

Okanagan Basin Water Board, 2018

All correspondence with respect to this review should be directed to:

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1 EXECUTIVE SUMMARY

The OBWB's Water Management Program is scheduled for renewal on April 1, 2019. The program was established in 2006, as a means for the OBWB to fulfill its original mandate for water management. This review lists the program's activities and achievements since the last renewal in 2014.

The OBWB is a public agency, unique in Canada, which looks at water issues through a valley-wide lens – identifying priority problems and solutions; forming partnerships with all levels of government, First Nations, and local stakeholders; and finding answers for decision makers. The OBWB has a special capacity for forming partnerships and aligning resources to meet shared priorities. We are effective because we focus on equity, and on outcomes with valley-wide benefit. Strong relationships and trust are our greatest assets.

Through the Water Management Program, the OBWB helps local governments prepare for impacts on water from population growth, development, and extreme weather like drought and floods. Given the diversity of water interests in the valley and increasing financial constraints, we can best make progress by working together and avoiding duplication of effort. The Program works within the OBWB's mandate to achieve its objectives, leverage funding, institutional resources and the great store of local expertise in the valley to provide significant economies of scale. The OBWB has received more than \$6 million in external funding since the beginning of the program, making up between 19-43% of the program budget each year. For all these reasons, the Water Management Program should continue its activities to protect the waters of the Okanagan valley.

There are no major changes planned in the scope of funding or activities for the Water Management Program. The board requests one change to the terms of reference of the Water Conservation and Quality Improvement Grant Program. This would be to award the funding on a merit-basis through a valley-wide pool, making it more consistent with the OBWB's other programs and providing the greatest possible impact. Each regional district must pass the resolution for it to come into effect.

Requested Resolution #1.

That the Regional District of [North Okanagan, Central Okanagan, and Okanagan-Similkameen] approves the following change to the OBWB Governance Manual: that future WCQI grants be awarded on a valley-wide basis, ranked on the merit of each proposed project as it benefits its region and the valley as a whole.

The three Okanagan regional districts are further requested to pass the following resolution, to empower the OBWB to continue the Water Management Program. <u>Each regional district must pass the resolution for it to come into effect.</u>

Requested Resolution #2.

That the Regional District of [North Okanagan, Central Okanagan, and Okanagan-Similkameen] reaffirms support for the OBWB's Water Management Program under the Terms of Reference of the OBWB's Governance Manual, and renewal of the program for another four-year term, from April 1, 2019 to March 31, 2023.

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3 LIST OF APPENDICES

Appendix A: Financial Review Schedules (Attached).

Appendix B: Detailed review of the Water Conservation and Quality Improvement Grant Program. Available online at:

http://www.obwb.ca/newsite/wp-content/uploads/2018-05-25 wcqi program review 2006-2018.pdf

4 LIST OF SUPPORTING DOCUMENTS

OBWB Governance Manual Okanagan Basin Water Board Strategic Plan 2014-2019

5 Message from the Executive Director



The health of our communities and our economy is bound to the health of our lakes and streams. The words "economy" and "ecology" both come from the Greek word for home – and taking care of each of these, takes care of our homes. From north to south, our lakes and streams flow together, and our communities are made richer by our proximity and relationship to the water.

The OBWB was founded as a way for local communities to work together to protect Okanagan water. It provides an Okanagan advantage compared to all other regions in B.C., and is unique in Canada as a local government watershed agency. The Water Management Program is the OBWB's mechanism to do these activities. In the past four years, we've created partnerships for flood plain mapping, coordinated drought response, public

outreach to prevent invasive mussels and promote water conservation, and for critical water science studies to understand the sustainability of groundwater and flows for fish.

The Water Management Program is everything that we do, beyond milfoil control and sewerage facilities grants, and it is the reason the OBWB was founded. We review and renew this program every four years, as a way to promote transparency and accountability with the communities we serve.

Collaboration and coordination allow us, in the Okanagan, to be stronger and more resilient together – through any winds of change.

Anna Warwick Sears, Executive Director

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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.

Water Management Mandate

The Water Management Program acts on the mandate given to the OBWB in its founding legislation:1

- To organize or receive proposals from private interests, organizations or agencies and all levels of governments regarding best practices for water use and management;
- To define water problems and priorities, economic feasibility of solutions, responsibility, necessary legislation and required action;
- To communicate and coordinate between levels of government and their agencies about water use and management;
- To present proposals and recommendations to local or senior governments, according to jurisdiction and responsibility;
- To participate financially or otherwise, in surveys, investigations or projects on behalf of Okanagan local governments;

The OBWB's legislated mandate requires the board to establish a Liaison Committee, now named the Okanagan Water Stewardship Council.²

• The Water Board shall establish a Liaison Committee consisting of persons appointed by such municipalities, regional districts, improvement districts and Government agencies as the Water Board may determine, and the Liaison Committee shall advise on such matters as may from time to time be referred to it by the Water Board.

¹ See OBWB Supplementary Letters Patent in the OBWB Governance Manual

² OBWB SLP Article 14

7.1 OBWB BOARD OF DIRECTORS AND STAFF

2018 Directors

RDCO

Chair Tracy Gray, Kelowna Councillor Doug Findlater, Mayor of West Kelowna Cindy Fortin, Mayor of Peachland

RDNO

Vice-Chair Juliette Cunningham, Vernon Councillor Rick Fairbairn, RDNO Electoral Area 'D' Director Doug Dirk, Coldstream Councillor

RDOS

Peter Waterman, Mayor of Summerland Ron Hovanes, Mayor of Oliver Sue McKortoff, Mayor of Osoyoos

Water Management Initiative Appointments

Lisa Wilson, Okanagan Nation Alliance Denise Neilsen, Okanagan Water Stewardship Council Toby Pike, Water Supply Association of B.C.

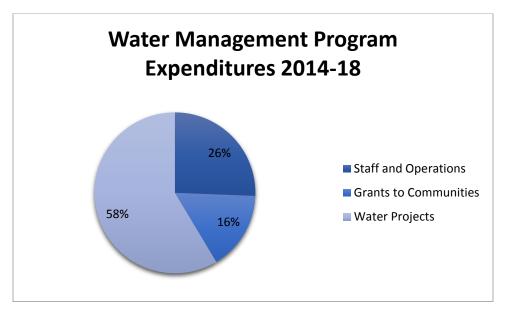
2018 Water Management Staff

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

*Other short-term staff as needed and external funds allow.

8 WATER MANAGEMENT PROGRAM FINANCES

Financial summaries of Water Management Program income and expenses are given in Appendix A. The OBWB publishes an annual report with its audited financial statements, outlining income and expenses across all programs, and presents the report at our Annual Public Meeting.



8.1 Overview: Inter-regional actions and economies of scale

The program is structured to support Okanagan water sustainability and bring added value to local communities. Economies of scale are created by pooling funds, sharing resources, and leveraging dollars from outside the valley. Rather than each jurisdiction hiring staff or contractors to manage water science projects, grants and planning initiatives, the OBWB can centralize activities. The program creates capacity for inter-regional projects:

- that are difficult for individual local governments to lead;
- that are outside any individual local government's mandate; and
- where a basin-wide approach greatly increases efficiency.

Having a stable source of local funding for water projects has allowed the OBWB to match contributions and be a landing pad for funding from senior government. The OBWB has flexibility as a grantor and as a funding partner, and can take on multi-year projects. The OBWB also assists local communities to secure external funding from private and corporate foundations, and government agencies.

Water infrastructure, water monitoring and management costs are expected to rise in the years ahead. This is because of the increased frequency of extreme weather events, increases in population that require more services and are vulnerable to weather extremes, and because of inflation and aging infrastructure. This makes the OBWB's cost savings, external funding and platform for collaboration more important than ever.

A large part of the OBWB budget depends on grant revenue, which is difficult to project. The schedule of future budgets (Appendix A) is relatively conservative – and we are confident in meeting

and exceeding the given targets. The OBWB has been able to maintain and improve service delivery because we have continued to find new and better ways to increase productivity.

8.2 BASE FUNDING

The OBWB is funded through property taxes on land within the Okanagan watershed. Every taxpayer contributes at the same rate, and funds are directed to projects with distinct basin-wide benefits. The monies flow through the regional districts but otherwise we are structured as a fully-integrated, valley-wide entity.

The Water Management Program agreement allows OBWB to assess up to \$0.02 (2-cents) per \$1,000 assessment for program costs. This caps the growth of the program, and the actual annual cost is based on budget requirements. Our current requisition is \$0.016 per \$1,000 assessed value.

8.3 LEVERAGED FUNDING

The OBWB was designed to pool funds for inter-regional projects and to bring external funds to the Okanagan. Since the beginning of the program in 2006, the Water Management Program has brought in more than \$6.06 million in external grants for Okanagan water projects.

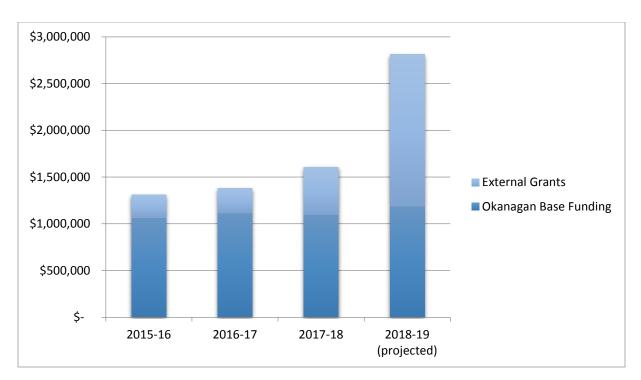
Program Reporting Term ³		Water Management		
		Grants to OBWB		
April 2006 – Aug 2008		1,500,000		
Sep 2008 - Jun 2011		900,000		
Jul 2011 - Aug 2014		750,000		
Sep 2014 - Mar 2019		2,913,772		
(awarded)		2,913,112		
T	otal	6,063,180		

In the past three years, external grants have ranged between 19% and 32% of our total budget. In the 2019 fiscal year, external grants are projected to be at least 43% of our total budget, based on

awarded grants.



³ The Reporting Term varies slightly from the renewal period, because reviews are done mid-way through the fiscal year that the program is renewed.



Direct grants to OBWB don't tell the whole story. The OBWB's 2013-19 Strategic Plan determined that we should seek to increase resources and external funding for all of our partner communities, as well as the OBWB. We accomplish this in a variety of ways:

- Matching Funding: Our overall goal is to bring water funding to the valley, whether or not the OBWB is the recipient. For example in 2014, RDOS was able to leverage OBWB's Make Water Work program to secure a \$90,000 grant from RBC's Blue Water Project, at no additional cost to Okanagan communities.
- Support for Local Grant Applications: OBWB staff assist local governments, non-profits and university researchers with grant applications and letters of support. In 2017-18, this included \$1,140,000 in flood mapping grants directly to RDNO, RDCO and RDOS, above and beyond the \$1,450,000 awarded to OBWB for LiDAR and aerial imagery to support this flood mapping.
- Water Funder Outreach: The OBWB is part of the Canadian Environmental Grantmakers Network, and helped found the B.C. Water Funders Group – where public and private funding agencies share information and improve water granting to B.C. communities and non-profits. The OBWB raises awareness of Okanagan water issues among funders working at the provincial and national level.
- Funding Advocacy to Senior Governments: The OBWB has been a vocal advocate for
 increased funding to prevent the spread of invasive mussels into B.C. Working with other
 regions and groups like the Kelowna Chamber of Commerce, we have raised the profile of
 the issue, which has led directly to increased budgets for monitoring and inspection stations.
- In-kind Contributions: Industry contributions to the Don't Move a Mussel campaign of \$410,000 accounted for 69% of the total budget for 2014 through 2017. Industry contributions to the Make Water Work campaign of \$328,000 accounted for 63% of the total budget for 2014 through 2017. The in-kind contribution of Okanagan Water Stewardship Council members' volunteer hours for technical expertise between 2015-18 was more than \$200,000.

8.4 UBC-O RESEARCH PARTNERSHIPS

The UBC – Okanagan Campus is a great asset to our community. The growing community of world-class faculty and the diverse student body are using the Okanagan as a laboratory for community-based research. The OBWB is a close partner with the university. In 2010, at the request of the Okanagan regional districts, we helped establish the BC Regional Innovation Chair in Water Resources and Ecosystem Management, and have participated in the Water Research Advisory Committee.

We have also worked directly with university researchers on a variety of projects, ranging from studies of the Kelowna aquifers to endocrine disrupters, to source protection for small water systems. The university has significant capacity, and faculty can oversee graduate student projects at a fraction of what it would cost to hire a consultant. Many times, the OBWB will assist researchers simply by being a community partner, providing in-kind participation and letters of support. In a reciprocal way, we draw on faculty for expert advice for our water science initiatives.

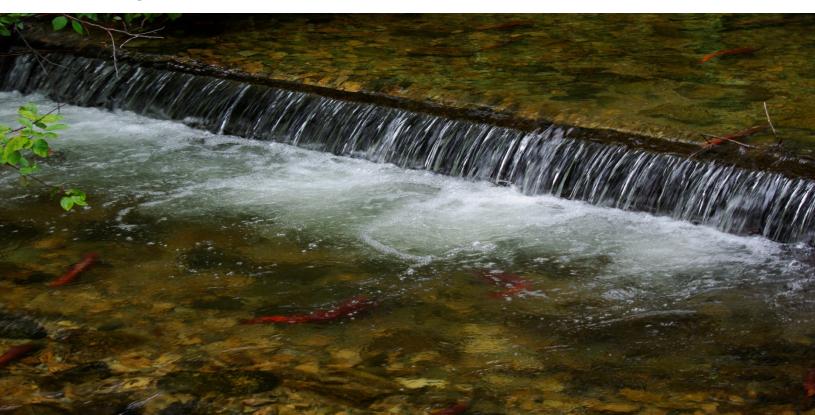
8.5 Projections for Future Fund Leveraging

We anticipate continued strong support for Okanagan water projects and programs from senior governments and private granting foundations. The valley is a centre for water science in western Canada. We have excellent partnerships, and the OBWB can act as a local funding partner and project coordinator with a variety of agencies and organizations.

Our ability to carry-over funds from one fiscal year to the next and to provide financial administration for multi-agency partnerships contributes to the OBWB's success in gaining senior funding. Two other essential factors for receiving large external grants are:

- Staff capacity to participate as full partners.
- Local base-funding to leverage grants.

The schedule of future budget projections given in Appendix A includes anticipated external grants, however all projects are scalable, and can be adapted to increases or decreases in available funding.



9 PROGRAM STAFFING

Water Management Program staffing is adequate for maintaining existing program areas. The OBWB has been able to increase service delivery over the period of the review by increasing productivity. One half-time staff position, the Policy and Planning Specialist, was added in 2016 to increase our direct support to local governments across the valley.

9.1 OVERVIEW

The success of the OBWB's Water Management Program is a direct result of the quality of its staff, and their personal commitments to water sustainability in the Okanagan. All staff are highly experienced, well-educated and trained for their positions. The program is run from a single office and has very low overhead. OBWB is innovative and highly collaborative because we have few staff and must find new ways to make progress. We rely on contractors and partners to accomplish many of our projects.

9.2 CURRENT STAFF POSITIONS

Executive Director

Reports directly to the Board of Directors. The Executive Director provides leadership for all OBWB programs, managing staff, and working with the board to develop long-term strategic plans. The Executive Director acts as board representative and primary point of contact for political leaders, First Nations, senior government officials and staff. This is a permanent position.

The current Executive Director, Anna Warwick Sears, has a Ph.D. in Biology, and before coming to the OBWB was the Research Director for an NGO, responsible for developing watershed management plans and managing an aquatic weed control program. She also holds a certificate in Local Government Administration, and is a Registered Professional Biologist.

In addition to working for OBWB, Dr. Sears was appointed by the Minister of Finance to the Board of Governors of the Real Estate Foundation of B.C., and she was appointed to the International Osoyoos Lake Board of Control by the International Joint Commission.

Water Stewardship Director

Reports to Executive Director. The Water Stewardship Director is the primary staff person to the Water Stewardship Council, managing Water Management projects and initiatives, participating in strategic planning and development of council work plans, and engaging in outreach with technical experts and community members. This is a term position, supporting the Water Management Program.

The current Water Stewardship Director, Nelson Jatel, is a registered professional agrologist and has an M.A. in Interdisciplinary Studies with a focus on Okanagan water. Mr. Jatel also holds a B.Sc. in Freshwater Science, and before coming to the OBWB was the Executive Director of the Okanagan Partnership bridging environmental and economic concerns for sustainable prosperity in the Okanagan. He also holds a certificate in Local Government Administration.

In addition to working for OBWB, Mr. Jatel is pursuing a part-time doctorate in social sciences with a focus on Okanagan water governance. Nelson has recently been re-appointed for a second term as a director on the UBC Alumni Association advisory board.

Communications Director

Reports to Executive Director. The Communications Director is responsible for communication between the OBWB and the community at large, as well as OBWB record keeping. This is a term position supporting the Water Management Program.

The current Communication and Research Coordinator, Corinne Jackson, has a B.A. in political science and had a former career as a journalist for a number of B.C. newspapers. Ms. Jackson holds a certificate in Local Government Administration, with additional training in local government communications.

Operations and Grants Manager

Reports to Executive Director. The Operations and Grants Manager is responsible for coordinating the Eurasian Watermilfoil Control Program, managing the Sewerage Assistance Grants and the Water Conservation and Quality Improvement Grants programs, and overseeing OBWB operations. This is a permanent position, bridging the Water Management Program, the Milfoil Program, and the Sewerage Facilities Program.

The current Operations and Grants Manager, James Littley, came to the OBWB with 12 years management experience as an officer in the Canadian Forces Reserve. He has an M.A. in Interdisciplinary Studies, focusing on local government sustainability planning, and a B.A. in political science and human geography. Mr. Littley also holds a certificate in Local Government Administration, with additional training in local government project management. He was recently elected to the board of directors of the Canadian Environmental Grantmakers Network, a national organization of funding organizations.

Policy and Planning Specialist

Reports to the Executive Director. The Policy and Planning Specialist is responsible for direct support and collaborations with local government staff in the Okanagan – with a focus on increasing capacity for water-related planning initiatives. This is a term position, supporting the Water Management Program.

The current Policy and Planning Specialist, Kellie Garcia, has a degree in Environmental Science from Royal Roads University, and a diploma in Environmental Science from Camosun College. She is a registered professional agrologist. Before coming to the OBWB, Kellie had 13 years of experience as an environmental consultant and business owner, focusing on environmental assessment and planning, technical writing, and facilitation.

10 OKANAGAN WATER STEWARDSHIP COUNCIL

The OBWB is required by our Supplementary Letters Patent to have an external advisory committee. Originally this was called the Liaison Committee, that was renamed the Okanagan Water Stewardship Council in 2006. The Council advises the OBWB's board of directors, and the Council Chair is a member of the board.

The role of the council is to capitalize on local expertise, supporting communication and conflict resolution among Okanagan water stakeholders. Council meetings are a venue to explore water problems and solutions, increase understanding, discuss government-to-government relationships, opportunities for collaboration, and identify barriers to multi-level water management challenges.

10.1 RECENT ACHIEVEMENTS

Some recent achievements of the Council are highlighted here:

- Between January 2015 and April 2018, Council members donated 2,370 volunteer hours of technical expertise, with an estimated value of more than \$200,000;
- The Council conducted extensive consultation on the new B.C. Water Sustainability Act, providing detailed advice to the OBWB to inform the board's submission to the Ministry of Environment;
- The Council consulted with Okanagan community members on strategic Okanagan water issues including:
 - o Strategic flood, fire and drought management
 - o Invasive mussel prevention strategies & advocacy
 - Agriculture water
 - o Environmental Flow Needs
 - o Reservoir storage, management, and safety
 - Okanagan fisheries
 - o Okanagan Wetland Strategy
 - o Okanagan bio-solids
 - o Natural resource mapping and data
- The Council convened community discussions on complex topics including: climate change (Dr. Francis Zwiers, December 2017) and multi-government legal water issues (lawyer James Tate, December 2015).
- In October of 2015 the Council discussed protocols and collaboration opportunities with the Okanagan Nation Alliance and we hosted a joint Council and Board meeting in June 2016, with indigenous law expert Dr. Joshan Danesh discussing opportunities for action.

10.2 SUMMARY

Much of the OBWB's success in the past 12 years would not have been possible without the contributions of the Council, given the importance of collaboration and conflict resolution for water.

Water stewardship is a balancing act among diverse, often competing interests, and the council provides a forum for stakeholders to share perspectives and resolve opposing viewpoints. The collaborative environment builds bridges and partnerships that might not happen otherwise. Council members volunteer their time for the monthly meetings, and for participation on committees and projects. Meetings and events are always well-attended, attracting a variety of other topic experts as guests, and the council is widely respected locally, provincially and nationally. In 2013, The Okanagan Water Stewardship Council won a prestigious national award from the Council of the Federation.

There is active interest among members of the Council on how initiatives are communicated and put into action, and a desire for members to become more actively involved in projects. The Council makes recommendations to the OBWB's board of directors, and the OBWB works with Council members and their organizations to find ways to have the greatest positive impact from their recommendations.

Finding solutions to complex Okanagan water problems requires a diverse community of committed parties – with a common goal of protecting water, our most precious resource. The Council continue to support learning and community building under a common vision of swimmable, fishable, and drinkable Okanagan water.



11 WATER SCIENCE AND POLICY

In the past several years, we have seen intense droughts, wildfires, and record flooding followed by record dry spells. It is important to build systems to monitor changes in the climate and hydrology of the valley, and any patterns in water quality changes.

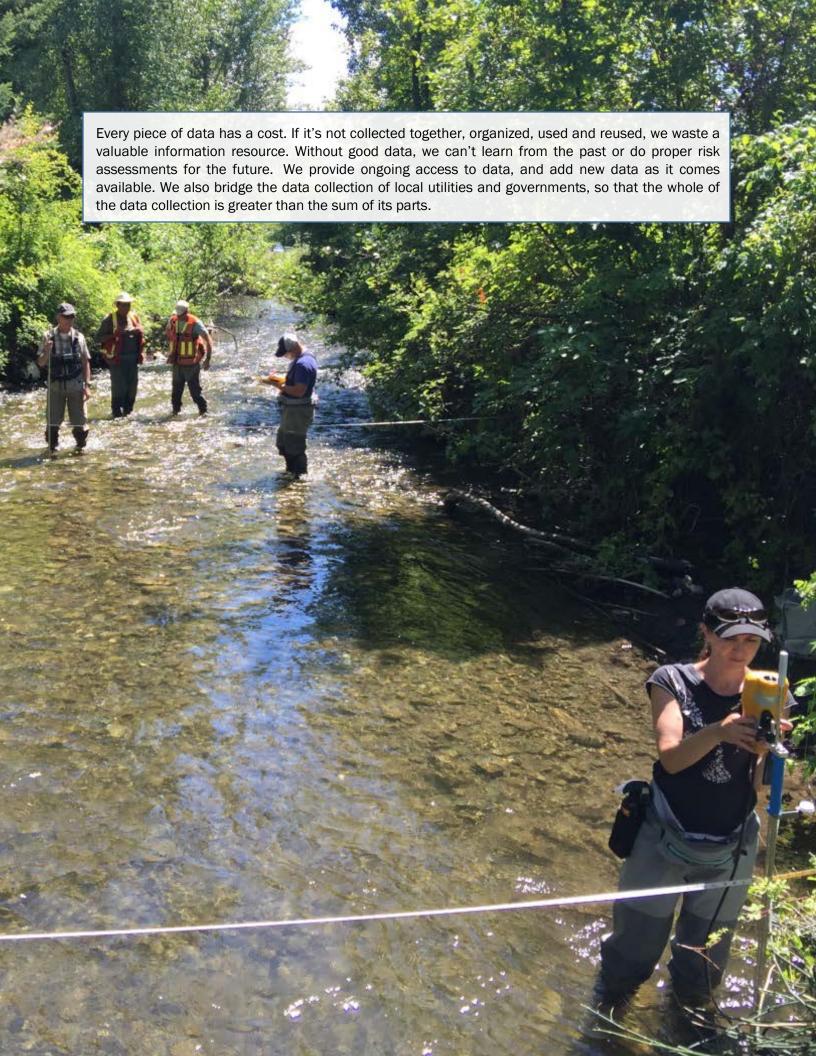
11.1 RECENT ACHIEVEMENTS

- Development of Environmental Flow Needs assessments for Okanagan streams, in partnership with the Okanagan Nation Alliance and the Province of BC;
- Groundwater studies on the Kelowna aquifer, including groundwater/surface water interactions along Mission Creek, and 3-D mapping of subsurface aquifer layers;
- Collaborative effort to acquire LiDAR and aerial imagery for valley-wide floodplain mapping, in partnership with GeoBC, Emergency Management BC, Okanagan local governments and First Nations governments;
- Coordination of local government drought planning, so that they are consistent among communities and integrate with provincial drought response plans;
- Development of drought triggers for water suppliers that draw on the mainstem lakes, based on the risk of drought return periods, to incorporate into drought plans;
- The Okanagan water demand model is being widely used for regional growth strategies, OCP updates and local government development planning, and has been replicated throughout B.C.;
- Development of an Okanagan hydrometric (stream flow) database and interface using the Aquarius software system, complementary to the Water Survey of Canada system.
- Coordination of many partners on Okanagan Wetlands Strategy, increasing the level of external grant funding and leading to an increase in on-the-ground restoration projects;
- Development of an online hub for local government planning and policy guides on CivicInfo BC;
- Water Monitoring Scan conducted in partnership and with funding from the B.C. Water Funders Collaborative, detailing all the sources of water monitoring data in B.C., online access, and gaps in knowledge. The final report is being used to increase coordination between agencies.

11.2 SUMMARY

The OBWB's approach is to work steadily on problems that have the greatest impact on water quality and supply over the long term. Essentially, we are working to improve water management during a time of rapid climate, population, and social change. We make progress through persistence and continuity.

Climate science shows that there will be more water shortages and more flood events in coming years, but many local communities lack up-to-date drought or flood plans. B.C.'s new Water Sustainability Act also presents many challenges, moving forward – as local governments and the public adapt to new regulations. Communities will have to be increasingly self-reliant, and clearly communicate their needs to senior governments. The OBWB can help local communities to share resources, and to magnify the voices of individual jurisdictions.



12 WATER CONSERVATION AND QUALITY IMPROVEMENT GRANTS

The Water Conservation and Quality Improvement (WCQI) grant program provides funds to local governments, irrigation districts, and non-profit organizations for projects that conserve and protect water, based on the recognition that we are all part of "One Valley, One Water." Networks of collaboration and communication are built through the program as grantees work together to develop and share best management practices. Since its inception in 2006, each year the program has been oversubscribed and competitive.

12.1 RECENT ACHIEVEMENTS AND PROGRAM IMPROVEMENTS

- Since 2014, OBWB has distributed \$1,210,000 of Water Conservation and Quality Improvement Grants to 71 projects by 32 organizations, including local governments, improvement districts and NGOs (\$4,106,654 since 2006, to 250 projects and 63 organizations).
- More than 45 other agencies, organizations or businesses contributed funding or in-kind support since 2006, bringing water conservation and quality improvement project spending to more than \$29.9 million.
- Since 2014, the program has integrated annual themes to prioritize and give bonus points to proposals which meet the annual theme objectives.
- The granting process has been significantly streamlined, following the best practices learned through our participation in the Canadian Environmental Grantmakers Network.
- An updated database with all the successful projects is available on the OBWB website.
- In 2015, OBWB hosted a workshop for grant-eligible organizations to share project successes, improve basin-wide collaboration and identify ways to achieve OBWB strategic goals. "Celebrating Collective Impact 10 years of water funding in the Okanagan" was attended by over 90 people, with information posters from each of the previous grant projects, and presentations from several past grantees.
- The next WCQI Workshop will be scheduled for October 2018 to coincide with the release of the call for applications for the 2019 grant year.



12.2 SUMMARY

An extensive review of the program is given in Appendix B. Ongoing reviews form a record of the program over time. In this way, projects which may seem unrelated can be understood in the bigger picture to see progress in the valley over time. Whether the project is a local government improving the resilience of their water supply, a community group doing stream restoration, or the Okanagan Nation doing fisheries enhancement, this pool of funding often makes a difference for whether a project goes forward.

The WCQI grants program has led to significant improvements in water conservation and water quality protection, and has leveraged substantial external grant funds from senior government or agencies such as the B.C. Real Estate Foundation. It has also increased collaboration and communication between participating local governments and organizations. This collaboration leads to greater efficiency and reduced costs.

Many times grantees will use the program to undertake innovative pilot projects outside of their normal business – for example, the creek restoration done by École KLO Middle School. Lessons learned in one area (such as Greater Vernon Water's innovative drought planning) are spread to other parts of the valley. The Okanagan Foreshore Inventory was completed piece by piece over a series of years, as local governments drew on the WCQI grant program to map their own lakeshore; and other mapping initiatives have been completed in the same incremental way – contributing a valley-wide benefit.

The program strives for continual improvement and support for our grantees. Through our participation and peer-learning in the Canadian Environmental Grantmakers Network and the B.C. Water Funders Collaborative, we have streamlined our program to make it simple and flexible. By increasing the profile of Okanagan water projects among other funders, we've also made it easier for local organizations to expand their sources of funding.

Because we are local, we can easily answer questions and respond to the needs of recipients. Most of the projects we fund are in the field and on the ground, and can be delayed by weather conditions. Other scheduling difficulties, such as securing alternate sources of funding, can also be considered for granting extensions. This flexibility has meant that the WCQI projects have a high level of success.

Each year the program is over-subscribed. Although some applicants are unsuccessful, the rigorous selection process keeps the awards competitive, ensuring that only the projects with both significant regional benefits and potential for valley-wide positive impact receive funding. To reduce frustration for unsuccessful applicants, staff have increased feedback, providing clear direction on the fit of the project with WCQI programs goals.

Another benefit from the program is that grantees leverage WCQI funds to gain other funding. Grant programs often require prior confirmed funding through other organizations in order to consider a project. OBWB staff routinely provide letters of support for our grantees applying to other agencies. Many of our grantees apply for multiple grants from many agencies, often from outside the Okanagan.

12.3 Special Recommendation for the Future

The OBWB is recommending a change to the grant program terms of reference, to a merit-based, valley-wide competition that is aligned with the intent and structure of all other OBWB initiatives.

While the intent of the WCQI program is to provide a valley-wide benefit to all residents in the Okanagan Basin, funds are currently allocated according to regional district, rather than going to the projects with the most merit, valley-wide. Under the current framework, projects are evaluated by staff according to standard scoring criteria, but some projects which score lower are funded over those with higher rank, because of the regional distribution of funding.

A change to valley-wide, merit-based funding will enable a more effective program addressing ongoing gaps in water quality and conservation, and support valley-wide collaboration on shared issues. The new structure would continue to ensure that local projects received grants based



on their local merit, but would also enable funding for larger initiatives with valley-wide impact. For example, changing to a valley-wide funding structure will enable projects that take a broader approach such as:

- Enable valley-wide coordination to enhance source-water protection more efficiently than similar efforts by individual water providers;
- Enable valley-wide flood prevention and mitigation efforts through coordinated mapping, data gathering and restoration work;
- Enhancing public outreach and education efforts to prevent the introduction of aquatic invasive species such as zebra and quagga mussels, or other shared threats to our waters;
- Conserving shared waters by ensuring valley-wide use of metering and irrigation best practices.

A valley-wide program for WCQI grant funding would ensure that projects with the clearest promotion of best practices, greatest valley-wide benefit, collaboration, innovation and quality of proposal would be given priority. This valley-wide grant process would also enhance other benefits of the program, such as attracting more outside funding from senior governments, corporate funders and foundations into the Okanagan.

At the May 1, 2018 meeting of the OBWB, the board passed a resolution:

"THAT future WCQI grants be awarded on a valley-wide basis, according to the merit of each proposed project, based on the board-approved scoring criteria, pending approval by the Regional Districts during the Water Management Program review."

Changing from the current regional distribution of funding to a merit-based, valley-wide funding competition requires a change to the OBWB Governance Manual, on approval of the three Okanagan regional district boards. The recommended motion is given in the Executive Summary of this review document, on page 3.

13 COMMUNICATIONS AND OUTREACH PROGRAM

Communication and Outreach is one of the main components of the Water Management Program, and is integral support for the rest of the program, as well as the work of the OBWB in general.

Effective communication between the OBWB and local government, First Nations, senior levels of government, water researchers and local residents is essential to create an understanding of Okanagan water issues, and develop and act on solutions to protect it.

13.1 RECENT ACHIEVEMENTS

- 827 news stories were generated between April 1, 2014, and March 31, 2018, reaching viewers/readers not just throughout the Okanagan, but also sometimes provincially and nationally. This is a 45% increase in stories compared to the previous three years;
- During the same time, the OBWB issued 62 news releases and held 16 public or media events:
- Monthly reports on activities at board meetings now reach over 240 people, as well as being available online;
- The Don't Move a Mussel campaign, aimed at stopping the spread of invasive zebra and quagga mussels, continues to grow every year, with valley-wide government and media partnerships, and materials being shared as far away at Manitoba;
- The Don't Move a Mussel campaign was a finalist for the 2017 Marketing Campaign of the Year award from the Kelowna Chamber of Commerce;
- OBWB directors have met with the B.C. Minister of Environment, and federal representatives in Ottawa to discuss concerns about invasive mussels;
- The valley-wide Make Water Work campaign was piloted in 2011 and has grown in leaps and bounds valley-wide, with many industry partners and its own website;
- OBWB staff delivered over 100 presentations to public forums, conferences, and workshops.
- As of March 2018, we have 1,017 subscribers on the Okanagan WaterWise YouTube channel, and 279,668 views of our content;
- OBWB posts nearly daily on social media, and we have been growing our audiences, with 1,941 Twitter followers, and 1,269 Facebook followers;
- Award-winning River Film documentary released in 2017, produced in partnership with the International Joint Commission, and the Washington Department of Ecology, to educate the public about the annual cycle of water management in the Okanagan/Okanogan watershed;
- The OBWB has worked with educators around the valley to develop curriculum materials on water for Okanagan public schools.

13.2 OVERVIEW

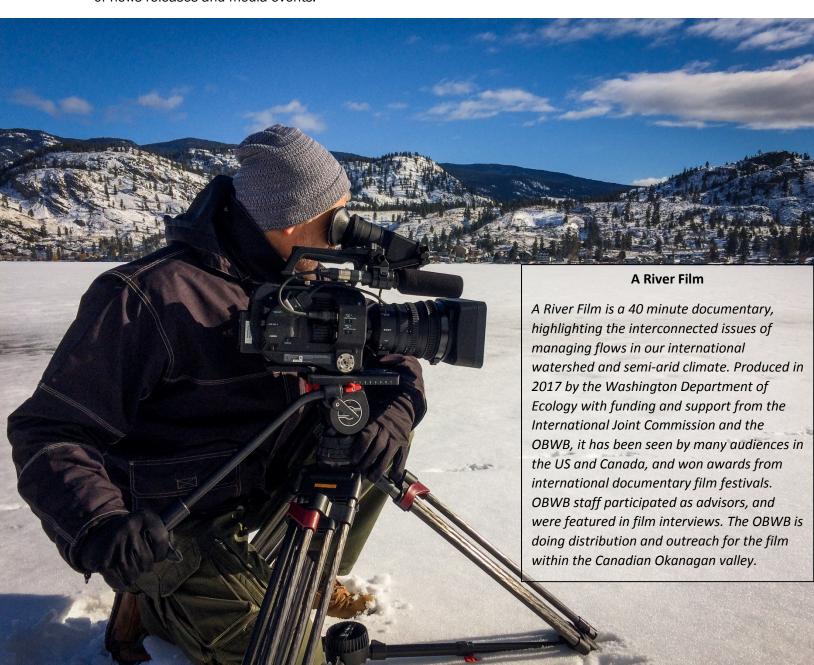
The OBWB has become the go-to communications hub for those looking for information on Okanagan water and those working towards its sustainability. This includes government officials, residents, researchers, media and water stakeholders. In response, the OBWB has developed many tools and strategies to reach specific audiences, improve understanding of water issues in the region and encourage collaboration. As our communication program has expanded, there has been ever-increasing interest among the public and media about water issues. Staff are continually building ways to reach audiences, using websites and social media, and working with media.

The Don't Move a Mussel campaign is unique in B.C. and has led to wide awareness about the emerging issue of invasive mussels. It also involves direct outreach to elected officials, in the federal and provincial ministries with jurisdiction over inspections and monitoring for mussel larvae. The

OBWB has an ongoing advocacy campaign for governments to increase funding for inspections, hire more conservation officers, train more mussel-sniffing dogs, and increase the number of decontamination stations. The OBWB has also advocated for tougher screening by CBSA officers along the USA/Canada border.

Our communications program has been especially successful developing partnerships with local governments, water purveyors, and organizations like the Okanagan Xeriscape Association and the Thompson-Okanagan Tourism Association. With the help of these partners, and the very generous contributions and in-kind donations from media outlets and the nursery and landscaping industries, our messages have spread much farther than ever expected.

As word spreads about the range of water issues in the valley, we've had more demand for public outreach, educational materials for schools, and other resources. With one dedicated staff member, assisted by summer interns, the OBWB contracts out some aspects of design and website development. We also work with local government, media, and industry partners who contribute staff time to steering committees and distribute materials, or make in-kind contributions to spread our messages and engage the public. Since the last review, the OBWB has nearly doubled the number of news releases and media events.



14 LOOKING FORWARD

Making a Difference: New Projects for Water Sustainability

It's essential to have a forward-thinking strategic plan, as the board of directors developed in 2013, and actions to implement it.

Table 14.1. Key Ongoing, Scheduled, and Completed Water Management Program Projects

Ongoing Projects
Okanagan WaterWise public education program
Don't Move a Mussel public education program
LiDAR acquisition to support floodplain mapping
Valley-wide Coordinated Drought Planning
Mainstem Lakes Drought Triggers project
Okanagan Wetlands Strategy implementation
CivicInfo BC database of Climate Adaptation and Water Management Bylaws
Water Demand Model and Land Use Inventory updates
Updating the Okanagan Sustainable Water Strategy
Environmental Flow Needs conference in October 2018
Water data hosting, management, and delivery to local governments
Groundwater and Hydrometric (stream flow) monitoring
B.C. Water Use Reporting Centre
Scheduled or Proposed Future Projects
New Okanagan hydrology models for major tributaries
Coordinated Flood Risk and Flood Management Planning
Recently Completed Projects
Mission Creek Groundwater/Surface Water Interaction Study
Environmental Flow Needs for Okanagan Streams
Guide to Constructed Wetlands in the Okanagan

14.1 STRATEGIC PLANNING

As stated in the OBWB's 2013 strategic plan, "The biggest risk we face as an organization is becoming spread thin on many small projects, and missing opportunities for major progress." This plan goes through 2019, so early next year the board will be reviewing and renewing its strategies to improve water sustainability in the valley. However, the focus of the plan will remain – protecting water supply and water quality, supporting the development of plans and policy, and building relationships and collaboration.

The Okanagan Water Stewardship Council has also begun to update their 2008 Sustainable Water Strategy. Their strategy is more high-level than a strategic plan, and reviews and explains the chronic water issues in the valley – suggesting actions and policy changes that are needed to address them.

There are many common threads between the OBWB's strategic plan and the Sustainable Water Strategy, because they seek to solve the same problems. However, the Council's plan is more outward facing, and includes actions to be taken by various levels of government and stakeholder groups, while the OBWB's plan focuses on strategies to be undertaken by the Board.

The four main goals listed in the OBWB's most recent strategic plan are:

- 1. Adequate supplies of water for all human and environmental uses.
- 2. The Okanagan has excellent source water quality drinkable, swimmable, fishable.
- Okanagan local governments, First Nations, water purveyors and stakeholders have up-todate coordinated plans and policies to protect water quality and water supply, and prepare for extreme events.
- 4. The OBWB has excellent relationships, a defined role, and clear communications with stakeholders and other levels of government.

The next sections correspond to these goals, and lay out plans for the next four years – anticipating that there may be new opportunities or needs arising. Work on these goals is cross-cutting for all of our program areas, and includes communication, grants, water science and policy as well as relationship building.

14.2 WATER QUANTITY (STRATEGIC PLAN GOAL 1)

As the new Water Sustainability Act comes in to force, with groundwater licensing and environmental flow protections, we need the best possible models, data and policy approaches to ensure that existing human and environmental needs are met before new licenses are issued. The provincial review⁴ of the 2017 Okanagan flood response also emphasized the need for better data and models, to prepare and mitigate flooding.

The next significant work to understand water supply will be to improve the hydrology models for the major tributaries into the valley, including Coldstream Creek, Mission Creek and Trout Creek – this will help both with drought and flood planning. We have received a Gas Tax grant to do this modeling, and the project will begin in 2018.

We are also continuing to improve and upgrade the Okanagan Water Demand Model, which calculates the water needs of all the agricultural areas of the valley, as well as residential use. This work is made possible by a grant from Agriculture and Agri-Foods Canada, to support a modeling intern position. The water demand modeling is used for infrastructure and irrigation planning, and has been one of the most frequently-accessed models maintained by OBWB.

Between 2015 and today, we've bounced from drought to flood to drought to flood again. The 2015 drought inspired many Okanagan water suppliers to do engineering studies to develop trigger graphs for better management of their reservoirs. The OBWB, is working with suppliers who have mainstem lake intakes to develop drought triggers for the main valley lakes. This project is still underway, and the technical information is expected to be incorporated into municipal/improvement district bylaws to guide water conservation stages.

After the historic flooding of 2017, the OBWB, working with partner local governments and the Okanagan Nation Alliance, initiated an effort to update flood maps, assisting with grant applications and securing funding from Emergency Management BC to get LiDAR imagery for the entire watershed. This project is currently underway, with airplane flights to collect LiDAR and orthophotos

⁴ Associated Environmental. December 2017. Review of 2017 Flood Response: Okanagan Lake Regulation System and Nicola Dam. A report for the Ministry of Forests, Lands, Natural Resource Operations & Rural Development. https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/integrated-flood-hazard-mgmt/2017 flood response report final.pdf

planned for this summer. These data will form the basis for floodplain maps and other forms of hazard mapping, including mud slides.

The OBWB continues to maintain databases for hydrometric (stream flow) data, and water use reporting by water purveyors. We are also supporting and coordinating efforts to expand the hydrometric monitoring network. In the coming term, the OBWB, the province, and other partners hope to revitalize the network of weather stations in the valley, to improve access and reliability of climate data.

14.3 WATER QUALITY (STRATEGIC PLAN GOAL 2)

Okanagan water should be drinkable, swimmable and fishable, to benefit all. Our water quality is directly influenced by land use in the upper watersheds, agricultural lands, and stormwater runoff, as well as wastewater outfalls. Problems are exacerbated by climate change increasing water temperatures.

The OBWB is working with the regional districts and many other partners to map, protect and rehabilitate wetlands for water quality improvement. We recently assisted RDOS with the planning and purchase of land to construct a treatment wetland for the Okanagan Falls wastewater treatment plant, to polish endocrine disrupters out of the discharge before it reaches the Okanagan River. In the coming term, we hope to work with RDOS to develop the research and education potential of this wetland.

OBWB also commissioned a guidebook for local governments to construct stormwater treatment wetlands. Looking forward, wetland construction and restoration will be important for both flood control and water quality improvement, and we will continue to move forward with refining and implementing the Okanagan Wetlands Strategy – mapping and restoring wetlands for water purification, and flood mitigation.

The Okanagan Water Stewardship Council has had a standing committee on Source Water Protection, and there is ongoing interest in the OBWB participating in an effort to do collaborative source protection for the mainstem lakes. The OBWB has supported previous Source Protection work through the Water Conservation and Quality Improvement grants program, as well as developing materials like the Slow it, Spread it, Sink it! Okanagan Homeowners Guide to reduce stormwater pollution. We will work with local governments and other water suppliers to continue these efforts.

In 2017, the OBWB was an adviser on the Hullcar Aquifer review for the Ministry of Environment and Climate Change Strategy. The OBWB also helped the Ministry of Health develop a protocol for assessing and managing cyanobacterial toxins (blue green algae) in recreational waters. This protocol has recently been incorporated into a combined policy for assessing and managing toxins in both drinking water and recreational water. The OBWB is a neutral broker of information that will continue to work with all agencies and groups, to ensure that decisions and plans are made using the best available information.

Invasive zebra and quagga mussels are the Okanagan's biggest threat to water quality, and have been the focus of a huge prevention effort – primarily through a public communications campaign, "Don't Move a Mussel," but also through sustained political advocacy to senior government decision makers, and staff participation in the multi-province and state planning process led by the Pacific Northwest Economic Region (PNWER). We will continue this high level of involvement, providing leadership, policy analysis and direction should the mussels infest areas closer to the valley. One of

the next important tasks will be to do risk assessments and planning for public infrastructure in the event of an infestation.

14.4 COORDINATED PLANS AND POLICY (STRATEGIC PLAN GOAL 3)

While we can't do anything to mitigate weather extremes in the near term, we can prepare in advance to respond and adjust to climate extremes, population growth and wear and tear on infrastructure. The OBWB's role is to bring together funding and expertise from in and outside the valley, to benefit local communities and the whole valley.

As described earlier, the OBWB is actively gathering data and developing models to better understand valley water supplies. The next challenge is to put them into use. Drought plans, water conservation plans, flood risk management plans, infrastructure plans, and other water plans are developed by local governments, the province, First Nations, and water suppliers. The OBWB's role is to help these plans be streamlined, coordinated and consistent. We will continue to work with our partners to develop and share best practices, and communicate across jurisdictions.

In 2018, the OBWB launched a new database on CivicInfo BC, to provide easy access to planning guides related to water management. These range from the OBWB's Groundwater Bylaws Toolkit, to the province's Dealing with Drought Handbook for Water Suppliers, to the Columbia Basin Trust's guide to Official Community Plan Policies supporting Climate Resilience. This is a simple, straightforward way to get information on best practices into the hands of local government staff and we will continue to build it out as new resources are developed.

Following the drought of 2015, the OBWB assisted local governments to create or update their drought plans by convening and coordinating their separate efforts so that the plans have a consistent format and consistent definitions for watering restriction stages. Consistent plans are much easier to communicate to the public, and easier to implement because communities learn from each other. There is much more work to do on drought planning, as many of these efforts have been slowed by flood response. The OBWB will continue to work with local governments and other water suppliers until the entire valley is at the same level of preparedness for drought.

The OBWB received a very large grant in 2018 to obtain LiDAR imagery and orthophotos to support development of floodplain maps by local governments and First Nations. There are three levels of flood mapping: inundation, hazard, and risk (the highest standard), and all require LiDAR and orthophotos for background topographic data. Risk mapping is the most useful for developed areas as it allows local governments to target and prioritize where to spend their future mitigation funding dollars. Emergency Management B.C. has strongly recommended that local communities coordinate their flood mapping and management plans, and develop similar flood construction elevations based on lake levels. The OBWB plans to assist communities with this coordination.

14.5 RELATIONSHIPS, ADVOCACY, AND COMMUNICATION (STRATEGIC PLAN GOAL 4)

Partnerships are essential to our strategy for progress. The OBWB is a unique watershed agency because we have no rule-making authority, and all our work is based on partnerships, communication, and trust. There are many valuable (but non-financial) resources within and outside the valley, and we can tap into them through the networks of the Okanagan Water Stewardship Council, through partnerships with other jurisdictions, and through the universities.

Communication is a core part of our legal mandate, providing information and recommendations to municipalities, regional districts, the provincial and federal governments. To be effective

communicators, we always seek to provide the best possible, most accurate and science-based information, in a non-partisan way. And our advocacy for best water policies and practices is even-handed and well respected.

The Okanagan WaterWise public outreach and education program continues to grow, with new local government and industry partners, benefiting from a valley-wide approach. We continue to expand the Don't Move a Mussel campaign to reduce threats from invasive aquatic species. The OBWB's recent advocacy to senior government has placed great emphasis on preventing invasive mussels, and this will continue to be a major focus going forward – especially should the mussels move closer to B.C.

Over the past four years, we have placed special effort on growing our relationships with the funding community, diversifying funding sources for Okanagan water. This includes being members of the B.C. Water Funders Collaborative, and the Canadian Environmental Grantmakers Network. Often, the funds do not come to the OBWB, but we are able to raise local awareness about opportunities, and communicate needs and priorities to the funder community – we are continuing to develop these relationships and hope to see continued growth in external water funding for the valley.

Along with our member local governments, the Okanagan Nation Alliance (ONA) is our most important partner in the valley. Along with the ONA representative on the board, we have a network of organizational relationships related to specific initiatives. The ONA Natural Resources department is a close partner on the flood plain mapping initiative, and the ONA Fisheries department is a close partner on our environmental flow needs project. As we continue to build these project-based relationships, we are laying the foundation for a formal relationship Protocol.



APPENDIX A - FINANCIAL REVIEW SCHEDULES

- A.1 Program Revenues/Costs from Audited Financial Statements and projections for April 1, 2015 March 31, 2019.
- A.2 Projected future budgets for April 1, 2019 March 31, 2023.

PROGRAM REVENUES/COSTS FROM AUDITED FINANCIAL STATEMENTS AND BUDGET FOR CURRENT FISCAL YEAR

OBWB Water Management Program

Current year budget with estimates

				estimates
	2015-16	2016-17	2017-18	2018-19
REVENUE				
Okanagan Regional District Requisition				
RDOS	226,377	232,156	224,470	239,388
RDCO	636,003	670,744	667,818	734,505
RDNO	201,651	210,959	203,832	214,357
Requisition subtotal	1,064,031	1,113,859	1,096,120	1,188,250
External grants Note 1	244,464	266,147	509,255	1,624,930
Interest	12,818	9,608	9,773	20,000
Other income	-	-	-	-
Transfer from sewage program Note 2	20,000	20,000	20,000	20,000
Transfer from operating reserve Note 3	45,395	212,464		80,043
TOTAL REVENUE	1,386,708	1,622,078	1,635,148	2,933,223
EXPENDITURES:				
Program Operating Costs				
Administration				
Board of Directors	10,290	10,709	10,651	11,000
Employee salaries and benefits Note 4	330,686	379,343	438,846	375,000
Office overhead	82,559	80,626	78,436	85,000
Amortization	-	6,084	6,778	-
Operating Costs subtotal	423,535	476,762	534,711	471,000
Projects and Activities Note 5				
Assistance Grants	300,000	275,000	300,000	300,000
Contract Services	476,139	686,480	542,930	1,900,000
Communication and Outreach	157,951	178,134	163,935	175,000
Water Stewardship Council	29,083	5,702	13,529	30,000
Transfer to operating reserve Note 6	-	-	80,043	57,223
Okanagan Water Management Program subtotal	963,173	1,145,316	1,100,437	2,462,223
TOTAL EXPENDITURES	1,386,708	1,622,078	1,635,148	2,933,223
Surplus (Loss)				

Note 1. Grant amounts are based on already awarded funds.

- Note 4. Salary expenditures include grant and project funded internships and term positions.
- Note 5. Projects and Activities budget expenses include both OBWB contribution and external grants.
- Note 6. (See Note 3) Project funds are carried over from one fiscal year to the next.

Note 2. A portion of the sewage grant budget is transferred for overhead costs.

Note 3. Operating reserves are used to manage mult-year project grants.

BUDGET PROJECTIONS

OBWB Water Management Program

	2019-20	2020-21	2021-22	2022-23
REVENUE				
Okanagan Regional District Requisition				
RDOS	237,500	237,500	237,500	237,500
RDCO	738,000	738,000	738,000	738,000
RDNO	212,500	212,500	212,500	212,500
Requisition subtotal Note 1	1,188,000	1,188,000	1,188,000	1,188,000
External grants Note 2	300,000	300,000	300,000	300,000
Interest	12,000	12,000	12,000	12,000
Transfer from sewage grant program Note 3	20,000	20,000	20,000	20,000
Transfer from operating reserve Note 4	57,223	-	-	-
TOTAL REVENUE	1,577,223	1,520,000	1,520,000	1,520,000
EXPENDITURES:				
Program Operating Costs				
Administration				
Board of Directors	11,000	11,000	11,000	11,000
Employee salaries and benefits Note 5	380,000	385,000	390,000	395,000
Office overhead	85,000	87,500	87,500	90,000
Operating Costs subtotal	476,000	483,500	488,500	496,000
Projects and Activities Note 6,7				
Assistance Grants	300,000	300,000	300,000	300,000
Contract Services	591,223	526,500	521,500	511,000
Communication and Outreach	180,000	180,000	180,000	183,000
Water Stewardship Council	30,000	30,000	30,000	30,000
Transfer to operating reserve	-	-	·	-
Water Management Projects and Activities subtotal	1,101,223	1,036,500	1,031,500	1,024,000
TOTAL EXPENDITURES	1,577,223	1,520,000	1,520,000	1,520,000
Surplus (Loss)				

- Note 1. In this 4-year projection, requisition rates are declining per-household, as assessments rise and requisition amounts remain stable.
- Note 2. Projected grant income is based on levels in prior years.
- Note 3. A portion of the sewage grant budget is transferred for overhead costs.
- Note 4. Operating reserves are used to manage mult-year project grants..
- Note 5. Actual salary expenditures will include grant and project funded internships, which may exceed these budget figures.
- Note 6. Projects and Activities budget expenses include both OBWB contributions and external grants
- Note 7. Priority project areas include groundwater, source protection, drought and flood planning, water monitoring .

APPENDIX B – WCQI GRANT PROGRAM REVIEW

Available online at:

http://www.obwb.ca/newsite/wp-content/uploads/2018-05-25 wcqi program review 2006-2018.pdf