TAPPING INTO Water Solutions

2023 ANNUAL REPORT

Okanagan Basin WATER BOARD

TAPPING INTO WATER SOLUTIONS

The Okanagan Basin Water Board (OBWB) was founded in response to an intractable problem. Okanagan communities wanted to work together to address water pollution in Okanagan lakes and waterways, but there was no obvious way to go about collaborating.

Each community only contributed a small amount to pollution, but taken together, the contributions added up to a crisis. In the 1960s, mayors from around the valley met to form the Okanagan Pollution Control Council, to discuss how they could work together. They soon realized that they needed a more formal structure so that they could share funds and collaborate over the long term. The solution was the OBWB – an organization designed for communities to work together on valley-wide water problems.

Since 1970, the OBWB has been helping communities solve water problems of all kinds, and especially those that cross jurisdictional boundaries. Often water solutions emerge from joint planning and action. For example, the extensive lakeshore flood mapping the OBWB coordinated in response to the major floods of 2017. Each of the Okanagan regional districts wanted to map their flood plains, but everyone agreed that the best solution was for the OBWB to take the lead to create one seamless set of maps for the whole valley. Other water solutions arise from convening diverse groups with similar interests across the watershed – like the need to protect water at its source. As a result, the OBWB coordinated the development of a Source Water Protection Toolkit, to help water purveyors and others manage the upper watershed.

OBWB-funded Mission Creek floodplain expansion project helps protect area from flooding during freshet

The most important thing for solving water problems is to approach them with a solution-oriented mindset. Rather than settling into conventional ideas of what can and cannot be accomplished, we try to think broadly about the vision and outcomes we want to achieve. There are many serious environmental issues in the world, ranging from climate change to threats of infestation by invasive mussels. Sometimes one has to play defense, but other times there are opportunities to make positive, progressive change. The solutions lie in working together, maintaining lines of communication, thinking creatively, and knowing that we have the will and the partners to get things right.

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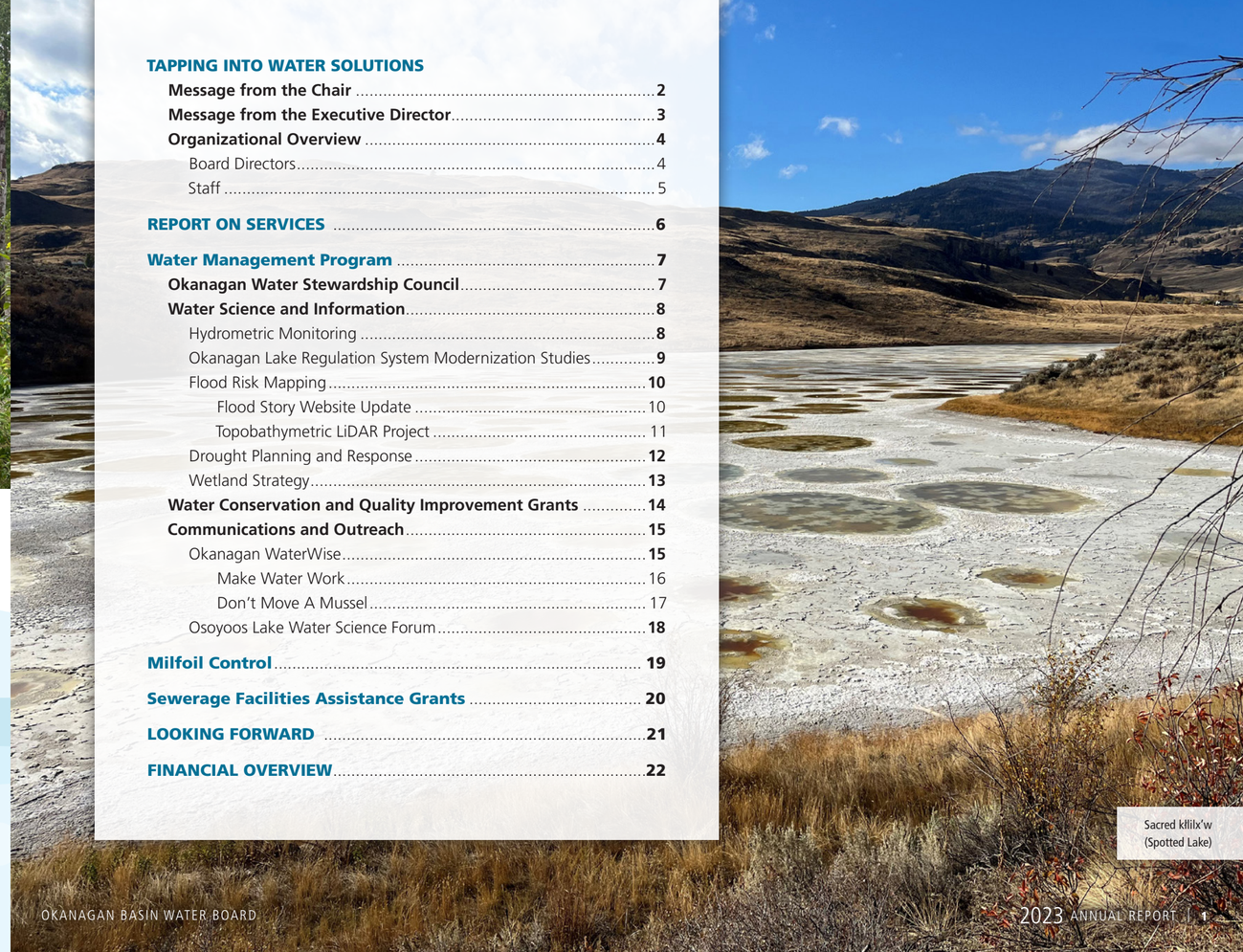


Sacred kłłilx̓w (Spotted Lake)

Sue McKortoff
OBWB Chair

MESSAGE FROM THE CHAIR

The mandate of the Okanagan Basin Water Board (OBWB) is to protect and enhance the quality of life in the Okanagan through sustainable water management. Since 1970, directors from Okanagan communities and regional districts have met monthly, to work together to solve water problems by sharing resources, learning from experts in the field (such as the Okanagan Water Stewardship Council [OWSC]) and educating our residents and visitors.

In October 2022, the 4th Osoyoos Lake Water Science Forum program emphasized bridging Indigenous and western approaches to knowledge, science and management of water. This forum, sponsored by the International Joint Commission and OBWB was looking for shared water solutions – the theme of this year's annual report. Since our population in the Okanagan continues to grow every year, water quality and quantity are key to the well-being of our residents and visitors. We support reducing pollution in our lakes by monitoring, and drinking water regulations, and ensuring that septic systems are compliant with provincial and Interior Health rules. Many of the OBWB's programs help to educate our citizens (including school students) in ways to understand and protect our water.

The OBWB staff and the OWSC continue to find solutions to coordinate flood management planning and floodplain mapping, drought planning and response, to protect and construct wetlands, to prevent invasive species from reaching our lakes, to develop source water protection tools, and undertake studies to modernize the Okanagan Lake Regulation System.

We will continue to develop partnerships with Indigenous partners, local, provincial and federal governments, working together to understand climate change, while increasing hydrometric and weather stations to collect needed data, and learning from the Syilx strategy to protect and restore water. It's through water discussions and solutions that we recognize we have "One Valley. One Water." that connects us – a theme that we embrace today and will continue to into the future.

Anna Warwick Sears
OBWB Executive Director

MESSAGE FROM THE EXECUTIVE DIRECTOR

This fiscal year marked a significant milestone for the OBWB, as the Okanagan regional districts agreed to make our Water Management Program permanent, reinforcing this powerful tool for water solutions.

In 2005, the three Okanagan regional districts supported the OBWB to develop a Water Management Program, and renew the original mandate of the OBWB. For more than two decades, our scope had been limited to Eurasian watermilfoil (milfoil) control, and distributing grants for sewerage infrastructure (SFA grants), without considering the full range of water issues in the valley. With the support of a wide cross-section of the water sector, and member local governments, the OBWB established the Water Management Program (WMP), which includes the Water Conservation and Quality Improvement grants, the Okanagan WaterWise education program, the Hydrometric Monitoring service, and the whole range of water science and advocacy work, now regularly undertaken by the board and staff. At the same time, it revived the "Liaison Committee" described in our supplementary letters patent, renaming it the Okanagan Water Stewardship Council.

The WMP was initially given a three-year renewal term, that required regional district review and re-endorsement. Although this term was later changed to four years, the review cycle created challenges with long-term strategic planning and budgeting, and was a large investment of administrative time. Given the success of the program, and its track record of water solutions, the board reviewed the program's history from 2006 - 2022, and recommended that the regional districts make the program permanent. As you read through this Annual Report, you will see that most of the activities are directly linked to this program. While the Sewerage Facilities Assistance Grant and the Milfoil Control programs remain an integral part of the OBWB's work, they are supported by all the water management activities we do, bringing water solutions to communities across the Okanagan.

ORGANIZATIONAL OVERVIEW

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.

The OBWB's mission is to provide leadership to protect and enhance quality of life in the Okanagan Basin through sustainable water management.

The OBWB's strength is in our partnerships: bringing people and resources together, and providing a means for joint strategic action. We advocate for local water concerns to senior governments, and are a public voice for water education. The board is made up of three directors from each of the Okanagan's three regional districts, one director from the Okanagan Nation Alliance, and one director each from the Water Supply Association of B.C., and the Okanagan Water Stewardship Council. This was an election year, and there was some turnover on the board as a result. The directors for the first half of the year are noted in parentheses.

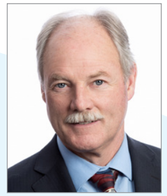
Board Directors

Sue McKortoff, Chair, RDOS
Mayor, Town of Osoyoos

Blair Ireland, Vice-Chair, RDCO
Mayor, District of Lake Country
(Cindy Fortin, RDCO)

Rick Fairbairn, RDNO
Director, Electoral Area "D"

Christine Fraser, RDNO
Mayor, Township of Spallumcheen
(Bob Fleming, RDNO)

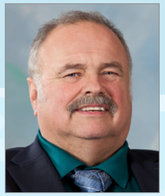


Victor Cumming, RDNO
Mayor, City of Vernon

Wayne Carson, RDCO, Director,
Electoral Area "Central Okanagan West" *(James Baker, RDCO)*

Charlie Hodge, RDCO
Councillor, City of Kelowna
(Colin Basran, RDCO)

Doug Holmes, RDOS
Mayor, District of Summerland



Rick Knodel, RDOS
Director, Electoral Area "C"

Councillor Tim Lezard,
Okanagan Nation Alliance

Robert Hrasko,
Water Supply Association of BC

Jeremy Fyke, Chair, Okanagan
Water Stewardship Council
(Scott Boswell, OWSC)

Staff

Anna Warwick Sears,
Executive Director

Nelson Jatel,
Water Stewardship Director

Corinne Jackson,
Communications Director

James Littley,
Deputy Administrator

Kellie Garcia,
Policy and Planning Director

Carolina Restrepo,
Office and Grants Manager

Pat Field,
Milfoil Field Supervisor

David Hoogendoorn,
Milfoil Operator

Darby Taylor,
Milfoil Operator

Services

REPORT ON SERVICES

The Okanagan Basin Water Board provides three core programs: Water Management, Milfoil Control and Sewerage Facilities Assistance Grants. Work in each of these programs is summarized in the three corresponding sections of this Annual Report, followed by a section on Looking Forward, and finally, our Financial Statements for fiscal year 2023-23.

Bertram Creek as it enters Okanagan Lake

WATER MANAGEMENT PROGRAM

The Water Management Program includes the Okanagan Water Stewardship Council, OBWB's science and information initiatives, Water Conservation and Quality Improvement Grants, and communications and outreach.

OKANAGAN WATER STEWARDSHIP COUNCIL

Celebrating its 16th year, the Okanagan Water Stewardship Council (OWSC) remains a pillar of the Water Management Program.

The OWSC, established by the Water Board, is an advisory body promoting sustainable water management in the Okanagan. Our members represent stakeholders, including federal, First Nations, provincial, and local government water-related departments, UBC Okanagan and Okanagan College water programs, and diverse industry and non-profit groups. This diversity brings a holistic approach to water management in our region.

Despite the challenges of the pandemic, the council, under the guidance of Chair Scott Boswell and Vice-chair Jeremy Fyke, seamlessly transitioned between virtual and in-person meetings. The council's dedication was evident in the 850 hours of volunteer service committed to addressing critical watershed issues.

Monthly guest speakers enriched our discussions, each bringing their unique expertise. Topics ranged from Indigenous rights and reconciliation, to climate change impacts on the Okanagan, providing a comprehensive understanding of our water management challenges.

The OWSC had seven committees during the 2022-23 term: Policy, Water and Climate, Alluvial Fans, Wetlands, Agriculture Water, Water Quality, and Source Protection. Each committee is tasked with advancing the council's priorities and responding to the Board's needs. One of our significant achievements this year was publishing a report on Okanagan Dams and Reservoirs, led by Dr. Bernie Bauer. This significant contribution to our understanding of local water management is now available on our website.

For more insight into the council, visit **www.OBWB.ca/wsc**.

The OWSC meets monthly except in the summer

WATER SCIENCE AND INFORMATION

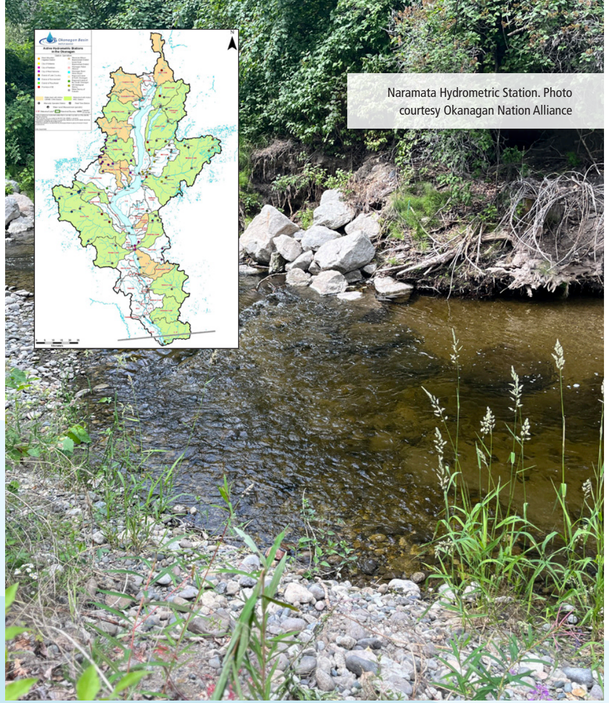
Hydrometric Monitoring

The OBWB has a commitment to collect and manage reliable hydrometric data, a cornerstone of effective water management in the Okanagan region. Hydrometric information is vital to various water-related activities, such as water resource planning, licensing, regulation development and control, flow allocation, fish management, environmental and critical flow management, and drought contingency planning.

There was a drastic decrease in Okanagan's hydrometric network, from 156 stations in the early 1980s to 25 in 2007. In 2020, we launched the Okanagan Basin Hydrometric Information Network, working with the Okanagan Nation Alliance (ONA) and Environment and Climate Change Canada (ECCC) to restore the network to a more functional level. This project aims to install 26 stations over five years, building and managing a robust hydrometric information network for greater water security in the Okanagan.

In 2022-23, we added eight stations to the hydrometric network of which three are ECCC stations, bringing our total to 22. We have significantly improved the OBWB hydrometric data management system, allowing our partners to update their data online, enhance quality assurance and control, and integrate OBWB-collected hydrometric data into the B.C. government hydrometric data warehouse. The Technical Advisory Committee (TAC), comprised of representatives from all government levels, met three times to review activities and contribute to the operational plan for 2022-23.

To improve data transparency and accessibility, we've adopted a new data management strategy to share our hydrology models and associated climate and hydrology datasets on Google Cloud and GitHub. These models use hydrometric data to offer several decision-support management services, including environmental flow needs, flooding, drought, and reservoirs. Our collaboration with the ONA has been essential for gathering and managing this crucial hydrometric data. For more information, visit our website at **www.OBWB.ca/hydrometrics**.



Naramata Hydrometric Station. Photo courtesy Okanagan Nation Alliance

Okanagan Lake Regulation System Modernization Studies

In 2022-23, OBWB staff continued to work with partners to complete or initiate several studies that will contribute to the modernization of the Okanagan Lake Regulation System (OLRS) and its operating plan. The OLRS is a series of dams and other structures located on major lakes and the Okanagan River between Penticton and Osoyoos that enable the Government of B.C. to manage lake levels. The system was constructed by the federal and provincial governments in the 1950s to control flooding and (secondarily) to provide water for irrigation. A comprehensive water study in the early 1970s led to the Okanagan Basin Agreement, which recommended target lake levels and river flows to control flooding, along with several other benefits. Those recommendations formed the basis for the lake level operating plan that is still in use today. A Fish Water Management Tool developed in the early 2000s that predicts the consequences of management decisions on fish and other users also helps the provincial dam operator make decisions.

It is increasingly challenging to manage the level of Okanagan Lake. Modernization will consider climate change, which has increased the intensity and frequency of floods and droughts in the valley. The worst flooding in living memory occurred in 2017, and the lake was near the lowest level in its recorded historical range in 2021. The modernization process will also provide an opportunity to consider societal priorities and values that have changed since the 1950s, like environmental protection and the need to advance truth and reconciliation with the local Indigenous community.

In 2020, the OBWB worked with B.C. Ministry of Forests, the B.C. River Forecast Centre, the Okanagan Nation Alliance, Fisheries and Oceans Canada and other organizations to prepare a *Plan of Study for Modernizing the Okanagan Lake Regulation System*. The plan of study calls for 18 studies to be completed over approximately seven years, culminating in a final plan to optimize lake level and river flow management, reduce conflicts with flooding, drought, advance comprehensive river and floodplain restoration, improve fisheries management and provide greater benefits to society. More information about the studies can be found at **www.OBWB.ca/lakelevelmanagement/**.

Dam at Okanagan Falls

Flood Risk Mapping

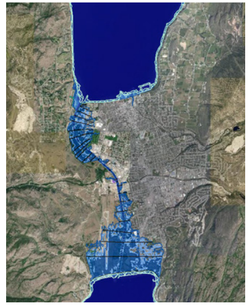
In response to major flooding incidents in 2017 and 2018, the Okanagan Basin Water Board (OBWB) has spearheaded a collective initiative to update the region's floodplain maps. The Okanagan Inundation Flood Mapping Project, a significant milestone, was completed in March 2020. Following this, in 2021, we embarked on a new project to create a comprehensive flood risk assessment (FRA).

This FRA is designed to deepen our understanding and management of flood risks in the Okanagan. Its purpose is to generate essential data, tools, and risk maps to better comprehend the baseline flood risk under a mid-century Okanagan climate.

The "Flood Risk Mapping for the Okanagan Valley Watershed" report, finalized in March 2023, provides a detailed analysis of flood risks in the Okanagan Valley. It explains the methodology used to assess flood risks, including identifying hazards, selecting assets, determining exposure and vulnerability, and evaluating potential consequences. The report includes potential flood impacts on the population, buildings, crops, public parks, and infrastructure. It also considers possible disruptions to services like power, water and wastewater, and the potential release of untreated sewage and pollutants. And, the report references public and First Nations engagement, which included workshops, surveys, and a project website. The data collected was used to create a flood risk database.

This information will equip the OBWB and regional partners with the knowledge needed to make informed decisions about flood risk management and develop tailored mitigation strategies.

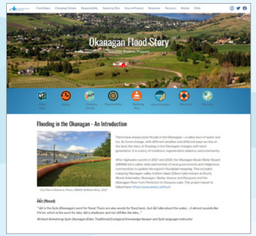
For more information, please visit our project website at **www.OBWB.ca/flood**.



Updated flood map for Penticton

Flood Story Website Update

The Okanagan Flood Story website (**www.OkanaganFloodStory.ca**) continues to provide an important portal to flood information for the region. The site has floodplain maps that show which areas might flood under specific circumstances, how deep the floodwaters would be, and the recommended flood construction levels along the shorelines, among other things. Flood construction levels are an important tool for local governments because they dictate the elevation that structures are recommended to be built at to reduce flood risk. The website also includes photos and stories about flood history in the Okanagan, information about how climate change is impacting flooding, and resources to help property owners prepare for, respond to, and recover from floods. This year, a simplified and streamlined version of the website was developed for the public. The "power user" portal is still available on the Flood Story Website for people who are interested in the more technical aspects of flooding, such as local government engineers and planners and provincial staff.



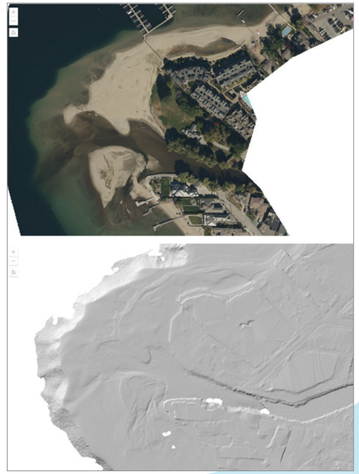
Okanagan Flood Story website

Topobathymetric Light Detection and Ranging (LiDAR) Project

In 2023 we were curious about how many water solutions could come out of a single data product developed by the OBWB. In 2021, the OBWB mapped the bathymetry (underwater elevations) of shallow areas along seven lakes in the Okanagan. The primary purpose of this project was to provide data for flood modelling, and the project was funded by the National Disaster Mitigation Program for that purpose, in response to the record floods of 2017 and 2018. In addition to flood mapping, the data is also useful for many other projects and studies, and the OBWB has made it available to other levels of government, First Nations, local governments, academic institutions, and consultants.

In 2023, we learned that the data was used for a wide range of purposes, including engineering work to plan for structural flood mitigation and drainage improvements on a section of the historical Kettle Valley Railway. Senior governments used the data to identify illegal buoys and other structures on the lakes, and to update navigational and hazard charts. The data was used by aquatic researchers to update foreshore inventories and mapping, and by terrestrial researchers to decipher the last glaciation in the Okanagan using landform features. Biologists also used the data to investigate interactions between Rocky Mountain Ridged Mussels and invasive milfoil in Okanagan Lake, to map aquatic habitat, and to map aquatic plants (which you can read more about in the milfoil control section of this report).

The topobathymetric LiDAR projects, and others like it, gather massive amounts of data, which would have had more limited uses in the past. Today's computers can be taught to recognize patterns in vast datasets and classify those patterns into types of habitat or plants, human-made structures, and can even differentiate plant species in the forest. Even though projects like this are costly to undertake, the value of the data, when shared, is far beyond the cost to gather it. These projects in 2023 allow us to understand the importance and value of data. Ultimately, projects like this one provide the ingredients for water solutions yet to come.



TOP: High-definition aerial photo of Mission Creek entering Okanagan Lake

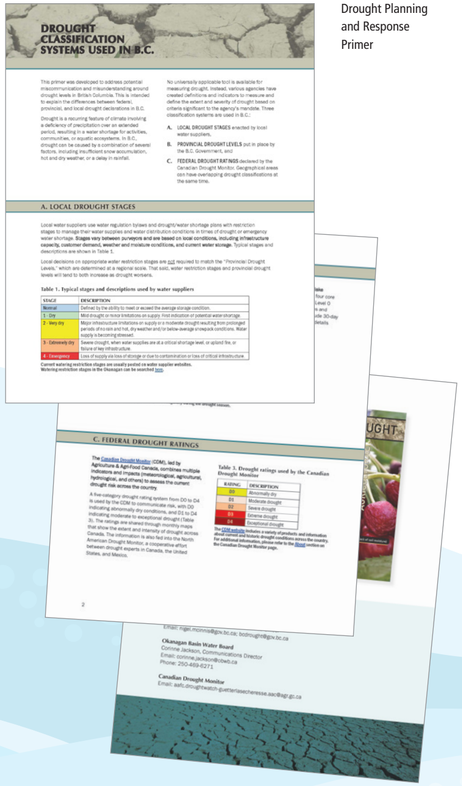
BOTTOM: Digital elevation model image of the same area using LiDAR

Drought Planning and Response

The 2022 summer season started out well, with full reservoirs, normal or above average flows in most streams, and normal aquifer levels. But August was hot and dry, causing stream flows to decline and water temperatures to increase throughout the region. These conditions continued into early November. The effects of the fall drought lingered over the winter and were compounded by unusually dry and warm conditions in the spring of 2023 and an exceptionally rapid and early snowmelt. The Okanagan region is in a Drought Level 4 as of early August 2023. Water suppliers are managing because of their reservoir storage, but there is concern for low-flow streams not backed by storage and the implications for fish that would normally return to spawn there. The Government of B.C. ranks drought levels from 0 to 5, with level 5 being the most severe with adverse impacts to socioeconomic or ecosystem values being almost certain. To view current drought levels, visit the **BC Drought Information Portal**.

OBWB staff participated on the Thompson Okanagan Regional Drought Response Team in 2022, as they have done since its inception in 2017. The team is comprised of provincial staff, including aquatic ecologists, fisheries biologists, ecosystems officers, hydrogeologists, hydrologists, agrologists, and district water officers. Advisors from Fisheries and Oceans Canada, Agriculture Canada, First Nations organizations, local governments, and other groups also participate.

OBWB staff also worked with the team's communications sub-committee to prepare a drought classification **primer** for the public which is intended to help address miscommunication and misunderstandings around drought declarations in B.C. The primer can be found at **www.OBWB.ca/drought**. Unfortunately, no universally applicable tool is available for measuring drought so various agencies have created definitions and indicators to measure and define the extent and severity of drought based on criteria significant to the agency's mandate. Three drought classification systems are used in B.C.: Stages enacted by local water suppliers, Levels put in place by the B.C. Government, and Ratings declared by the Canadian Drought Monitor. Geographic areas can have overlapping drought classifications at the same time – which may not seem to logically correspond. The primer explains the indicators/criteria used to determine different drought declarations and provides links to important information sources for each. It also highlights the three kinds of drought: meteorological (lack of precipitation), hydrological (reduced streamflows, lake or groundwater levels), and agricultural (lack of soil moisture).



Drought Planning and Response Primer

Wetland Strategy

In response to the substantial loss of wetlands in the Okanagan, the OBWB has prioritized several wetland conservation research and mapping projects this year. Wetlands, often called biodiversity hotspots, are vital habitat for wildlife and deliver indispensable ecological services. Yet, since European settlement, over 84% of valley bottom wetlands have been lost to development.

To counter this, the OWSC kick-started strategic planning and research initiatives for wetlands. Key undertakings include enhancing wetland maps using the latest LiDAR topographical data, safeguarding valley-bottom wetlands, and launching practical projects such as fencing to keep out cattle and removing invasive species.

The council's Wetland Committee is also working on a significant multi-year project, "Conservation Planning for Climate Change," to understand the impact of climate change on wetlands and grasslands in the Thompson-Okanagan. The project will develop predictive models for these ecosystems, informing new policies and sustainable practices for their protection. These areas are crucial for carbon storage, biodiversity, land connectivity, and support agriculture and water filtration. The first year saw the formation of a technical advisory team, a research team at UBC, and a conservation coordinator, along with the initiation of data gathering and model development. The second year focuses on field data collection, climate data analysis, and developing a grassland data collection protocol for B.C. This research is vital for protecting these critical natural areas now and in the future.

WATER CONSERVATION AND QUALITY IMPROVEMENT GRANTS

The OBWB's Water Conservation and Quality Improvement (WCQI) Program awards $350,000 annually to Okanagan local and Indigenous governments, improvement districts, and non-profit organizations, for projects that conserve and/or protect water, and provide valley-wide benefit. Applicants can receive up to $30,000 for their project and each year the program attracts innovative and action-oriented submissions. Two of these projects are highlighted below.

City of Kelowna – Snow Storage Location Risk Assessment:

City of Kelowna staff assessed water quality risks associated with the city's four snow storage locations. The snow storage locations have varying characteristics, including whether or not they are paved, have a connection to storm drains or not, and vicinity to environmentally sensitive areas. The project examined water quality data at these sites over two winter seasons. Although snow events were somewhat unpredictable, enough data was gathered to prove that an elevated risk from heavy metals and tire biproducts exist. Plans are now being prepared to address this risk.

Okanagan Nation Alliance – Groundwater:
Stream Exchange on Alluvial Fans of the Okanagan Valley – Phase 2

One of the critical gaps in knowledge is the extent of water exchange between surface streams and groundwater on alluvial fans throughout the Okanagan. This information is important because it can affect the availability of water for fish and for irrigation. In this project, the ONA identified hydraulic connectivity between streams and aquifers, and for Trout Creek, estimated the volumes of water exchanged, using desktop and field-based methods. The first phase of the project demonstrated that highly modified streams have different than expected patterns of water movement across alluvial fans. By applying these techniques throughout a full hydrological year, investigating the additional complexity of the streambed, and the relative age of groundwater, and interweaving Traditional Ecological Knowledge, the second phase of the project will guide future research projects and calculate water flows needed by fish.

Image of snow-covered Kelowna from Snow Storage Location Risk Assessment report

WCQI Grants Program
AT A GLANCE

- SINCE 2006
- Individual Grants 3K to 30K
- Total Funding per year up to $350,000
- $5.5 Million Awarded Since 2006
- 315 Projects Funded
- Average of 19 Projects per year

COMMUNICATIONS AND OUTREACH

Okanagan WaterWise

As the OBWB's board, advisory council, and staff, work to understand the issues facing water in the Okanagan and find solutions, responding to our water challenges requires the involvement of local citizens. Okanagan WaterWise is the OBWB's outreach and education program, aimed at providing residents with science-based information and answers to help address the valley's water challenges.

To ensure the public is up-to-date on local water issues, we keep the OBWB's website (**www.OBWB.ca**), WaterWise website (**www.OkWaterWise.ca**), and social media channels current. This year, we also distributed news releases, and staff responded to numerous media requests about water-related issues.

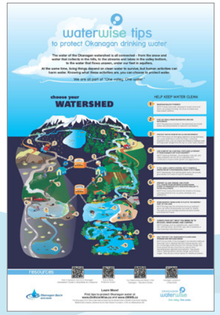
In 2023, Okanagan WaterWise continued to promote its outreach tools, including the *"Our Relationship with Water in the Okanagan – Explorations in Outdoor Education to Support the B.C. Curriculum"* education guides. We also developed a *"Choose Your Watershed"* poster. Similar to "choose your own adventure" books, the poster invites people to choose their watershed and illustrates how various actions in different parts of a watershed can harm or protect water quality. The poster was developed as part of the OBWB's Source Water Protection Project and is available on the Okanagan WaterWise website at **www.OkWaterWise.ca/resources**. Print copies are also available.

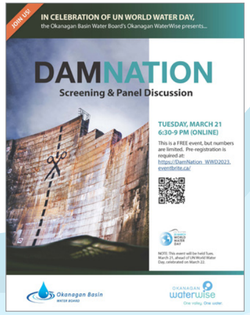
Additional outreach included our annual World Water Day film screening and panel discussion. This year we featured *DamNation*, exploring the change in attitude about big dams and how they affect the health of our waterways. The film's themes and follow-up discussion were especially relevant as the Water Board and partners begin the work of modernizing the Okanagan Lake Regulation System (OLRS).

To tap into WaterWise resources for residents, businesses, educators and students, and for those with a general interest in water, visit **www.OkWaterWise.ca**.

STAY WATERWISE!

- "Like" us on **Okanagan WaterWise Facebook**,
- follow us on **Okanagan WaterWise Instagram**
- and on **Okanagan WaterWise Twitter**.
- Plus, check out our channel: **Okanagan WaterWise YouTube**





LEFT: "Choose Your Watershed" education poster

RIGHT: Event poster for 2023 World Water Day celebration

Make Water Work

The OBWB's Okanagan WaterWise program has been delivering the Make Water Work (MWW) residential outdoor water conservation campaign, in partnership with Okanagan water utilities, since 2011. The campaign has grown to include a number of garden centre and irrigation business partners and runs from May to October when outdoor water use is highest.

Highlights from 2022 include the welcoming of Westbank First Nation and City of West Kelowna as full partners in the campaign, joining local government and utility partners from Armstrong in the north to Osoyoos in the south. The website (**www.MakeWaterWork.ca**) was updated to be bright and engaging, with the design replicated on collateral outreach materials. We created new graphics to highlight the native plants in the *"Make Water Work Plant Collection."* And, we placed ads on billboards, bus shelters, buses, sandwich boards, local TV, Castanet, Facebook, Instagram and more. Partners were provided with social media material, handouts, bookmarks, and gardening gloves.

OBWB-OkWaterWise funds the Okanagan Xeriscape Association (OXA) to conduct MWW outreach. As part of this effort, OXA worked with the City of West Kelowna to open a xeriscape demonstration garden. They also had a MWW info table at two gardening-related community events, conducted at least 10 presentations which reached more than 500 people, and they did on-site customer outreach at five MWW garden centres. They also submitted a monthly column to Black Press and began a bi-weekly column on Castanet.

The late start to summer in 2022 saw a shift in campaign engagement, starting to rise in early June and peaking in August, and then starting to drop in September. As weather patterns shift and become less predictable, so does the Okanagan's outdoor watering season.

Between May and October, the MWW website had more than 9,300 visits with more than 7,100 first time visitors. While on the website, 438 people pledged to conserve. Visitors also looked at tips to conserve water, learned about the Plant Collection, found water restrictions, and more. Tens of thousands more people heard and saw the messaging numerous times through the advertising channels noted above.

TOP: Rutland Waterworks staff with Make Water Work yard sign and gardening gloves

BOTTOM: Make Water Work winner Randy Goncalves of Kelowna (right) accepts $500 WaterWise yard upgrade certificate from Carmen Walisser of Better Earth Gardens Kelowna and Ed Hoppe with City of Kelowna

Don't Move A Mussel

Invasive Zebra and Quagga mussels continue to be a concern for our valley as one of the premier boating destinations in Canada, and because our water chemistry makes our large lakes highly vulnerable. In 2022, as COVID restrictions started to lift, we returned to some of the tried-and-true outreach methods for the Don't Move A Mussel (DMM) campaign.

The website **www.DontMoveAMussel.ca** received a refresh with an updated provincial inspection station map, invasive mussels map, and eye-catching design. The campaign included ads on billboards, radio, Castanet, Facebook & Instagram. We also held a contest on social media for a Don't Move A Mussel prize pack, including outdoor recreation gear.

A DMM digital and hardcopy package of materials was developed which included a DMM General Info sheet, Fact Sheet, rack card with Clean-Drain-Dry and general mussel information, posters, social media graphics and text. OBWB-OkWaterWise funded the Okanagan and Similkameen Invasive Species Society (OASISS) to extend DMM outreach efforts and provided them with the package to share with water recreation-related businesses and organizations. Some 145 businesses and organizations received the materials. We also provided OASISS with DMM branded muscle shirts, smartphone wallets, and selfie postcards to distribute.

Additional outreach efforts included OASISS surveying 1,111 watercraft at 18 launches, presenting to 116 youth at summer camps, attending eight community events and five farmer's markets - connecting with 3,478 people. With additional external funding they collected 148 water samples from 19 locations on five lakes and deployed substrate monitors at 12 locations on five lakes. All sampling tested negative for invasive mussels. Materials and support were also provided to the Regional District of North Okanagan, Vernon RCMP volunteers, and Kelowna RCMP volunteers who conducted a combined 426 watercraft surveys.

In addition to the DMM campaign, the OBWB sent letters to senior governments calling for stronger mussel prevention efforts. Find our letters at **www.DontMoveAMussel.ca/in-the-news**.

Between May and October, the DMM website had 7,919 new visitors. Other than the homepage, the top three most visited web pages were "Have the Talk" where people could find information resources to share the "Risks" to the Okanagan, and the "Mussels" information page. Many more heard and saw the mussel messaging numerous times through the various advertising and outreach channels used in 2022.

Visitors to OASISS' Don't Move A Mussel table show how scary invasives are

Contest winner Amanda Huston of Vernon collects her Don't Move A Mussel prize pack

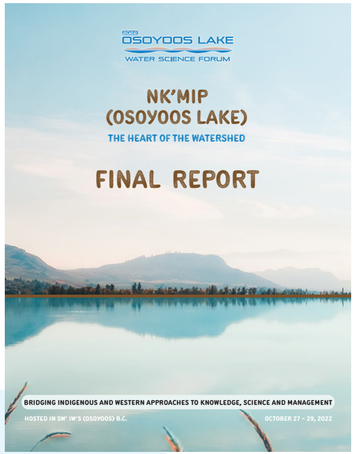
Osoyoos Lake Water Science Forum

The 2022 Osoyoos Lake Water Science Forum took place Oct. 27 -29 in Osoyoos, B.C. This was the 4th forum held in Osoyoos, with previous events in 2007, 2011, and 2015. The theme of this year's gathering was "Nk'Mip (Osoyoos Lake) - The Heart of the Watershed: Bridging Indigenous and Western approaches to Knowledge, Science and Management" which built on the knowledge and relationships formed at previous forums.

Field trips, exhibits, informal conversations, and the forum itself gave participants the opportunity to come together, build relationships and learn about important, water-related issues for Osoyoos Lake and the broader Okanagan/Okanogan watershed. It was a unique opportunity for *Syilx* Okanagan and non-Indigenous people to meet in a collaborative manner to share values and ideas about the past, present, and future of Osoyoos Lake.

Encouraged by *Syilx* Okanagan facilitators, forum participants were invited to think in different, yet complementary, ways to understand the watershed better and consider new approaches to planning and decision-making. Indigenous and non-Indigenous worldviews and approaches were described and discussed, compared, and contrasted. Recent scientific research was shared, providing a wide, holistic lens on the watershed's overall health.

Information about the event, a video with highlights, and a final report can be found at: **www.OBWB.ca/olwsf/**

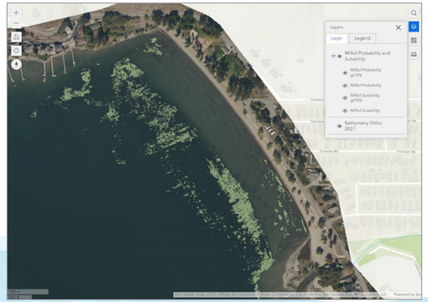


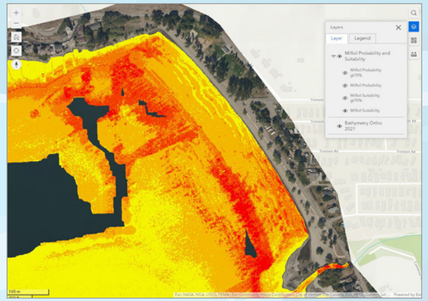
MILFOIL CONTROL

The control program for invasive Eurasian watermilfoil is one of the water solutions that the OBWB has worked on since the aquatic plant was introduced in the 1970's. The control techniques that we use today were first developed in the 1970's and 80's, but in the last decade, and especially in 2023, we have developed new solutions to enhance our program and the important benefits it brings to Okanagan water.

One new water solution is the introduction of an amphibious milfoil harvester that will give new flexibility to the program. The amphibious harvester can carry more weeds to shore and offload them closer to the worksite without the need for special access sites along the waterfront. The machine was sourced through a global request for proposals, and is the only amphibious harvester in production today. The new harvester is on schedule to start work in Okanagan lakes in summer 2024.

In 2022-23, OBWB also worked with Dr. Mathieu Bourbonnais and researcher Mackenzie Clarke at UBC Okanagan to develop new predictive milfoil mapping, using LiDAR and multispectral imagery that the OBWB collected in 2021. Using these data, the UBCO researchers trained the computer to produce maps showing areas with >70% probability of milfoil. Early field tests have showed these new maps to be highly accurate for identifying areas of lake weeds. In 2024, the work will continue with ground-truthing, to differentiate between milfoil and non-target aquatic plant species. In the future, this mapping could significantly enhance efficiency in targeting milfoil throughout the valley.





TOP: New amphibious milfoil harvester set to arrive summer 2024

MIDDLE: UBCO mapping project showing green shaded areas where milfoil beds predicted

BOTTOM: Heat map showing predicted milfoil habitat where red is highest likelihood to have milfoil

SEWERAGE FACILITIES ASSISTANCE GRANTS

Through the Sewerage Facilities Assistance (SFA) Program, OBWB provides grant funding for local governments to build new sewer treatment plants and to bring sewer lines to older neighbourhoods. The program has seen significant changes over the years, making it an important water solution throughout the Okanagan over many decades. Under the current Terms of Reference, many of the areas eligible for grants have already drawn on the funds, and in general, the number of applications has trended down. One major factor in the decline in applications is the reduction of funding available from senior governments to build new sewer infrastructure. With limited dollars, local governments have more difficulty building large projects.

In 2023, OBWB began a comprehensive review of its SFA program, working with several provincial ministries and all Okanagan local governments. The basic goal of the program will remain the same – to provide funds to improve wastewater treatment and reduce septic pollution. However, increased demand for development and housing makes it important to review the program's Terms of Reference, meeting local government and provincial housing objectives while protecting water. The review will clarify existing elements of the grant program, and explore ways to improve its impact for the future. An Advisory Committee, which includes staff from OBWB, local governments and Interior Heath, will provide recommendations to the OBWB's Board of Directors, ensuring a secure future for a program that remains an important water solution.

Work crew installs sewer lines in an old neighbourhood of Kelowna for a highrise development

LOOKING FORWARD

This annual report is being written three months into the new fiscal year, and the OBWB is quietly humming with activity.

Summer sailing on Okanagan Lake

We are in a project development phase. Many of our larger water management projects have wrapped up, and new ones are being planned. The milfoil control program is acquiring new equipment and updating permits. Our SFA program is going through a review, to help us update our policies to match new needs and new directions for provincial housing policy.

It is good to take time to strengthen existing programs, and set ourselves up for success in the future. The pandemic is thankfully over, but climate change, inflation, and instability around the world remind us that we need to keep our house in order, to best support our community partners. We like to have many shovel-ready projects, with scopes of work and project charters already prepared, so that we can capitalize on different funding opportunities as they arise. The most precious resources we have are our people, with their talent, expertise, and institutional knowledge.

When the OBWB was recently invited to address the B.C. Select Standing Committee on Finance for the 2024 B.C. budget, the board's most urgent recommendation was for the government to invest in preventing the introduction of invasive mussels to Okanagan waters. This work will always be with us, unless by some miracle a means of control is discovered. Although most of the prevention actions are under provincial jurisdiction, the board continues to review policy options to tighten protections and urge the B.C. government to do more response planning.

The other work with a very long time-horizon is the review and update of the Okanagan Lake Regulation System – the dams, control structures, and operating plans for the Okanagan mainstem lakes. Managing lake levels is a complex process, with many competing interests. If the infrastructure and plans are not updated, Okanagan communities will be much more vulnerable to climate change impacts. We have a plan of study for this work, shared with the B.C. Ministry of Forests and the Okanagan Nation Alliance, and many of the OBWB's other projects feed into it. The most important role for the OBWB is to help maintain the focus and momentum on the review. For this, as in many other aspects of Okanagan water, we help hold the vision for a sustainable future.

FINANCIAL OVERVIEW

In all financial respects, it was a quiet year of steady progress. With our long-term, multiyear projects, our reserve amounts fluctuate depending on where we are in the project budget cycle. This year, we added to our milfoil equipment reserve, and drew down the Water Management Program reserve funds – spending the grants we received in prior years.

Osoyoos Lake Water Science Forum attendees play with the interactive *WaterWays* exhibit

In 2022-23, the OBWB received $56,855 in grants for water management projects. We also successfully supported a grant application to the International Joint Commission, for more than $150,000 to the International Osoyoos Lake Board of Control, to fund a study on Osoyoos Lake's vulnerability to climate change. As well, we had a number of financial partnerships, and generous sponsorships (cash and in-kind) of the 2022 Osoyoos Lake Water Science Forum. The "Make Water Work" and "Don't Move a Mussel" campaigns attracted in-kind contributions from media and other partners together totaling $100,000.

As a grantmaker, in 2022-23 the OBWB awarded more than $1.25 million in infrastructure grants to improve wastewater treatment, and $350,000 in Water Conservation and Quality Improvement (WCQI) grants to local governments and community groups. Another aspect of our grantmaking is to be active participants in both Environmental Funders Canada (EFC), and the B.C. Water Funders Collaborative. By building relationships with other funders, we can raise awareness about Okanagan water issues, and perform a matchmaking role with grantees in the valley. This year, OBWB staff helped organize the in-person EFC conference held in May 2022.

The OBWB also grows water research funding by supporting the work of university students and faculty, who often have their own sources of grant funding. Many federal funding programs require small in-kind or cash contributions from community organizations like ours. The OBWB helps by providing access to data, and facilitating contacts between the university and community stakeholders. In this way, we leverage the talents and resources of our post-secondary institutions to have more water research done in the valley. This year we continued our partnership with the UBC Engineering Department, supporting their work on a benchmarking project for Okanagan municipal water systems. We also supported researchers in the Creative and Critical Studies Department, as they rolled out their *WaterWays* museum exhibition, featured at the Osoyoos Lake Water Science Forum.

Okanagan Basin WATER BOARD

Okanagan Basin Water Board
Financial Statements
For the year ended March 31, 2022

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Management's Responsibility for Financial Reporting

The accompanying financial statements of the Okanagan Basin Water Board are the responsibility of management and have been approved by the Chairperson on behalf of the Board.

The financial statements have been prepared by management in accordance with Canadian public sector accounting standards. Certain amounts used in the preparation of the financial statements are based on management's best estimates and judgements. Actual results could differ as additional information becomes available in the future. When alternative accounting methods exist, management has chosen those it deems most appropriate in the circumstances, in order to ensure that the financial statements are presented fairly, in all material respects.

The Okanagan Basin Water Board maintains systems of internal accounting and administrative controls of high quality, consistent with reasonable cost. Such systems are designed to provide reasonable assurance that the financial information is relevant, reliable and accurate and the Board's assets are appropriately accounted for and adequately safeguarded.

The Board is responsible for ensuring that management fulfills its responsibilities for financial reporting and is ultimately responsible for reviewing and approving the financial statements.

The Board meets periodically with management, as well as the external auditors, to discuss internal controls over the financial reporting process, auditing matters and financial reporting issues, to satisfy themselves that each party is properly discharging their responsibilities, and to review the annual report, the financial statements and the external auditor's report.

The financial statements have been audited by external auditors BDO Canada LLP Chartered Professional Accountants in accordance with Canadian generally accepted auditing standards on behalf of the Board. The independent auditor's report expresses their opinion on these financial statements. The external auditors have full and free access to the accounting records and to the Board of the Okangan Basin Water Board.

DocuSigned by:
Sue Mckortoff
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Board of Directors Chairperson

DocuSigned by:
Anna Warwick Sears
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Executive Director

June 6, 2023

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1631 Dickson Avenue, Suite 400
Kelowna BC V1Y 0B5 Canada

Independent Auditor's Report

To the Directors of Okanagan Basin Water Board

Opinion
We have audited the financial statements of the Okanagan Basin Water Board (the "Board"), which comprise the statement of financial position as at March 31, 2023, and the statements of financial operations, change in net financial assets and cash flows for the year then ended, and notes to the financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the Okanagan Basin Water Board as at March 31, 2023, and its financial operations, change in net financial assets and cash flows for the year then ended in accordance with public sector accounting standards.

Basis for Opinion
We conducted our audit in accordance with Canadian generally accepted auditing standards. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are independent of the Board in accordance with the ethical requirements that are relevant to our audit of the financial statements in Canada, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Unaudited Information
We have not audited, reviewed or otherwise attempted to verify the accuracy or completeness of the information included elsewhere in the annual report.

Responsibilities of Management and Those Charged with Governance for the Financial Statements
Management is responsible for the preparation and fair presentation of these financial statements in accordance with public sector accounting standards, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Board's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Board or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Board's financial reporting process.

Auditor's Responsibilities for the Audit of the Financial Statements
Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Canadian generally accepted auditing standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

BDO Canada LLP, a Canadian limited liability partnership, is a member of BDO International Limited, a UK company limited by guarantee, and forms part of the international BDO network of independent member firms.

As part of an audit in accordance with Canadian generally accepted auditing standards, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Board's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Board's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Board to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

BDO Canada LLP

Chartered Professional Accountants

Kelowna, British Columbia
June 6, 2023

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Okanagan Basin Water Board
Statement of Financial Position

March 31	2023	2022
Financial Assets		
Cash (Note 1)	$ 3,542,333	$ 2,939,941
Accounts receivable	36,042	544,166
	3,578,375	3,484,107
Financial Liabilities		
Accounts payable and accrued liabilities	280,028	221,436
Grants payable (Note 2)	465,281	302,852
Asset retirement obligation (Note 3)	31,186	-
	776,495	524,288
Net Financial Assets	2,801,880	2,959,819
Non-Financial Assets		
Prepaid expenses	126,521	-
Tangible capital assets (Note 4)	654,618	675,612
Accumulated Surplus (Note 5)	$ 3,583,019	$ 3,635,431

Approved on behalf of the Board:

DocuSigned by:
Sue Mckortoff
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Chairperson

Okanagan Basin Water Board
Statement of Operations

For the year ended March 31	2023 Actual	2023 Budget	2022 Actual
Revenues (Note 11)			
Levies from member Regional Districts (Note 6)	$ 3,693,604	$ 3,693,017	$ 3,635,327
Grants	56,855	-	1,140,709
Interest income	133,770	8,600	20,403
Other income	-	-	12,758
Gain on disposal of assets	8,406	-	9,618
	3,892,635	3,701,617	4,818,815
Expenses (Note 11)			
Aquatic weed control	759,424	743,750	778,870
Sewerage facilities assistance	1,254,091	1,297,567	1,314,704
Water management	1,931,532	1,760,300	2,314,565
	3,945,047	3,801,617	4,408,139
Annual surplus (deficit) (Note 11)	(52,412)	(100,000)	410,678
Accumulated surplus, beginning of the year	3,635,431	3,635,431	3,224,753
Accumulated surplus, end of year	$ 3,583,019	$ 3,535,431	$ 3,635,431

Okanagan Basin Water Board
Statement of Change in Net Financial Assets

For the year ended March 31	2023	2023	2022
	Actual	Budget	Actual
Annual surplus (deficit)	**$ (52,412)**	$ (100,000)	$ 410,678
Acquisition of tangible capital assets	-	-	(439,999)
Amortization of tangible capital assets	**50,957**	-	83,747
Increase in tangible capital assets due to asset retirement obligations	**(29,961)**	-	-
Disposal of tangible capital assets	-	-	5,100
Prepaid expenses	**(126,521)**	-	53,568
Net change in net financial assets	**(157,937)**	(100,000)	113,094
Net financial assets, beginning of the year	**2,959,817**	2,959,817	2,846,723
Net financial assets, end of year	**$ 2,801,880**	$ 2,859,817	$ 2,959,817

The accompanying summary of significant accounting policies and notes are an integral part of these financial statements 8

Okanagan Basin Water Board
Statement of Cash Flows

For the year ended March 31	2023	2022
Cash provided by (used in)		
Operating Activities		
Annual surplus (deficit)	**$ (52,412)**	$ 410,678
Items not involving cash		
Amortization	**50,957**	83,747
Accretion	**1,225**	-
Gain on disposal of tangible capital assets	**(8,406)**	(9,618)
	(8,636)	484,807
Changes in working capital items		
Account receivable	**508,124**	(306,621)
Accounts payable and accrued liabilities	**58,593**	(3,841)
Grants payable	**162,427**	(16,155)
Prepaid expenses	**(126,522)**	53,571
	602,622	(273,046)
Cash from operations	**593,986**	211,761
Capital activities		
Purchase of tangible capital assets	-	(439,999)
Proceeds on disposal of tangible capital assets	**8,406**	14,719
Net change in cash and cash equivelants	**602,392**	(213,519)
Cash, beginning of the year	**2,939,941**	3,153,460
Cash, end of year	**$ 3,542,333**	$ 2,939,941

The accompanying summary of significant accounting policies and notes are an integral part of these financial statements 9

Okanagan Basin Water Board
Summary of Significant Accounting Policies

Nature of Business

The Okanagan Basin Water Board ("The Board") is established under Section 138 of the Municipalities Enabling and Validating Act (Province of British Columbia) and administers and operates the aquatic weed control program, the sewerage facilities assistance fund, and a water management program as an agent of the three participating regional districts. The participating regional districts are: Regional District of Central Okanagan (R.D.C.O); Regional District of Okanagan-Similkameen (R.D.O.S); and Regional District of North Okanagan (R.D.N.O).

Basis of Presentation

It is the Board's policy to follow accounting principles generally accepted for municipalities in the Province of British Columbia and to apply such principals consistently. The financial statements include the account of all funds for the Board. All inter-funds have been eliminated. They have been prepared using guidelines issued by the Public Sector Accounting Board (PSAB) of the Chartered Professional Accountants of Canada.

Use of Estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Portfolio Investments

Portfolio investments are recorded at the lower of cost and market value.

Financial Instruments

The Board's financial instruments consist of cash, portfolio investments, accounts receivable, and accounts payable and accrued liabilities. Unless otherwise noted, it is management's opinion that the Board is not exposed to significant interest, currency, liquidity or credit risks arising from these financial instruments. The fair values of these financial instruments approximate their carrying values, unless otherwise noted.

Tangible Capital Assets

Tangible capital assets are recorded at cost less accumulated amortization. Cost includes all costs directly attributable to acquisition or construction of the tangible capital asset including transportation costs, installation costs, design and engineering fees, legal fees and site preparation costs. Contributed tangible capital assets are recorded at fair value at the time of the donation, with a corresponding amount recorded as revenue. Amortization is recorded on a straight-line basis over the estimated life of the tangible capital asset commencing once the asset is available for productive use as follows:

Buildings	40 years
Equipment	20 - 25 years
Vehicles	5-7 years
Office furniture & equipment	10 years
Computers	4 years

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Okanagan Basin Water Board
Summary of Significant Accounting Policies

Asset Retirement Obligations

An asset retirement obligation is a legal obligation associated with the retirement of a tangible capital asset that the Board will be required to settle. The Board recognizes asset retirement obligations when there is a legal obligation to incur retirement costs in relation to a tangible capital asset, the past transaction or event giving rise to the liability has occurred, it is expected that future economic benefits will be given up, and a reasonable estimate of the amount can be made.

Asset retirement obligations are initially measured at the best estimate of the amount required to retire a tangible capital asset at the financial statement date. The estimate of a liability includes costs directly attributable to asset retirement activities.

Asset retirement obligations are recorded as liabilities with a corresponding increase to the carrying amount of the related tangible capital asset. Subsequently, the asset retirement costs are allocated to expenses over the useful life of the tangible capital asset. The obligation is adjusted to reflect the period-to-period changes in the liability resulting from the passage of time and for revisions to either the timing or the amount of the original estimate of the undiscounted cash flows or the discount rate.

Revenue Recognition

The levies from member Regional Districts are recognized when the levies for the fiscal year are approved by the Board and requisitioned.

Grants, interest and other income are recognized in the period in which they are earned.

Government Transfers

Government transfers, which include grants and funding agreements are recognized in the financial statements in the period in which events giving rise to the transfers occur, providing the transfers are authorized, any eligibility criteria have been met, and reasonable estimate of the amount can be made.

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March 31, 2023

1. Cash

The Board's bank account is held at one financial institution. The bank account earns interest at bank prime minus 1.95%.

2. Grants Payable

The Sewerage facilities grants program provides funds for municipalities to upgrade their waste water treatment system, the Board's grants provide partial funding for debt repayment on 20-25 year MFA notes. The process for the sewerage facilities grants program involves municipalities requesting an approximate grant amount early in their funding process, then verifying the final grant amount once municipalities have secured MFA notes and begin making payments. Once the grants are awarded, the Board will only issue the grants based on the proper documentation submitted by individual municipalities, such as a formal invoice to the Board.

The Water Conservation and Quality Improvement grant program provides funds to Okanagan local governments, improvement districts, and non-government organizations to support innovative, tangible, on the ground, water initiatives. The program takes a collaborative approach to water management issues and promotes more uniform standards and best practices throughout the valley. Up to $350,000 per year is made available for Okanagan projects. Grants will be expensed in the year of approval as per the budget.

3. Asset Retirement Obligations

The Board owns and operates a building that is constructed on leased land, which was found to contain mold in the roof of the building and oil spills on the property. Mold and oil spills are considered contaminants in the lease agreement, and the Board is legally obligated to remediate these contaminants at their own cost. Following the adoption of Public Accounting Standard PS 3280 *Asset Retirement Obligations*, the Board recognized an obligation relating to the removal of the contaminants as estimated at March 31, 2023. The transition and recognition of asset retirement obligations involved an accompanying increase to the buildings capital asset. The increase in capital assets is amortized on a straight-line basis over the remaining term of the lease agreement.

The Board has adopted this standard prospectively. Under the prospective method, the discount rate and assumptions used on initial recognition are those as of the date of adoption of the standard. Estimated costs totalling $40,156 have been discounted using a present value calculation with a discount rate of 4.09% and inflated using an average inflation rate of 1.92% (BC CPI over the last 20 years). The timing of these expenditures is estimated to occur between fiscal year 2024 and 2025. No recoveries are expected at this time.

	2023	2022
Opening asset retirement obligation	$ -	-
Initial recognition of expected discounted cash flows	29,961	-
Increase due to accretion	1,225	-
Closing asset retirement obligation	**$ 31,186**	-

March 31, 2023

4. Tangible Capital Assets

					2023
	Buildings	Equipment	Vehicles	Office furniture and equipment	Computers	Total
Cost, beginning of year	$ 118,352	$ 1,544,801	$ 239,748	$ 1,518	$ 22,651	$ **1,927,070**
Additions	-	-	-	-	-	-
Additions due to ARO recognition (Note 3)	29,961	-	-	-	-	**29,961**
Disposals	-	(59,085)	(58,710)	-	-	**(117,795)**
Cost, end of year	148,313	1,485,716	181,038	1,518	22,651	**1,839,236**
Accumulated amortization, beginning of year	70,925	1,034,021	127,398	909	18,203	**1,251,456**
Amortization	5,456	26,576	16,050	152	2,723	**50,957**
Disposals	-	(59,085)	(58,710)	-	-	**(117,795)**
Accumulated amortization, end of year	76,381	1,001,512	84,738	1,061	20,926	**1,184,618**
Net carrying amount, end of year	$ **71,932**	$ **484,204**	$ **96,300**	$ **457**	$ **1,725**	$ **654,618**

For the year ended March 31, 2023 (Prior year comparative information)

4. Tangible Capital Assets (continued)

					2022
	Buildings	Equipment	Vehicles	Office furniture and equipment	Computers	Total
Cost, beginning of year	$ 118,352	$ 1,233,201	$ 166,022	$ 3,773	$ 32,440	$ 1,553,788
Additions	-	311,599	128,400	-	-	439,999
Disposals	-	-	(54,674)	(2,255)	(9,789)	(66,718)
Cost, end of year	118,352	1,544,800	239,748	1,518	22,651	1,927,069
Accumulated amortization, beginning of year	66,182	977,793	157,499	3,012	24,842	1,229,328
Amortization	4,743	56,228	19,901	152	2,723	83,747
Disposals	-	-	(50,002)	(2,255)	(9,361)	(61,618)
Accumulated amortization, end of year	70,925	1,034,021	127,398	909	18,204	1,251,457
Net carrying amount, end of year	$ 47,427	$ 510,779	$ 112,350	$ 609	$ 4,447	$ 675,612

March 31, 2023

5. Accumulated Surplus

The Board maintains a reserve for future expenditures. Canadian public sector accounting standards require that non-statutory reserves be included with operating surplus. The reserve and changes therein are included in the operating surplus as follows:

	2023	2022
Aquatic Weed Control Equipment Reserve		
Balance, beginning of year	$ **563,784**	$ 878,297
Proceeds from sale of tangible capital assets	**8,406**	14,719
Gain on disposal of tangible capital assets	**(8,406)**	(9,619)
Net surplus	**27,580**	43,365
Transfer of amortization	**48,082**	77,021
Transfer for acquisition of tangible capital assets	-	(439,999)
Transfer for recognition of asset retirement obligations	**(29,961)**	-
Balance, end of year	**609,485**	563,784
Invested in Tangible Capital Assets		
Balance, beginning of year	**675,612**	324,460
Disposal of unamortized assets	-	(5,100)
Transfer of amortization	**(50,957)**	(83,747)
Transfer for acquisition of tangible capital assets	-	439,999
Transfer for recognition of asset retirement obligations	**29,961**	-
Balance, end of year	**654,616**	675,612
Sewerage Facilities Assistance Reserve Fund		
Balance, beginnning of year	**1,160,373**	1,336,433
Net deficit	**(8,576)**	(176,060)
Balance, end of year	**1,151,797**	1,160,373
Water Management Accumulated Surplus		
Balance, beginnning of year	**1,235,662**	685,563
Net surplus (deficit)	**(71,416)**	543,373
Transfer of amortization	**2,875**	6,726
Balance, end of year	**1,167,121**	1,235,662
	$ **3,583,019**	$ 3,635,431

6. Levies from Member Regional Districts

	2023 Actual	2023 Budget	2022 Actual
North Okanagan	$ **662,527**	$ 662,527	$ 646,724
Central Okanagan	**2,305,399**	2,304,812	2,263,718
Okanagan Similkameen	**725,678**	725,678	724,885
	$ **3,693,604**	$ 3,693,017	$ 3,635,327

7. Sewerage Facility Grants to Member Local Governments

Included in Sewerage Facilities Assistance are the following grants to member local governments:

	2023	2022
City of Kelowna	$ **162,652**	$ 165,782
City of Penticton	**152,338**	152,338
City of Vernon	**112,757**	143,078
City of West Kelowna	**23,353**	27,174
District of Coldstream	**10,888**	11,114
District of Lake Country	**176,049**	194,526
District of Peachland	**135,511**	135,511
District of Summerland	**261,016**	261,412
Town of Osoyoos	**16,401**	16,790
Regional District of North Okanagan	-	4,679
Regional District of Okanagan Similkameen	**119,665**	119,665
Westbank First Nation	**41,937**	42,634
	$ **1,212,567**	$ 1,274,703

8. Budget information

The budget adopted by the Board was not prepared on a basis consistent with that used to report actual results based on current PSAB standards. The budget was prepared on a modified accrual basis while PSAB requires a full accrual basis. The following reconciles the difference:

	2023
Budget surplus (deficit) for the year as per board budget	$ -
Less:	
Transfer from previous years surplus in revenues	(100,000)
Budget deficit per statement of financial operations	$ **(100,000)**

9. Commitments

The Board has exercised its right to renew their lease with the Regional District of North Okanagan for another five year term, which will end March 31, 2024 for the lease of land, on which the Board's machine shop building resides. The original agreement provided an annual lease payment of $14,560, with increases in 2014 and 2019 indexed to the annual CPI for British Columbia. At the conclusion of the lease term, ownership of the Board's building will be transferred to the Regional District of North Okanagan.

The Board is also currently in a five year lease agreement, which expires December 31, 2023, with the option to renew for one additional term of five years, with the Regional District of Central Okanagan for office space as well as financial, administrative and technology services. The agreement provides for a monthly payment of $9,303.

10. Employee Benefits

Retirement Benefits

The Board and its employees contribute to the Municipal Pension Plan (a jointly trusteed pension plan). The board of trustees, representing plan members and employers, is responsible for administering the plan, including investment of assets and administration of benefits. The plan is a multi-employer defined benefit pension plan. Basic pension benefits are based on a formula. As at December 31, 2021, the plan has about 227,000 active members and approximately 118,000 retired members. Active members include approximately 42,000 contributors from local governments.

Every three years, an actuarial valuation is performed to assess the financial position of the plan and adequacy of plan funding. The actuary determines an appropriate combined employer and member contribution rate to fund the plan. The actuary's calculated contribution rate is based on the entry-age normal cost method, which produces the long-term rate of member and employer contributions sufficient to provide benefits for average future entrants to the plan. This rate may be adjusted for the amortization of any actuarial funding surplus and will be adjusted for the amortization of any unfunded actuarial liability.

The most recent valuation for the Municipal Pension Plan as at December 31, 2021, indicated a $3,761 million funding surplus for basic pension benefits on a going concern basis.

The Board paid $66,188 (2022 - $68,322) for employer contributions to the plan in fiscal 2023.

The next valuation will be as at December 31, 2024, with results available in 2025.

Employers participating in the plan record their pension expense as the amount of employer contributions made during the fiscal year (defined contribution pension plan accounting). This is because the plan records accrued liabilities and accrued assets for the plan in aggregate, resulting in no consistent and reliable basis for allocating the obligation, assets and cost to individual employers participating in the plan.

11. Segment Disclosures

Aquatic Weed Control

This program controls the growth of Eurasian watermilfoil in the shallow waters around Okanagan beaches and boating areas. This is a year-round program managing weed growth with rototillers in the winter and harvesters in the summer. The goal of the program is to keep public areas clear of weed, but when time allows operators and equipment will also contract work on a cost-recovery basis.

Sewerage Facilities Assistance

This program reduces the discharge of polluted water to Okanagan lakes and streams by supporting upgrades of sewage treatment plants and community sewers. Grants go to Okanagan municipalities as a local match for senior government infrastructure funding. It is one of the Board's longest-running programs, and has led to great improvements in water quality.

Water Management

This initiative undertakes projects and programs that support water sustainability in the Okanagan. It supports the original mandate of the board, providing leadership and coordinating water management activities in the interests of Okanagan citizens. The initiative includes the Water Conservation and Quality Improvement grant program, water education and outreach, advocacy to senior government for Okanagan water concerns, and establishing the science and monitoring systems required for informed decision making. Many of the projects are conducted as multi-year partnerships with other funding agencies, and operating surplus balances are specifically designated for project commitments through funding agreements with senior government, or targeted to planned projects in development. The Water Management Accumulated Surplus includes $932,041 (2022 - $1,083,714) for previously committed projects.

March 31, 2023

11. Segment Disclosures and Expense by Object (continued)

	Aquatic Weed Control	Sewerage Facilities Assitance	Water Management	2023 Total
Revenues				
Levies	$ 749,650	$ 1,193,567	$ 1,750,387	**$ 3,693,604**
Grant income	-	-	56,855	**56,855**
Interest income	28,948	51,948	52,874	**133,770**
Other income	8,406	-	-	**8,406**
	787,004	1,245,515	1,860,116	**3,892,635**
Expenses				
Assistance grants	-	1,212,567	350,000	**1,562,567**
Amortization	48,082	-	2,875	**50,957**
Accretion expense	1,225	-	-	**1,225**
Contract services	14,712	1,524	892,801	**909,037**
Director's remuneration and expenses	6,917	-	7,450	**14,367**
Equipment costs	129,904	-	4,106	**134,010**
Insurance	41,742	-	2,905	**44,647**
Interest charge	-	-	92	**92**
Office	13,852	-	33,987	**47,839**
Outreach and publicity	481	-	40,088	**40,569**
Overhead allocation	(20,000)	40,000	(20,000)	-
Professional fees	40,073	-	40,543	**80,616**
Rental costs	23,462	-	8,903	**32,365**
Safety	4,397	-	(340)	**4,057**
Stewardship council expenses	-	-	2,311	**2,311**
Travel, conference and meetings	1,128	-	45,418	**46,546**
Utilities, yard supplies and maintenance	19,124	-	-	**19,124**
Wages and benefits	434,325	-	520,393	**954,718**
	759,424	1,254,091	1,931,532	**3,945,047**
Annual surplus (deficit)	**$ 27,580**	**$ (8,576)**	**$ (71,416)**	**$ (52,412)**

For the year ended March 31, 2023 (Prior year comparative information)

11. Segment Disclosures and Expense by Object (continued)

	Aquatic Weed Control	Sewerage Facilities Assitance	Water Management	2022 Total
Revenues				
Levies	$ 807,000	$ 1,129,176	$ 1,699,151	$ 3,635,327
Grant income	-	-	1,140,709	1,140,709
Interest income	5,187	9,468	5,748	20,403
Other income	10,047	-	12,330	22,377
	822,234	1,138,644	2,857,938	4,818,816
Expenses				
Assistance grants	-	1,274,704	350,000	1,624,704
Amortization	77,021	-	6,726	83,747
Contract services	-	-	1,355,356	1,355,356
Director's remuneration and expenses	8,573	-	8,573	17,146
Equipment costs	108,018	-	229	108,247
Insurance	41,841	-	3,584	45,425
Interest charge	570	-	366	936
Office	13,130	-	36,010	49,140
Outreach and publicity	347	-	26,185	26,532
Overhead allocation	(20,000)	40,000	(20,000)	-
Professional fees	38,242	-	38,287	76,529
Rental costs	23,462	-	8,903	32,365
Safety	5,812	-	1,050	6,862
Travel, conference and meetings	2,014	-	29,957	31,971
Utilities, yard supplies and maintenance	16,972	-	-	16,972
Wages and benefits	402,868	-	529,339	932,207
Transfer from Aquatic Weed Control to Water Management	60,000	-	(60,000)	-
	778,870	1,314,704	2,314,565	4,408,138
Annual surplus (deficit)	$ 43,365	$ (176,060)	$ 543,373	$ 410,678

12. Comparative Figures

Certain comparative figures have been reclassified to conform to the current year's presentation.

Nk'Mip Desert Cultural Centre

Okanagan Basin
WATER BOARD

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