to indicate that clean intakes as deep as possible are best.

Mr. Watt noted that some of Hayco's work was also undertaken in response to the city's need for information when it received development applications. The city wanted a database to assess applications, but also its own civic developments. Developers were also asked to have some modelling done as part of having an application considered, he added. Such modelling was used for the downtown waterfront and the Kelowna Yacht Club.

In response to questions, Dr. Stronach said that wave action, substance type and weight of it, all need to be considered in determining the impact on water intakes. Also, the north/south movement of water around intakes depends on the depth of the intake, he added.

Some contaminants would settle out with sediment, continued Dr. Stronach, noting that if a contaminant is on the surface it may naturally decay.

Currently, Hayco's research is focussed on looking at risks if an incident were to occur, he added, noting that there is no work being done on climate change and the effects on flow patterns.

## **7. NEW & UNFINISHED BUSINESS**

### **7.1 Okanagan Water Supply Communication Strategy: Drought-proofing the Okanagan, June webinar highlights**

Mr. Jatel provided highlights from the June webinar. He referred to a comment by Alan Chapman, head of B.C.'s River Forecast Centre, that although drought concerns have been downgraded with the wet spring, the province has still not recovered from last year's drought and we're still not out of the woods. This needs to be considered as we move ahead this year.

Mr. Jatel noted that three webinars have been held, linking those with the information on water supply and demand with water managers and users to support management decisions. There has been some interest in seeing the webinars continue, he added.

Mr. Matthews responded that while we are in a wet period, the potential for a dry summer ahead and potential problems is still there and the webinars are a good way to keep water providers and others informed on a regular basis.

The initial target audience when the series began was water managers. If we are looking at keeping a broader audience informed of water supplies, perhaps we need to redevelop the framework to potentially include fisheries and ecological flow concerns, said Mr. Jatel.

### **7.2 Hydrometric monitoring sub-committee**

Mr. Jatel reported that work is continuing on hydrometric monitoring as noted in the Round Table – Member Updates provided earlier in the meeting.

### **7.3 Project updates: NASA initiative / Streamlined Water Use Reporting Tool (SWURT)**

Mr. Jatel noted three projects underway with NASA: 1) a scoping document, exploring the use of satellites to support the Okanagan Water Supply and Demand (OWSD) model; 2) a Terrestrial Hydrology proposal has been submitted, looking at snow water equivalents using satellite data that can be plugged into the OWSD and used in the U.S. and Okanagan, and 3) a climate change project is under development, exploring the use of remote sensing data to expand the demand and supply model into the Similkameen and Okanogon, and turn the OWSD model into a forecasting tool.

A meeting on the NASA project was held in the U.S. two weeks ago, added Mr. Jatel, saying there was great interest and support for the project.

Mr. Jatel provided an update on the SWURT project, explaining how the web-based tool for Okanagan utilities to report water use will replace the annual report they currently provide to the province. Water suppliers have seen a template of the software and seem pleased, he added.

It's anticipated that a final draft of the web tool will be completed by mid-June and the project will be finalized by December.

In response to questions, Mr. Jatel noted that unlicensed groundwater users are also being asked to report their water use, but it is voluntary. Large surface and groundwater users are being asked to report so there is a seamless accounting of water use. The SWURT web-tool is being developed to become a prototype for the province, he added.

#### 7.4 Okanagan Water Supply Communication Strategy: Signage project

Mr. Jatel reported on a request received from Regional District of North Okanagan. The regional district is looking at potential road signage that would indicate current water supply and asked the Water Board if there was anything available. At the same time, the province is developing a drought strategy and Ministry of Environment is interested in this type of signage.

Mr. Jatel invited Stewardship Council members to form a committee to develop signage that can be piloted in the Okanagan. Mr. Birtles volunteered. Dr. Bauer suggested that members of the communications committee might also be a possibility.

Mr. Van der Gulik suggested that the OWSC start a SharePoint site to track all of its projects. It would be a way to monitor progress on various projects. Ministry of Environment has a SharePoint site that has worked well, he added, noting that it has encouraged people who are working on projects that overlap to work together. Dr. Bauer suggested that perhaps this should be put on the agenda for September.

#### 7.5 Presentation by Anna and Ted regarding trip to Australia

Dr. Warwick Sears reported on her recent two-week water policy tour of Australia, noting the purpose was to examine the Australian experience coming out of a 10 year drought.

Dr. Warwick Sears was accompanied by Jackie Belzile, who is doing her master's thesis on Water Governance and who organized the tour, and Mr. van der Gulik. Meetings were held with research facility e-Water, local farmers, the Murray-Darling Basin Authority, scientists, the federal water minister, irrigators, and industry people.

Dr. Warwick Sears noted that she was astounded by the public investment in water, which is in the billions of dollars.

One major project being conducted in Australia is the Murray-Darling (M-D) Basin Plan. The M-D Basin Authority members are appointed and make recommendations to the federal water minister. If the minister does not accept and move on the recommendations she must justify this. In addition, all states in the M-D area must meet the authority's recommendations.

Decisions are being driven by the water needs of six iconic wetland sites, Dr. Warwick Sears continued. During a water shortage, the first priority is critical human water needs, then planned environmental water, licensed environmental water and irrigation allocations. Environmental need is determined using science, she added.

The Commonwealth Scientific and Industrial Research Organisation and e-Water are doing

modelling for M-D. CSIRO has 400 water staff and a budget of \$100 million a year, plus university funding.

Australia is also looking at future climate change impacts and gearing up for it, said Dr. Warwick Sears.

At the state level, they are establishing water trading rules, water sharing plans, economic analyses, and working with irrigation districts to implement water plans. There are some conflicts between state laws that are being resolved, she noted.

Interestingly, there was a tour of a wetland. It had been constructed in such a way that it was losing a lot of water through evaporation, so the operators sold some of their water rights to the federal government – about the same amount it was losing through evaporation. The funds were then used to upgrade the storage area and as a result, they ended up recouping the lost water.

Signs highlighting drought conditions are seen everywhere. And every drop of water is tracked, she added, noting some is lost through evaporation in open channels, but tracking is done to ensure best possible conservation.

Wineries are encouraging grape growers to improve their watering methods and will not buy grapes unless water-saving technology is in place.

In Sydney, the overall strategy that is being adopted is one of: dams + recycling + desalination + water efficiency = water for life. However, the new goal is to avoid water restrictions, added Dr. Warwick Sears. By having conservation measures in place they will have enough water that there will never be a need for water restrictions.

It is understood that if no rain fell in Sydney's catchment area, it would have four years supply, she noted, adding Sydney Water has determined that mandatory restrictions work better than voluntary ones.

People are unsentimental about making tough decisions around water in Australia – and water is universally valued. There is a focus on economic and environmental sustainability, independent, expert-based rule making, water sharing plans for sub-basins, as well as significant investment in science, water infrastructure, excellent data collection and access, and strong efficiency measures.

There are, however, things they have done in Australia that we should avoid here in the Okanagan, added Dr. Warwick Sears. In Australia, there is a lack of transparency with planning, not enough communication with water users, lack of regulation/consistency in water markets, insufficient economic/social analyses, and little help with structural adjustments to communities.

On the other hand, ideas that should be considered here, she added, include ways to reduce water demands in homes, for example with universal metering and ways for users to track their meter readings on the web. There should be local-scale water demand studies, water-sharing (drought) plans, a look at market-based or other reallocation mechanisms, pricing for cost recovery and conservation, and better communication. To expand the supply of the Okanagan, we need to do a better job of protecting and expanding our reservoir storage,

Mr. Van der Gulik noted that he is looking to develop a presentation to be taken around the province that shares what was learned on this policy tour.

## **8. NEXT MEETINGS**

The next meeting of the Okanagan Water Stewardship Council will be held Sept. 9, 2010 at Kelowna and District Fish and Game Club clubhouse.

9. ADJOURNMENT

The meeting was adjourned at 4:39 p.m.

Moved by Bob Hrasko

*“That there being no further business, the meeting of the Okanagan Water Stewardship Council of June 10, 2010 be adjourned.”*

**CARRIED**

CERTIFIED CORRECT:

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Chair

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Executive Director