DRAFT Okanagan Basin Water Board Strategic Plan: 2014-2019

OBWB Vision

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

About this Plan

The Okanagan Basin Water Board's (OBWB) mission is to provide leadership to protect and enhance quality of life in the Okanagan Basin through sustainable water management. The OBWB was initiated in 1968, as a collaborative local government agency, to identify and resolve critical water issues in the Okanagan valley.

The OBWB's strength is to facilitate work by others, bringing people and resources together, and providing a mechanism for joint action on strategic initiatives at the watershed scale. We advocate to senior government on local water concerns, and are developing a new public voice for water education. Our financial structure promotes activity by triggering funds from many sources and matching them to local dollars – with special advantages gained from regional collaborations, and regional goals. OBWB's administrative and project management capacity attracts new senior government funding, and allows delivery of complex, multi-partner projects. We connect water initiatives throughout the valley.

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

This plan focuses on actions that can be undertaken by the OBWB. It is intended to complement the 2008 Sustainable Water Strategy, and the Okanagan-wide Water Plan to coordinate and inform the actions of decision makers at all levels of government, being investigated by the Okanagan Water Stewardship Council. The OBWB's Strategic Plan establishes the special role our organization can take, and key activities to catalyze and support actions by diverse partners and other levels of government.

Our ***goals*** reflect high-level strategic concern about water sustainability, decision-making based on science and data, the transfer of knowledge and understanding, and ultimately behavior change. We seek to reach these goals through ***strategies*** that involve collaboration, advocacy, education, strategic funding, science, data collection and policy development. We are

supported in our work by many partners, and the advice of the Okanagan Water Stewardship Council, who provide technical expertise and community perspectives.

The OBWB will ***measure success*** in a variety of ways, tracking not only the work produced by the Board or the Water Stewardship Council, but also work we have contributed to through our partnerships. Ultimately, the best measure of success is progress toward a more sustainable water future for the valley, with communities and stakeholders working together, increasing their capacity and understanding, and taking action to improve water quality, water supply and conservation, and adapt to climate change.

Rationale: Why a Strategic Plan?

The world is changing rapidly – within the next 20-30 years, the global population will grow from seven to nine billion people, the global economy is providing unexpected stresses and benefits, climate change is adding to already unpredictable swings in precipitation patterns. Yet despite these global processes, water problems are local. We feel them locally – whether water pollution, shortages, or flooding – and the solutions are local.

The Okanagan is often called the "canary in the coal mine" for Canada's water issues. We have among the lowest per capita water availability in the nation, and many water-dependent industries. With less water available, it is especially important to protect water quality, so water can be accessed, used and re-used for a variety of purposes – as well as environmental needs. Being the canary means that there are few examples to follow and the valley must lead the way with innovations in water policy and practices. This has been our history, and this will be our key to the future.

The Okanagan community is strongly committed to water sustainability, but given the wide number of water issues, and limited time and resource budgets, it is essential to focus efforts on the areas of biggest strategic gain, highest impact and importance, and that fill a niche without replicating the work of other levels of government. *The biggest risk we face as an organization is becoming spread too thin on many small projects, and missing opportunities for major progress.*

What Makes an Initiative Strategic?

Some initiatives are strategic because they are local actions that solve a wide range of local problems. For example, the OBWB's sewage infrastructure grants were strategic because this local funding source triggered action by the B.C. government to put a special Okanagan rule in the provincial sewage regulations, so that only local governments could discharge into surface waters (i.e., no private wastewater treatment plants). For many years, the province also made

special funding available in the Okanagan, to match local dollars. The net strategic benefit was a dramatic improvement in water quality, enjoyed by all.

Universal metering is strategic, because it benefits the local water utilities, and also allows a valley-wide response to water shortages and better management of the resource as a whole. Similarly, monitoring streamflow, groundwater, snowpack, and water use have strong local benefits, and broad benefits to regional and valley-wide water management planning, enabling faster, coordinated response to changing environmental conditions (drought or flood risk).

Valley-wide water communication is strategic because it leverages the efforts of individual utilities, and creates a common message with less confusion for residents who work and travel between communities. Ongoing water conservation communication is also strategic because it reinforces the ability of utilities to adjust rates, put in watering restrictions, and steadily increase the efficiency of domestic water use. It gets at the heart of the "Myth of Abundance."

Aligning the goals of local governments and First Nations is strategic, because we are 19 communities sharing a narrow valley, each affecting the others. Although the structure, resources, and responsibilities differ between municipalities, regional districts, and band councils, we have strong shared interests in protecting our water sustainability. We can learn from each other, build off of other's strengths, and shore up each other's weaknesses. If we work together, we have much more leverage with the provincial and federal governments.

Other initiatives are strategic because they provoke changes to provincial policy that can have major local impacts. Work on Water Act Modernization, especially for groundwater regulation, agricultural water, and environmental stream flows are strategic because whatever legislation is enacted will have wide-ranging local implications. Off-road vehicle licensing, and other policies that relate to source protection are also strategic, because they benefit the water suppliers, and the health of the environment. Improving the licence allocation process is strategic, because over-allocation will create conflicts in local areas and the whole watershed.

Over the next five years, the OBWB will continue to work on initiatives that support sustainable water management in the Okanagan, facilitating collaboration and leveraging resources. Healthy watersheds are our priority. The year-round availability of clean water supplies should never be taken for granted.

Long-term goals

A. Adequate supplies of water for all human and environmental uses

It is common for suppliers to have water shortages in dry years. Key factors are in-stream fish flows, reservoir storage and management, and summer water demands. Under extreme conditions, with high demands and reduced snow storage (expected in the future), if priority is given to in-stream flows, we risk mining the lakes. Many conflicts can be avoided with planning and increased water use efficiency.

a. Sub-goal: The Okanagan has sufficient, accessible, water science and data to plan for changing conditions in climate, economy, and population growth

Strategies

i. Maintain and update Okanagan water supply and demand models, including land use inventory and climate models working toward operational models for water planning, allocation, and management;
ii. Build and improve local data management systems for water use, stream flow and groundwater monitoring;
iii. Assist water suppliers to identify new areas of upland storage, and methods to improve reservoir management;
iv. Improve models to better evaluate current and future risks of extreme drought and flood events;
v. Collaborate with university and government researchers to improve technology and approaches for water monitoring and management;
vi. Improve access to data and information for use by local government staff, planners and engineers;
vii. Work with the Water Stewardship Council to identify critical information gaps and strategies to fill them.

Success Measures

- Updated Land Use Inventory by 2015, to provide information to local governments and for updating Water Supply and Demand analysis;
- Water monitoring database is established, with regular uploads of stream flow and groundwater data, and system is integrated with Water Survey of Canada hydrometric system;
- Number of local governments and water suppliers using data in Regional Growth Strategies (RGS), Master Water Plans, Liquid Waste Management Plans, reservoir studies and others;

- Number of water purveyors, and independent licence holders who are using the B.C. Water Use Reporting Centre (BCWURC).

b. Sub-goal: Water licence allocations are appropriate to support the environment, agriculture, and urban growth over the long term

Strategies

i. Establish a standard process for defining in-stream flow needs under variable climate conditions, to support water use planning;
ii. Define current and potential agricultural water needs for ALR and other viable agricultural lands;
iii. Develop a model linking large-volume licence allocations to mainstem lake water balance, and recommend a lake-level trigger elevation for licence restrictions during severe droughts;
iv. Develop a water allocation plan for mainstem lakes and major drainages to reduce risks of water shortages.

Success Measures

- Increase in number of conservation licences established for environmental water flows in Okanagan streams;
- Number of water use plans developed for major drainages and sensitive fish streams, triggering licence restrictions during droughts;
- Provincial water licencing policies incorporate recommendations from local government on what water shortage risk levels are acceptable, and use the most current science and models to establish allocations.

c. Sub-Goal: Groundwater and surface water are regulated as one source

Strategies

i. Continue to advocate for groundwater regulation through the Water Act Modernization process;
ii. Identify locations appropriate for a groundwater licencing pilot program, and work with the provincial and local governments to determine appropriate pilot program criteria;
iii. Support further studies on groundwater, and surface/groundwater interactions by university and government researchers;
iv. Fully integrate and improve tools for groundwater use reporting in BC WURC;

v. Include groundwater monitoring in hydrometric data management system;
vi. Work with local governments to pass bylaws that protect groundwater supply and quality.

Success Measures

- Pilot area established for groundwater regulation by 2015;
- Number of major groundwater users reporting through BC WURC;
- Number of communities with bylaws or other policies in place to reduce development in groundwater limited areas and/or limit over-extraction;
- Number of new groundwater studies completed or under way.

d. Sub-goal: Increased water efficiency in all sectors

Strategies

i. Promote best practices and partnerships by increasing the priority of water use efficiency in our Water Conservation and Quality Improvement (WCQI) grants;
ii. Convene workshops and programs to provide information to communities on new approaches to reduce water use, including conservation water pricing and rate structures;
iii. Work with Agriculture and Agrifoods Canada and BC Ministry of Agriculture to reinstate programs to upgrade agricultural irrigation systems;
iv. Identify remaining communities that do not yet have water metering for residential and agriculture, and work with them to secure funding and install meters;
v. Work with local governments to pass bylaws for topsoil, landscape irrigation, using only certified irrigation installers, and other practices encouraging residential water use efficiency;
vi. Advocate to senior government to provide funding for water utilities to twin their systems and separate municipal and agricultural flows;
vii. Create or support public education programs, such as the Water Ambassador program, to reduce domestic water use and improve system efficiencies.

Success Measures

- Number of water conservation projects completed through WCQI grants;
- Attendance at OBWB workshops and conferences on new research and best practices for water efficiency;
- Increase in the number of communities with installed water meters, and/or upgraded to smart meters;
- Demonstrated per capita use reductions;
- Reduction in lawn and impervious hardscape in developed areas;
- Increase in number of water conserving bylaws put in place.

B. The Okanagan has excellent source water quality – drinkable, swimmable, fishable

Water quality issues are difficult to manage because small sources of pollution can add up to big problems. "Source protection" falls into three areas: (1) upper-watersheds around reservoir lakes and streams (mostly Crown land); (2) agricultural runoff; and (3) developed areas, where it's called "stormwater." Different actions are needed for each. Healthy riparian areas along streams and lakeshores protect water quality, and also reducing runoff in developed areas. Invasive species like milfoil or zebra mussels are a special kind of water pollution problem.

a. Sub-goal: That we understand risks to source waters and what measures are needed to mitigate and manage them

Strategies

i. Support completion of source protection and response plans to get coverage of the whole valley;
ii. Facilitate information-sharing between water suppliers, supporting development of common source protection plan templates and content standards;
iii. Support development of a mainstem lake source protection plan for risks that cross jurisdictional boundaries, including updates to foreshore inventory maps;
iv. Facilitate university research related to source protection – including water quality and engineering studies;
v. Work with partners to conduct valuations of ecosystem services that identify economic benefits of protecting sources.

Success Measures

- Increase in the number of source protection/response plans for upper watersheds;
- Local government partnerships and actions leading to the creation of a mainstem lake source protection plan;
- Updated foreshore inventory mapping by 2016;
- Number of studies by university researchers and others that support source protection and foreshore protection;
- The value of environmental health for major Okanagan lakes and tributaries is clearly established.

b. Sub-goal: Government policy promotes appropriate land use in upper watersheds that protect water quality

Strategies

i. Advocate to B.C. ministries to protect water on Crown lands, asking that they direct action and coordinate with other agencies;
ii. Advocate for full implementation of off-road vehicle licensing program;
iii. Advocate for increasing the number of conservation officers patrolling upper watersheds;
iv. Encourage collaborative studies on reducing impacts from multi-uses of the watersheds, through WCQI grants and other opportunities;
v. Reaffirm OBWB position opposing privatization of lands on drinking water reservoirs;
vi. Support research on cost/benefit analyses for drinking water filtration vs. source protection.

Success Measures

- Improved water quality entering drinking water collection intakes;
- Reduction in off-trail motorized recreation in watersheds;
- Increase in the number of conservation officers;
- Continued moratorium on sales of leased lots on drinking water reservoirs;
- Shift in government policy emphasis from filtration to source protection for drinking water treatment.

c. Sub-goal: Pollution is reduced in developed areas through infrastructure improvement and policies limiting contamination of surface and ground waters

Strategies

i. Continue to provide infrastructure grants for wastewater treatment improvements and community sewer;
ii. Work with local government to develop plans and policies to reduce stormwater runoff and promote on-site infiltration of rainwater – including green infrastructure such as engineered wetlands;
iii. Support policies to reduce agricultural runoff, such as removing obstacles to off-stream livestock watering or allowing tax-breaks for riparian buffers on agricultural land (currently any land not in production is taxed at non-agricultural rates);
iv. Convene workshops and trainings on reducing stormwater pollution, sharing best practices and new technologies with local government staff and contractors;
v. Support research to promote the use of reclaimed water, and ways to reduce pollution from emerging contaminates;
vi. Work with partners to develop an Okanagan wetlands strategy, to preserve and improve wetlands for water quality benefits.

Success Measures

- Advances in wastewater and stormwater infrastructure upgrades including use of green infrastructure;
- Attendance at workshops and trainings on stormwater management for local government staff;
- Policy changes to reduce agricultural runoff;
- Policy changes to increase protection of natural wetlands, and remove barriers to establishing engineered wetlands for water quality treatment.

d. Sub-goal: Zebra and quagga mussels are kept out of the Okanagan, and Eurasian watermilfoil continues to be successfully controlled

Strategies

i. Advocate to federal and provincial governments for boat inspections at US and Alberta borders;
ii. Engage the International Joint Commission to support cross-border coordination and prevent transport of invasive species;

iii. Support provincial "Clean Drain Dry" campaign and advocate for increased capacity and additional conservation officers to do boat inspections;
iv. Continue invasive mussel awareness campaign, and provide information to local governments about mitigation measures should mussels arrive;
v. Continue to improve mapping and digital tracking of milfoil operations, and work with local governments to maintain lakeshore access for milfoil equipment and weed removal.

Success Measures

- Policies in place for Canadian border services to question people bringing boats into B.C. and requiring inspections if appropriate;
- Joint action by B.C., Alberta, and Canadian government to inspect boats entering B.C. from Alberta;
- Okanagan residents and visitors are aware of potential damage from invasive mussels;
- Continued streamlined permitting process for milfoil control, based on maps of work areas generated by OBWB;
- Long-term access established where needed for milfoil control equipment and weed removal.

C. Okanagan local governments, First Nations, water purveyors and stakeholders have up-to-date coordinated plans and policies to protect water quality and water supply, and prepare for extreme events

Most of the risk for water problems in the Okanagan – from droughts to floods to water pollution – can be well managed with solid plans, based on up-to-date information. The OBWB has been focused on gathering the science for better water plans, and it is time to place more effort on linking and strengthening local government plans into a truly regional approach. The Okanagan Water Stewardship Council has been preparing a framework for a valley-wide water plan that can potentially make these links. The OBWB has an opportunity to reinforce individual local government, First Nation and utility plans, and to be a leader in the larger planning effort.

a. Sub-goal: Local government has the capacity to prepare and respond to population and climate change

Strategies

i. Engage regularly with local government electeds and staff to determine local water concerns and present research and information on the connection between water and land use planning;
ii. Identify information needs and data gaps to assist with OCPs, RGS, and other planning processes;
iii. Connect with provincial and national groups to identify leading information and trends for managing water and water systems;
iv. Convene workshops and training, providing information on tools and resources for local government staff and contractors;
v. Support province-wide initiatives to improve flood risk assessments and emergency management and response policies;
vi. Support advances in water planning through OBWB's WCQI grants;
vii. Develop an Okanagan Water Plan to create an umbrella framework and uniform standards for coordinated plans among Okanagan communities and water purveyors;
viii. Coordinate local government water planning with water resource planning by Okanagan Nation communities.

Success Measures

- Number of presentation and number of attendees at OBWB presentations;
- Attendance at workshops and trainings on new research and best practices for risk assessment and planning;
- OBWB data and modeling results on water supply, climate and population changes are included in OCP updates, RGS, and other water and wastewater planning;
- Okanagan flood plain maps are updated to reflect changes in risks;
- Local governments and water suppliers have science-based, coordinated plans to respond to water shortages and droughts as well as groundwater protection and emergency response for extreme weather events.

b. Sub-goal: Diversifying funding sources, and securing new external funding partners to support Okanagan water initiatives by local governments

Strategies

i. Seek special infrastructure funding to bring Okanagan metering and monitoring systems up to one common standard, leveraged by local dollars;
ii. Identify external funders who can support local water initiatives and share information on funding opportunities with community partners;
iii. Educate external funders about the importance of freshwater ecosystems and fisheries in B.C.;
iv. Advocate for changes to emergency response funding policies to fund climate adaptation/hazard prevention measures;
v. Identify and advocate for new user fees or other funding mechanisms to support water planning, infrastructure renewal, and water protection initiatives;
vi. Support grant applications by university researchers, connecting them with local resources and networks, and participate as research partners when appropriate.

Success Measures

- Number of grants given, the number of matching cash and in-kind donations to our grantees and local partners;
- Number of grants and funding agreements received by OBWB to improve Okanagan water policy, planning, research, and data collection;
- Senior government funding is made available for communities to upgrade infrastructure, reduce hazards and risks associated with extreme weather events;
- Amount of partner funding and in-kind contributions of expertise from the OWSC and other partners;
- Number of projects OBWB participates in with university and other researchers to support Okanagan water sustainability.

c. Sub-goal: A knowledgeable public, with widespread commitment to science-based planning, water conservation and reducing pollution

Strategies

i. Be the most trusted local source of science-based Okanagan water information, and an informed voice for balanced water policy in B.C.;
ii. Further develop Okanagan WaterWise valley-wide water outreach programs, working with local government and business partners;
iii. Promote changes in public behaviour, leading to greater water conservation and protection of water quality;
iv. Support and coordinate public communication about invasive mussels, working with provincial and regional partners;
v. Make public presentations and convene public forums for business, youth, citizen and service groups to increase understanding of water issues and support for local government plans, policies and infrastructure improvements;
vi. Further build relationships with media, providing timely information and useful news;
vii. Expand our connections with school science programs, assisting with curriculum development, and training for teachers;
viii. Build out OBWB/WaterWise websites and social media tools to share information with diverse audiences;
ix. Engage Okanagan youth in water dialogue and planning.

Success Measures

- Increase in public water literacy, measured by participation in Okanagan WaterWise initiatives, and through surveys of the Okanagan public;
- Increase in number of xeriscaped municipal properties, parks, and private residences;
- Number of water presentations and total audience numbers each year;
- Number of news stories on Okanagan water each year;
- Okanagan water lessons become a standard part of school curricula;
- Okanagan youth become advocates for sustainable water in the Okanagan.

D. OBWB has excellent relationships, a defined role, and clear communications with stakeholders and other levels of government

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

a. Sub-goal: The OBWB is respected by all levels of government as an advocate for Okanagan and B.C. water concerns

Strategies

i. Be the most trusted source of science-based Okanagan water information, and an informed voice for balanced water policy in B.C.;
ii. Provide useful solutions and informed answers to the question, "How do we get this done?", rather than vague recommendations;
iii. Stay closely engaged with the International Osoyoos Lake Board of Control and regulations for Osoyoos Lake finding ways to improve public engagement;
iv. Continue advocacy for progress on Water Act Modernization, focusing on policy development that meets Okanagan needs;
v. Advance effective and innovative water policy, and advise on other existing or proposed water legislation and policies;
vi. Conduct webinars on Okanagan water information for local governments, water purveyors and other professionals;
vii. Build support among local elected officials for wise management of water resources in the basin.

b. Sub-goal: The OBWB has a strong working relationship with Okanagan First Nations communities

Strategies

i. Investigate new governance arrangements for First Nations participation on OBWB;
ii. Initiate discussions with the Okanagan Nation Alliance (ONA) and member bands to work toward a joint vision for water management in the Okanagan;

iii. Seek opportunities and mechanisms to incorporate First Nations community needs and cultural values into water planning;
iv. Facilitate and promote joint service agreements between Okanagan Nation communities and local government utilities;
v. Hold joint meetings with ONA and member bands to build relationships and identify common interests;
vi. Seek out opportunities for the OBWB to participate in First Nations' water-related cultural events (for example, fisheries).

Success Measures

- Full participation of Okanagan Nation government on OBWB, to share information and develop regional priorities that meet the needs of all Okanagan communities;
- Integration between Okanagan Nation water resource planning and the water planning of OBWB and Okanagan local governments and utilities;
- Number of joint meetings between OBWB and Okanagan Nation communities and groups;
- Number of new service agreements between Okanagan Nation communities and neighboring utilities;
- Participation of Okanagan chiefs, community members, and staff in OBWB initiatives and events;
- Participation of OBWB directors, OBWB staff, and Okanagan Water Stewardship Council members in Okanagan Nation initiatives and events.

c. Sub-goal: The OBWB, working with the Okanagan Water Stewardship Council (OWSC), maintains excellent communication with local stakeholders

Strategies

i. Take advantage of the Council's strengths, diversity and expertise to develop policy and planning recommendations for OBWB consideration;
ii. Use the Council's reach in the community and across B.C. to strengthen partnerships among other water stakeholders and water sector groups;
iii. Use the Council's reach to increase understanding among all stakeholders of the value of water and the state of the basin's water resources;
iv. Conduct webinars, building on Council expertise, on Okanagan water information for local governments, water purveyors and other professionals;

v. Continue to use the Council as a venue for conflict resolution among water stakeholders, user groups and the water sector as a whole.

Success Measures

- Number of collaborative partnerships with water stakeholder groups;
- Continued strong attendance and participation on the OWSC;
- Increased understanding among all stakeholder of the value of water and knowledge about the state of the basin's water resources;
- New policy and planning recommendations are developed by the OWSC for the OBWB's consideration;
- OWSC continues to be recognized as a trusted source of tested stakeholder advice and engagement.

We thank all our partners and supporters, and all the communities we serve.