

Okanagan Basin Water Board Meeting Agenda



DATE: Tuesday, June 5, 2018

TIME: 10 a.m. to 12 p.m.

PLACE: Summerland Ornamental Gardens,
4200 Hwy 97 South, Summerland, B.C.

1. CALL MEETING TO ORDER

1.1 Acknowledgement of First Nations Traditional Territory

2. INTRODUCTION OF LATE ITEMS

3. APPROVAL OF AGENDA

4. DELEGATION

4.1 Mike Sokal, Environmental Impact Biologist with B.C. Ministry of Environment and Climate Change Strategy on the Large Lakes Monitoring Project

5. ADOPTION OF MINUTES

5.1 Minutes of the Regular Meeting of the Okanagan Basin Water Board of May 1, 2018 at Ramada Inn, Kelowna, B.C. *(page 1)*

6. CHAIR'S REPORT

7. NEW & UNFINISHED BUSINESS

7.1 Presentation by Markus Schrott, BDO with review of Audited Financial Statements for the year ending March 31, 2018

7.1.1 Management Letter *(page 6)*

7.1.2 Auditor's Report and Audited Financial Statements *(page 7) (resolution required)*

7.2 Water Management Program (WMP) Review Memo *(page 27) (resolution required)*

7.2.1 WMP Final Review *(separate email attachment)*

8. STAFF REPORTS

8.1 Executive Director Report *(page 28)*

8.2 Water Stewardship Director Report *(page 30)*

8.2.1 Joint Board-Council Meeting Notes

8.3 Operations and Grants Manager Report *(page 41)*

8.4 Communications Director Report *(page 43)*

8.5 Policy and Planning Specialist Report *(page 49)*

9. CORRESPONDENCE

9.1 Letter from Summerland to Province of B.C. re: mining exploration *(page 51)*

9.2 Letter from Peachland to Province of B.C. re: mining exploration *(page 52)*

10. TOUR

10.1 Field Tour of Make Water Work gardens and additional water conservation demo work funded through OBWB Water Conservation & Quality Improvement Grant Program

11. NEXT MEETING

11.1 The next meeting of the Okanagan Basin Water Board will be an abbreviated meeting on **Friday, August 10, 2018** from 12:30 p.m. to 2 p.m. The meeting will follow our Annual Public Meeting to be held earlier in the morning. Location TBA.

12. ADJOURNMENT



**MINUTES OF A REGULAR MEETING OF THE OKANAGAN BASIN WATER BOARD
HELD MAY 1, 2018, AT THE RAMADA HOTEL & CONFERENCE CENTRE
2170 HARVEY AVE., Kelowna, B.C.**

PRESENT

Chair Tracy Gray	Regional District Central Okanagan
Vice-Chair Juliette Cunningham	Regional District North Okanagan
Director Doug Dirk	Regional District North Okanagan
Director Rick Fairbairn	Regional District North Okanagan
Director Doug Findlater	Regional District Central Okanagan
Director Cindy Fortin	Regional District Central Okanagan
Director Ron Hovanes	Regional District Okanagan-Similkameen
Director Sue McKortoff	Regional District Okanagan-Similkameen
Director Peter Waterman	Regional District Okanagan-Similkameen
Alt. Director Kathy Holland	Okanagan Nation Alliance
Director Toby Pike	Water Supply Association of BC
Director Brian Guy	Okanagan Water Stewardship Council

OBWB 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
Jocelyn Whalen	Communications and Outreach Coordinator

1. CALL MEETING TO ORDER

Chair Gray called the meeting to order at 10:00 a.m.

The Chair respectfully acknowledged that the meeting was being held on the traditional territory of the Okanagan Nation.

2. INTRODUCTION OF LATE ITEMS

3. APPROVAL OF AGENDA

“THAT the agenda of the regular meeting of the Okanagan Basin Water Board of May 1, 2018 be approved.”

CARRIED

4. ADOPTION OF MINUTES

4.1 Minutes of the Regular Meeting of the Okanagan Basin Water Board of April 3, 2018 at the Regional District of North Okanagan in Coldstream.

A small change in attendance was noted.

“THAT the minutes of the regular meeting of the Okanagan Basin Water Board of April 3, 2018 at the Regional District of North Okanagan in Coldstream be approved as amended.”

CARRIED

5. CHAIR'S REPORT

7.1 Board Chair Report

Chair Gray asked people to introduce themselves.

The Chair provided a brief update on the past month, including a meeting between herself, OBWB Vice-Chair Juliette Cunningham and Dr. Sears with Kelowna-Lake Country MP Stephen Fuhr regarding invasive mussels. Chair Gray also noted the news conference regarding LiDAR funding for floodplain mapping, a meeting with the new Water Stewardship Council Chair Denise Nielsen and Vice-Chair Scott Boswell about aligning research, advocacy and working together, and attendance at the opening of the Munson Pond project.

6. STAFF REPORTS

6.1 Executive Director Report

Dr. Sears delivered a draft Water Management Program review to the board and noted that she will be meeting separately with the three Okanagan regional districts over coming weeks. She is also working with finance staff on the OBWB's year-end audit, she added.

An update was given on the LiDAR project, noting conference calls are held every two weeks with GeoBC and Eagle Mapping. Low water areas and a number of floodplains are completed already. Aerial photos of the upper watershed will be done in July.

The Real Estate Foundation is presenting a water project award. Local governments are eligible.

Dir. Pike noted that the Water Supply Association of BC (WSABC) is putting a policy paper together on source water protection, but there is no mention of invasive mussels and there may be other topics that should be addressed. He suggested the OBWB follow up on this.

“THAT the Executive Director's Report, dated April 25, 2018, be received.”

CARRIED

6.2 Water Stewardship Director Report

Mr. Jatel told the board that the Water Stewardship Council elected Denise Nielsen as chair and Scott Boswell as vice-chair. These are 18-month terms.

Dir. Findlater entered the meeting at 10:14 a.m.

Nicole Pyett presented at the April council meeting on groundwater wells. Dir. Fairbairn asked for an update on well registration. Mr. Ted van der Gulik, with the Water Sustainability Partnership of B.C. and formerly with the B.C. Ministry of Agriculture, noted that he has heard concerns and that the registration process is backed up. Additional staff have been hired to address the backlog, he added.

Mr. Jatel noted that the Environmental Flow Needs (EFN) project is continuing and staff will be finalizing a contract with ONA on next surveys. An EFN Conference is planned in Kelowna Oct. 17 and 18, 2018.

A Water Supply Webinar was held April 16 with updates on snowpack, groundwater, Okanagan River and Lake levels, summer weather forecasts and more. Another is planned for May 8 at 11 a.m.

“THAT the Water Stewardship Director’s report, dated April 25, 2018, be received.”
CARRIED

6.3 Communications Director Report

Ms. Jackson gave an update on the Make Water Work and Don’t Move A Mussel (DMM) campaigns, the contracting of Hiilite Creative, and follow-up meetings to build out the campaigns for 2018.

The board was provided information regarding a watercraft purchased by an Osoyoos resident from a mussel-infested region and stopped by a Canada Border Services officer. The province was called in to do a follow-up inspection and decontamination. The province is planning an announcement regarding its 2018 inspection program in mid-May, Ms. Jackson added.

Although the OBWB-Okanagan WaterWise (OkWW)’s formal DMM campaign will be starting ahead of the May long-weekend, watercraft are on the move. As such, staff are already spreading the message regarding the mussels. Staff have also received a call and are following up with Manitoba’s Riding Mountain Biosphere Reserve which is interested in adopting the DMM campaign.

The OBWB’s OkWW program partnered with Regional District of Central Okanagan’s Waste Reduction Office to sell rain barrels during their composter sale, April 22. All 125 rain barrels were sold within 90 minutes of a 6 hour sale. Ms. Jackson said she and Waste Reduction staff have met to discuss potential improvements to the program for next year.

The board was given a brief update regarding the April 10 LiDAR news conference. The news conference was well-attended and included representation from the province and ONA.

Ms. Whalen provided an update on outreach efforts, including Seedy Saturday events with the Make Water Work message, and Okanagan WaterWise presentations to Gr. 2 and 5/6 classrooms.

“THAT the Communications Director’s Report, dated April 25, 2018, be received.”
CARRIED

6.4 Policy and Planning Specialist Report

Ms. Garcia told the board about a presentation she gave at the recent WSABC spring workshop regarding the update to the Okanagan Sustainable Water Strategy (SWS) that is underway, the OBWB’s mainstem drought triggers project and agricultural water supply communication project. The next few months will be busy focussing on the SWS, she added.

“THAT the Policy and Planning Specialist’s Report, dated April 24, 2017, be received.”
CARRIED

7. NEW & UNFINISHED BUSINESS

7.1 Water Conservation & Quality Improvement (WCQI) Grant Program Review

Mr. Littley provided an overview of the WCQI grant program review. There was follow-up discussion.

Currently those eligible to receive grants include local governments, improvement districts and non-profits. Dir. Fairbairn questioned if local governments should be removed as potential grant applicants. It was noted that local governments often have a greater capacity to conduct important water projects and there are not very many NGOs taking on such projects. It was also noted that by ensuring non-profits have access to the funds it also connects the community to the issues the OBWB has determined are priorities and promotes community engagement on water projects.

There was some discussion about the current program design where funds flow through the regional districts (RDs) to the OBWB to decide what water projects to approve in the RDs. It was noted that by providing the funds to the OBWB to administer, there is a guarantee that the funds are spent on water projects, and that the projects are reviewed with a valley-wide lens, ensuring valley-wide benefit. Staff also promote collaboration between projects to ensure greater success and impact. Dir. Cunningham voiced concern that having these funds stay with RDs would likely spell the end of water-funded projects.

There was discussion about the program's current requirement for a resolution of support from a local government (i.e. municipal council or regional district board). Dirs. Fortin and Findlater, spoke in favour of local government involvement to ensure municipalities know what projects are proposed. Dir. Findlater noted that perhaps a resolution is not necessary, and a referral for comment could suffice. There was general agreement that a referral for comment was a better solution.

The board considered the \$300,000 grant budget that has been in place since the program began in 2006 and the possibility of increasing the amount to \$370,000 to at least meet the rate of inflation. The board tabled this question.

Dr. Sears added that the WMP Review will be going to the three RDs to reaffirm the program as is, and if the three boards want the WCQI program to move to a valley-wide funding model this would need to be voted on and changes made to the grant program's terms of reference.

A vote was taken on the following motion.

“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.”

CARRIED

**Dirs. Findlater, McKortoff and Fairbairn opposed,
and Alt. Dir. Holland, and Dirs. Pike and Nielsen
abstained**

7.2 Water Management Program (WMP) Review

Dr. Sears introduced the draft WMP Review, noting that the program closely aligns with the OBWB's 2014-2019 Strategic Plan and the budget is driven by the need for the program.

Responding to questions, Dr. Sears explained that the maximum regional districts can provide for the OBWB's WMP is 2 cents per thousand of assessed property value, although we are currently at 1.6 cents/\$1000. Despite an increase in activity, funding for the program is proposed to stay at 2018 levels. This is in large part, she added, thanks to growing partnerships

and grant funding (e.g. flood mapping). Dir. Findlater added that having a cap means not everything can be funded which forces the board to fund what is best.

“THAT the OBWB adopts the 2018 Water Management Program Review Draft, in principle, and directs staff to move forward with the final version subject to minor revisions as requested and required.”

CARRIED

8. CORRESPONDENCE

8.1 Letter from Federal Minister of Public Safety & Emergency Preparedness to OBWB re: invasive mussels

“THAT the letter from the Federal Minister of Public Safety & Emergency Preparedness to OBWB re: invasive mussels be received.”

CARRIED

9. NEXT MEETING

The next meeting of the Okanagan Basin Water Board will be Tuesday, June 5, 2018 from 10 a.m. to 2 p.m. at Summerland Ornamental Gardens.

10. ADJOURNMENT

“THAT there being no further business, the regular meeting of the Okanagan Basin Water Board of May 1, 2018 be adjourned at 11:50 a.m.”

CARRIED

Certified Correct:		
Chair		Executive Director



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Kelowna BC V1Y 0B5 Canada

June 5, 2018

Dr. Anna Warwick Sears, Executive Director
Okanagan Basin Water Board
1450 KLO Road
Kelowna BC V1W 3Z4

Okanagan Basin Water Board
Regular meeting
June 5, 2018
Agenda No. 7.1.1

Dear Dr. Warwick Sears:

Re: Management Letter
Okanagan Basin Water Board

The objective of an audit is to obtain reasonable assurance whether the financial statements are free of any material misstatement and it is not designed to identify matters that may be of interest to management in discharging its responsibilities. Accordingly an audit would not usually identify all such matters.

During the course of our audit of the financial statements of Okanagan Basin Water Board for the period ended March 31, 2018, we did not encounter any significant matters which we believe should be brought to your attention.

This communication is prepared solely for the information of management and is not intended for any other purposes. We accept no responsibility to a third party who uses this communication.

We would like to express our appreciation for the cooperation and assistance which we received during the course of our audit from Carol Teschner and Janelle Harrison.

We shall be pleased to discuss with you further any matters mentioned in this report at your convenience.

Yours truly,

Markus Schrott, CPA, CA
Partner through a corporation
BDO Canada LLP
Chartered Professional Accountants

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Okanagan Basin Water Board
Financial Statements
For the year ended March 31, 2018

DRAFT

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DRAFT

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 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 auditors have full and free access to the accounting records and to the Board of the Okanagan Basin Water Board.

Board of Directors Chairperson

Executive Director
June 5, 2018

Independent Auditor's Report

To the Board of Directors of Okanagan Basin Water Board

We have audited the accompanying financial statements of the Okanagan Basin Water Board, which comprise the statement of financial position as at March 31, 2018, and the statements of operations and accumulated surplus, change in net financial assets and cash flows for the year then ended, and a summary of significant accounting policies and other explanatory information.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with Canadian public sector accounting principles 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.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal controls relevant to the Board's preparation and fair presentation of the financial statements 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. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements present fairly, in all material respects, the financial position of the Okanagan Basin Water Board as at March 31, 2018, and its operations and its cash flows for the year then ended in accordance with Canadian public sector accounting standards.

Chartered Professional Accountants

Kelowna, British Columbia
June 5, 2018

Okanagan Basin Water Board Statement of Financial Position

March 31	2018	2017
Financial assets		
Cash (Note 1)	\$ 2,842,963	\$ 337,235
Portfolio investments	-	2,365,330
Accounts receivable	26,538	33,773
	2,869,501	2,736,338
Financial liabilities		
Accounts payable and accrued liabilities	265,736	255,612
Grants payable (Note 2)	286,848	283,972
	552,584	539,584
Net financial assets	2,316,917	2,196,754
Non-financial assets		
Prepaid expenses	-	8,505
Tangible capital assets (Note 3)	309,488	237,393
Accumulated Surplus (Note 4)	\$ 2,626,405	\$ 2,442,652

Approved on behalf of the Board:

Chairperson

Okanagan Basin Water Board Statement of Financial Operations

For the year ended March 31	2018 Actual	2018 Budget	2017 Actual
Revenue (Note 11)			
Levies from member Regional Districts (Note 5)	\$ 3,451,500	\$ 3,451,500	\$ 3,444,221
Grants (Note 6)	509,255	-	267,772
Interest	46,422	35,000	36,175
Gain on disposal of assets	-	-	1,500
	4,007,177	3,486,500	3,749,668
Expenses (Note 11)			
Aquatic weed control	694,586	853,326	679,116
Sewerage facilities assistance	1,593,733	1,631,054	1,649,030
Water management	1,535,105	1,102,120	1,602,078
	3,823,424	3,586,500	3,930,224
Annual Surplus (Deficit) (Note 11)	183,753	(100,000)	(180,556)
Accumulated Surplus, beginning of year	2,442,652	2,442,652	2,623,208
Accumulated Surplus, end of year	\$ 2,626,405	\$ 2,342,652	\$ 2,442,652

Okanagan Basin Water Board Statement of Change in Net Financial Assets

For the year ended March 31	2018 Actual	2018 Budget	2017 Actual
Annual surplus (deficit)	\$ 183,753	\$ (100,000)	\$ (180,556)
Acquisition of tangible capital assets	(120,984)	-	(99,216)
Amortization of tangible capital assets	48,889	-	51,963
Change in prepaid expenses	8,505	-	(221)
Disposal of tangible capital assets	-	-	-
Net change in net financial assets	120,163	(100,000)	(228,030)
Net financial assets, beginning of year	2,196,754	2,196,754	2,424,784
Net financial assets, end of year	\$ 2,316,917	\$ 2,096,754	\$ 2,196,754

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Okanagan Basin Water Board Statement of Cash Flows

For the year ended March 31	2018	2017
Operating activities		
Annual surplus (deficit)	\$ 183,753	\$ (180,556)
Items not involving cash:		
Amortization	48,889	51,963
Gain on disposal of tangible capital assets	-	(1,500)
	232,642	(130,093)
Changes in working capital:		
Account receivable	7,235	9,001
Accounts payable and accrued liabilities	10,124	(182,926)
Grants payable	2,876	(5,643)
Prepaid expenses	8,505	(221)
	28,740	(179,789)
Cash from operations	261,382	(309,882)
Investing Activities		
Net change in investments	2,350,000	500,000
Accrued Interest	15,330	(2,212)
	2,365,330	497,788
Capital Activities		
Purchase of tangible capital assets	(120,984)	(99,216)
Proceeds from disposal of tangible capital asset	-	1,500
	(120,984)	(97,716)
Change in cash during the year	2,505,728	90,190
Cash, beginning of year	337,235	247,045
Cash, end of year	\$ 2,842,963	\$ 337,235

Okanagan Basin Water Board

Summary of Significant Accounting Policies

March 31, 2018

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 participation 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 principles consistently. The financial statements include the account of all funds for the Board. All interfund transfers have been eliminated. They have been prepared using guidelines issued by the Public Sector Accounting Board (PSAB) of the Canadian Institute of Chartered Profession Accountants (CICPA).
Use of Estimates	The preparation of financial statements in conformity with generally accepted accounting principles for British Columbia Regional Districts require 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 year. 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, accounts payable and accrued liabilities. Unless otherwise noted, it is management's opinion that the Board is not exposed to significant interest, currency, or credit risks arising from these financial instruments. The fair values of these financial instruments approximate their carrying values, unless otherwise noted.

Okanagan Basin Water Board

Summary of Significant Accounting Policies

March 31, 2018

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	25 years
Equipment	10 years
Vehicles	7 years
Office Furniture & Equipment	10 years
Computers	4 years

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.

Okanagan Basin Water Board

Notes to Financial Statements

March 31, 2018

1. Cash

The Board's bank account is held at one financial institution. The bank account earns interest at bank prime minus 1.8%

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 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 \$300,000 per year is made available for Okanagan projects. Grants will be expensed in the year of approval as per the budget.

Okanagan Basin Water Board
Notes to Financial Statements

March 31, 2018

3. Tangible Capital Assets

	Buildings	Equipment	Vehicles	Office Furniture & Equipment	Computers	Work In Progress	2018 Total
Cost							
Balance, beginning of year	\$ 118,352	\$ 883,874	\$ 166,022	\$ 3,773	\$ 24,128	\$ -	\$ 1,196,149
Additions	-	9,918	-	-	2,776	108,290	120,984
Disposals	-	-	-	-	(1,437)	-	(1,437)
Balance, end of year	118,352	893,792	166,022	3,773	25,467	108,290	1,315,696
Accumulated amortization							
Balance, beginning of year	47,212	808,187	84,557	2,402	16,398	-	958,756
Amortization	4,742	22,036	18,236	152	3,723	-	48,889
Disposals	-	-	-	-	(1,437)	-	(1,437)
Balance, end of year	51,954	830,223	102,793	2,554	18,684	-	1,006,208
Net book value	\$ 66,398	\$ 63,569	\$ 63,229	\$ 1,219	\$ 6,783	\$ 108,290	\$ 309,488

Okanagan Basin Water Board
Notes to Financial Statements

March 31, 2018

3. Tangible Capital Assets

Prior year comparative information:

	Buildings	Equipment	Vehicles	Office Furniture & Equipment	Computers	2017 Total
Cost						
Balance, beginning of year	\$ 118,352	\$ 875,174	\$ 107,837	\$ 2,250	\$ 17,555	\$ 1,121,168
Additions	-	8,700	80,670	1,523	8,323	99,216
Disposals	-	-	(22,485)	-	(1,750)	(24,235)
Balance, end of year	118,352	883,874	166,022	3,773	24,128	1,196,149
Accumulated amortization						
Balance, beginning of year	42,469	782,841	88,806	2,250	14,662	931,028
Amortization	4,743	25,346	18,236	152	3,486	51,963
Disposals	-	-	(22,485)	-	(1,750)	(24,235)
Balance, end of year	47,212	808,187	84,557	2,402	16,398	958,756
Net book value	\$ 71,140	\$ 75,687	\$ 81,465	\$ 1,371	\$ 7,730	\$ 237,393

Okanagan Basin Water Board

Notes to Financial Statements

March 31, 2018

4. 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 change therein included in the operating surplus is as follows:

	2018	2017
Aquatic Weed Control Equipment Reserve		
Balance, beginning of year	\$ 270,817	\$ 272,685
Proceeds from sale of tangible capital assets	-	1,500
Net surplus	162,644	37,666
Transfer of amortization	42,111	45,879
Transfer for acquisition of tangible capital assets	(118,208)	(86,913)
Balance, end of year	<u>357,364</u>	<u>270,817</u>
Invested in Tangible Capital Assets		
Balance, beginning of year	237,393	190,140
Transfer for acquisition of tangible capital assets	120,984	99,216
Transfer of amortization	(48,889)	(51,963)
Balance, end of year	<u>309,488</u>	<u>237,393</u>
Sewerage Facilities Assistance Reserve Fund		
Balance, beginning of year	1,504,515	1,511,773
Net deficit	(58,934)	(7,258)
Balance, end of year	<u>1,445,581</u>	<u>1,504,515</u>
Water Management Accumulated Surplus		
Balance, beginning of year	429,927	648,610
Net surplus (deficit)	80,043	(212,464)
Transfer of amortization	6,778	6,084
Transfer for acquisition of tangible capital assets	(2,776)	(12,303)
Balance, end of year	<u>513,972</u>	<u>429,927</u>
	<u>\$ 2,626,405</u>	<u>\$ 2,442,652</u>

Okanagan Basin Water Board

Notes to Financial Statements

March 31, 2018

5. Levies from Member Regional Districts

	2018		2018		2017
	Actual		Budget		Actual
North Okanagan	\$ 641,834	\$	641,834	\$	652,317
Central Okanagan	2,102,847		2,102,847		2,074,044
Okanagan Similkameen	706,819		706,819		717,860
	\$ 3,451,500	\$	3,451,500	\$	3,444,221

6. Gas Tax Agreement Funds

Gas Tax Agreement funding is provided by the Government of Canada. The use of the funding is established by a funding agreement between the Okanagan Basin Water Board and the Union of BC Municipalities (UBCM). All UBCM funds received by the Board in fiscal year 2018 were from a Gas Tax grant. Included in Grant income is \$332,071 for work related to the project, "Environmental Flow Needs for Okanagan Water Planning." 100% of the funds the Board received were spent on this project. No funds were spent on administration. Grants were paid in arrears, and no interest was earned on unspent funds.

7. Sewerage Facility Grants to Member Local Governments

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

	2018		2017
City of Kelowna	\$ 186,341	\$	187,108
City of Penticton	215,822		215,822
City of Vernon	92,636		94,203
City of West Kelowna	42,788		51,631
District of Coldstream	12,008		19,193
District of Lake Country	287,269		287,269
District of Peachland	174,089		174,089
District of Summerland	361,842		389,222
Town of Osoyoos	11,278		11,278
Regional District of North Okanagan	4,679		4,679
Regional District of Okanagan Similkameen	119,665		139,009
Westbank First Nation	45,316		35,527
	\$ 1,553,733	\$	1,609,030

Okanagan Basin Water Board

Notes to Financial Statements

March 31, 2018

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 Canadian public sector accounting standards ("PSAB"). The budget was prepared on a modified accrual basis while PSAB now require a full accrual basis. The following reconciles the difference.

	<u>2018</u>
Budget surplus (deficit) for the year as per board budget	\$ -
Less:	
Transfer from previous years surplus in revenues	<u>(100,000)</u>
Budget deficit per statement of financial operations	<u>\$ (100,000)</u>

9. Commitments

The Board is currently in a ten-year lease agreement, which has two years remaining, with the Regional District of North Okanagan for the lease of land, on which the Board's building resides. The agreement provides for an annual lease payment of \$12,800 for the first given years, and for the subsequent five years the lease amount will be 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, 2018, with the option to renew for one additional term of five years, with the Regional District of Central Okanagan for office rent and operating and overhead costs as well as financial, administrative and technology services. The agreement provides for a monthly payment of \$8,505.

Okanagan Basin Water Board

Notes to Financial Statements

March 31, 2018

10. Employee Benefits

Retirement Benefits

The Board and its employees contribute to the Municipal Pension Plan (a jointly trustee 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, 2016, the plan has about 193,000 active members and approximately 90,000 retired members. Active members include approximately 38,000 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, 2015, indicated a \$2,224 million funding surplus for basic pension benefits on a going concern basis. As a result of the 2015 basic account actuarial valuation surplus and pursuant to the joint trustee agreement, \$1,927 million was transferred to the rate stabilization account and \$297 million of the surplus ensured the require contribution rates remained unchanged.

The Board paid \$56,783 (2017 - \$50,214) for employer contributions to the plan in fiscal 2018.

The next valuation will be as at December 31, 2018, with results available in 2019.

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.

Okanagan Basin Water Board

Notes to Financial Statements

March 31, 2018

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 \$436,382 (2017 - \$367,482) for previously committed projects.

Okanagan Basin Water Board
Notes to Financial Statements

For the year ended March 31, 2018

11. Segment Disclosures and Expense by Object (continued)

	Aquatic Weed Control	Sewerage Facilities Assistance	Water Management	2018 Total
Revenues				
Levies	\$ 849,326	\$ 1,506,054	\$ 1,096,120	\$ 3,451,500
Grant income	-	-	509,255	509,255
Interest income	7,904	28,745	9,773	46,422
	<u>857,230</u>	<u>1,534,799</u>	<u>1,615,148</u>	<u>4,007,177</u>
Expenses				
Assistance grants	-	1,553,733	300,000	1,853,733
Amortization	42,111	-	6,778	48,889
Contract services	5,000	-	542,930	547,930
Director's remuneration and expenses	11,410	-	10,651	22,061
Equipment costs	115,647	-	517	116,164
Insurance	26,610	-	4,000	30,610
Interest charge	100	-	476	576
Office	10,203	-	26,452	36,655
Outreach and publicity	-	-	131,651	131,651
Overhead allocation	(20,000)	40,000	(20,000)	-
Professional fees	39,821	-	36,323	76,144
Rental costs	8,556	-	9,988	18,544
Safety	5,675	-	123	5,798
Stewardship council expenses	-	-	13,529	13,529
Travel, conferences and meetings	4,030	-	32,284	36,314
Utilities, yard supplies and maintenance	18,656	-	557	19,213
Wages and benefits	426,767	-	438,846	865,613
	<u>694,586</u>	<u>1,593,733</u>	<u>1,535,105</u>	<u>3,823,424</u>
Annual surplus (deficit)	\$ 162,644	\$ (58,934)	\$ 80,043	\$ 183,753

Okanagan Basin Water Board
Notes to Financial Statements

For the year ended March 31, 2018

11. Segment Disclosures and Expense by Object (continued)

Prior year comparative information:

	Aquatic Weed Control	Sewerage Facilities Assistance	Water Management	2017 Total
Revenues				
Levies	\$ 710,100	\$ 1,620,262	\$ 1,113,859	\$ 3,444,221
Grant income	1,625	-	266,147	267,772
Interest income	5,057	21,510	9,608	36,175
Gain on disposal of assets	1,500	-	-	1,500
	<u>718,282</u>	<u>1,641,772</u>	<u>1,389,614</u>	<u>3,749,668</u>
Expenses				
Assistance grants	-	1,609,030	275,000	1,884,030
Amortization	45,879	-	6,084	51,963
Contract services	7,166	-	686,480	693,646
Director's remuneration and expenses	10,709	-	10,709	21,418
Equipment costs	106,256	-	1,822	108,078
Insurance	25,886	-	3,780	29,666
Interest charge	89	-	78	167
Office	15,962	-	25,167	41,129
Outreach and publicity	1,324	-	141,055	142,379
Overhead allocation	(20,000)	40,000	(20,000)	-
Professional fees	46,492	-	37,634	84,126
Rental costs	21,259	-	9,687	30,946
Safety	9,957	-	2,458	12,415
Stewardship council expenses	-	-	5,702	5,702
Travel, conferences and meetings	9,604	-	37,079	46,683
Utilities, yard supplies and maintenance	15,658	-	-	15,658
Wages and benefits	382,875	-	379,343	762,218
	<u>679,116</u>	<u>1,649,030</u>	<u>1,602,078</u>	<u>3,930,224</u>
Annual surplus (deficit)	\$ 39,166	\$ (7,258)	\$ (212,464)	\$ (180,556)

MEMORANDUM

Okanagan Basin Water Board
Regular meeting
June 5, 2018
Agenda No: 7.1

File No. 0550.04

To: OBWB Directors
From: Anna Warwick Sears
Date: May 30, 2018
Subject: Water Management Program Review Memo

The OBWB's Water Management Program (WMP) must be renewed by September 7, 2018. OBWB's WMP Review (final version) accompanies this memo. The draft version was adopted in principle at the May 1, 2018 OBWB meeting. I will be meeting with the Regional Districts of Okanagan-Similkameen, North Okanagan, and Central Okanagan (on June 7, June 20 and July 19, 2018, respectively).

Recommended Resolution: *That the OBWB adopts the 2018 Water Management Program Review as presented, and directs staff to meet with the Okanagan regional districts to ask for their resolutions of support for a new term.*

MEMORANDUM

Okanagan Basin Water Board
Regular meeting
June 5, 2018
Agenda No: 8.1

File No. 0550.04

To: OBWB Directors
From: Anna Warwick Sears
Date: May 30, 2018
Subject: **Executive Director Report**

2018 Annual Public Meeting

Our Annual Public Meeting will be on Friday, August 10th this year. Our theme will focus on collaborative planning and risk reductions for climate adaptation, including droughts and floods.

Water Management Program Review Update

I have completed the Final Water Management Program Review, and included it in the agenda package under New and Unfinished Business. The board approved the draft, in principle, at our May meeting. The only significant changes relate to formatting and the structure of the requested resolutions of support. I have scheduled presentations at RDOS (June 7th), RDNO (June 20th) and RDCO (July 19th).

Audit and Annual Report

Our annual year-end audit is complete, and the audited financial statements have been presented as a separate agenda item. Once approved, they will be incorporated into our annual report, which will be presented at our Annual Public Meeting on August 10th. Note that this meeting is a month earlier than normal. Because of the early election schedule, the OBWB's budget approval schedule is moved forward to September/October.

LiDAR Capture and Flood Mapping

We anticipate the remainder of the LiDAR capture to take place as soon as the upper-elevation snow is gone – as early as some time in June. The flights must be done in a smoke-free condition, and the window of opportunity is between the beginning of June and the end of September. I met with the staff from most of the GIS departments in the valley, and they are very excited about the many ways the data can be used by local government.

I am currently working with RDCO to organize a workshop on collaborative flood risk mapping and flood management planning, for Okanagan local government and First Nations staff. We are bringing in Steve Litke from the Fraser Basin Council, who is the lead for the huge multi-jurisdictional flood management plan in the Lower Fraser. We are also bringing in Lotte Flint-Petersen, a Hydrotechnical Engineer with Emergency Management BC, with experience in flood risk assessments.

Federal Z/Q Funding

No direct news to report on our most recent funding request letter to the Government of Canada for preventing invasive mussels. I have been in touch with Mr. Fuhr's office, and we are trying to schedule a meeting in the next couple of weeks. I'll report to the board when I have clear news of the progress on this file.

Renewing Milfoil Yard Lease with RDNO

Our Milfoil Equipment Yard and machine shop is leased from RDNO. Our 10-year lease term is up at the end of this year, and I have activated the clause in the lease to have an automatic renewal for another five-year period. I have also suggested to the CAO that we would be interested in renewing for 10 years, if they are interested. The OBWB originally built the machine shop in 2007 on the RDNO property, specifically to do repair and maintenance on the milfoil equipment.

Weather Report

The seasonal forecast is for a hotter than normal summer, with near-normal precipitation in June (our rainiest month on average), which could slow down the fire season. If we miss the June rains, it could be a very dry summer.

MEMORANDUM

Okanagan Basin Water Board
Regular meeting
June 5, 2018
Agenda No: 8.2

File No. 0550.04

To: Board of Directors
From: Nelson R. Jatel
Date: May 25, 2018
Subject: **Water Stewardship Director's Report**

May Joint Water Stewardship Council & Board meeting

The May joint Council-Board meeting provided an opportunity for the Board and Council members to meet and discuss a range of important water issues including: groundwater reporting and flooding concerns. Two presentations were made. **Dr. Brian Guy** reported on the 2017 report detailing the management of Okanagan mainstem lakes for flood mitigation. The second presentation by **Mr. Dave Campbell**, from the BC River Forecast Centre, reported on the Okanagan water supply and flood risk anticipated in some sub-basins in the Okanagan.

Copies of Council presentations are available online:

- <http://www.obwb.ca/about-the-council/presentations-videos/>

The next Council meeting will be held at Kelowna's Coast Capri Hotel from 12:30 – 4:30 p.m. on June 14, 2018. June's Council meeting will focus on the development of our 18 month work plan. All Board members are invited and encouraged to attend.

Project management: project updates

In addition to supporting the communication, organization and project management of the WSC and its committees, the project activities and highlights for the month of April included:

Okanagan Environmental Flow Needs (EFN) project

The project team including the Okanagan Nation Alliance Fishery Department, B.C. Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNRORD) staff and the OBWB staff are collecting final water flow data information over the next couple of months and developing the stream specific Okanagan Tennant and Weighted Usable Width models. The technical steering committee is planning to meet mid-June to review preliminary model findings.



Okanagan Hydrology Modeling updating project

The project management team met for the first time on May 14th to review project deliverables and milestones, initiate project planning and discuss project timelines. The deliverables of this project are a suite of sub-basin hydrological models for priority (16-19) of the principle Okanagan tributaries that enter. The models will be spatially distributed, linking surface and groundwater flow models (where groundwater data is available) with the Okanagan Water Demand Model – to enable water balances to be determined at multiple points along each tributary. A full technical report will be written detailing the model development process, the results, lessons learned, gaps and next steps. A workshop and extension document will also be created with the purpose of communicating to local consulting firms, government staff, and technical users the project results and how they may be applied.

One major environmental benefit of this project is that it will help improve water management in the tributary streams, which support aquatic, riparian, and wetland habitats and the needs of fish and other aquatic life. Part of the challenge in the Okanagan is to manage storage in the upper watershed reservoirs so that sufficient flow is maintained in the streams during the hot summer months when there are high irrigation demands. There is ongoing discussion among local governments about the pros and cons of different water sources – upper watershed reservoirs vs. mainstem lakes, surface vs. groundwater – and environmental protection is a major factor in these resource development considerations. As well, water allocations by provincial staff must consider the needs of the environment, though there are few tools available to support these decisions.

Organization of Environmental Flow Needs Conference (October 17-18, 2018)

Momentum continues to build for the upcoming Okanagan EFN conference continues as the committees focus on finalizing our speaker list, sponsorship, and attendance. The project steering, fundraising, communication and programming committees have all met recently and are working hard to support conference organizational milestones. The overview program is available online at: www.EFN2108.ca. Sponsorship opportunities are still available and participant registration is open. The conference will be held at the Coast Capri Hotel in Kelowna.

Canadian Water Resource Association National Conference (May 28 – June 1, 2018)

As program committee member of this national conference, the program team has put the final touches on the program agenda including selections from over 204 paper submissions for this year's CWRA water conference, hosted in Victoria, B.C. There is a dedicated Okanagan session at this national conference and the preliminary program is now available online: <https://conference.cwra.org/>.

Joint Board and WSC meeting

May 4th 2018

Ramada Hotel Conference Center

Present:

Board members and alternates:

Chair Tracy Gray	Regional District Central Okanagan
Vice-Chair Juliette Cunningham	Regional District North Okanagan
Director Doug Dirk	Regional District North Okanagan
Director Rick Fairbairn	Regional District North Okanagan
Director Doug Findlater	Regional District Central Okanagan
Director Cindy Fortin	Regional District Central Okanagan
Director Ron Hovanes	Regional District Okanagan-Similkameen
Director Sue McKortoff	Regional District Okanagan-Similkameen
Director Peter Waterman	Regional District Okanagan-Similkameen
Alt. Director Kathy Holland	Okanagan Nation Alliance
Director Toby Pike	Water Supply Association of BC
Director Brian Guy	Okanagan Water Stewardship Council

WSC members and alternates:

Denise Nielsen	AAFC/ Emeritus
Lorne Davies	BCWF Region 8
Glenn Mandziuk	TOTA
Ellen Walker-Matthews	TOTA
Ted van der Gulik	IIABC
Zoe Kirk	RDOS
Renee Clark	RDNO
Bernie Bauer	UBCO
Brian Guy	CWRA
Tom Forge	AAFC
Kirsten Hannam	AAFC
Ray Crampton	FLNRORD
Murray Wilson	SOFA

OBWB staff:

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

Guests:

Nargiz Rahimova	UBCO
Barry Gerding	Black press

Meeting Notes:

1pm-3.30pm – WSC session notes:

1. Brief overview by Denise Neilsen – provincial policies, committees work, Sustainable Water Strategy update, new Council members.
2. Presentation by Brian Guy, AE Consulting, “Management of Okanagan mainstem lakes in spring 2017”. Dr. Guy talked about the work done AE Consulting summarizing the context for decision-making by provincial government, decision-making process and rationale, consequences and the summary of the lessons learned. The main lesson was that following the existing operating plans for forecasting lakes inflows becomes more challenging due to climate-induced unpredictability. A review process resulted in 65 recommendations in 3 categories:
 - A) Data and models – establishment of proper hydromet stations network to fill the gaps; upgrade models; use weather forecast
 - B) Operational – Operational plans need to be revise to include uncertainty in forecast; flood construction levels and setbacks re-evaluated ; delegate responsibilities to local governments; modifications to infrastructure; improve knowledge of impacts with LIDAR data
 - C) Organizational- improve communication; increase staffing; training and succession planning; stronger provincial commitment to improve data network

In addition, a number of strategic recommendations were collected through the process of interviewing people, including the need for the Province to increase commitment to flood preparation; and developing a comprehensive risk management strategy.

3. Presentation by Dave Campbell, River forecast centre, 2018 outlook

Pointed out an elevated risk of flooding based on snowpack accumulation at 150% of normal, lingering effects from La Nina translating into possibility higher than average temperatures. (according to Environment Canada forecast). Seasonal snowmelt, however, is timely with smaller river systems filling up and larger expected to pick up starting next week.

Discussion:

1. Lake level is kept intentionally low (40 cm below compared to previous year) to accommodate possibly larger volumes of water
2. Flood situation in South Okanagan aggravating due to low to mid elevation snow melt; observed unprecedented saturation, i.e. all ponds that were dry for the last 15 years are filled with water.
3. Local governments did amazing work last year responding to flood but the reality is that local government’s capacity is insufficient to handle extreme situations on annual basis; Province needs to step in and support local government and facilitate remediation measures.
4. Transboundary jurisdiction in case of Osoyoos lake – management measures need to be coordinated with the US side and Similkameen.
5. Last significant investment into flood protection dates back to 1948 flooding event. The present situation calls for another major investment as climate change translate into greater flood hazards.
6. Shawn Reimer will be reporting latest news during May 8th water supply webinar.



Management of Okanagan mainstem lakes in spring 2017

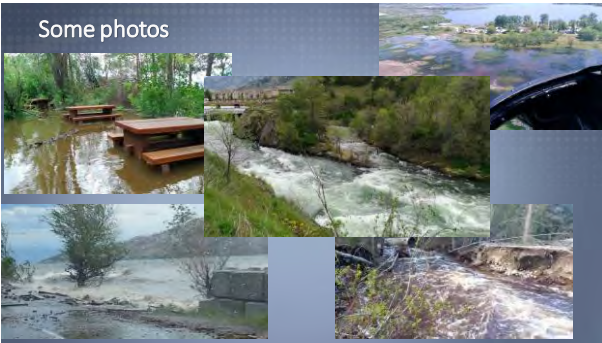
Brian Guy, Ph.D., P.Geo.
OBWB / OWSC joint meeting
May 1, 2018

Overview

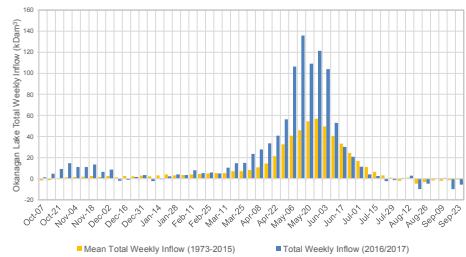
- What happened?
- Weather, snowpack development and melt
- General: lake inflow forecasts and decision-making process
- 2017: inflow forecasts and management actions
- 65 Recommendations in 3 areas



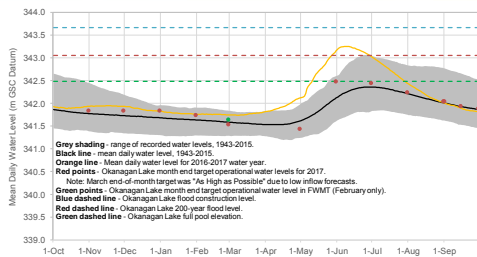
Some photos



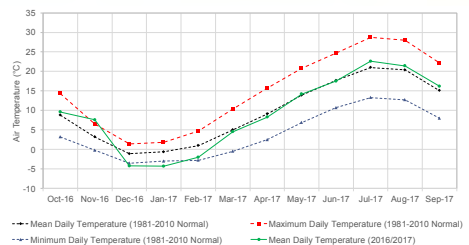
Weekly inflow to Okanagan Lake - 2017



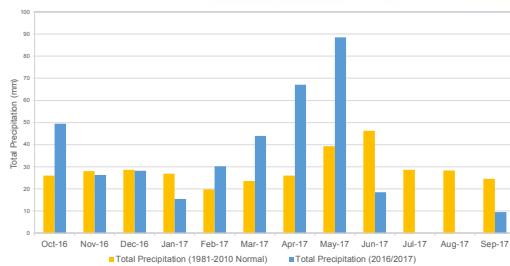
Okanagan Lake levels - 2017



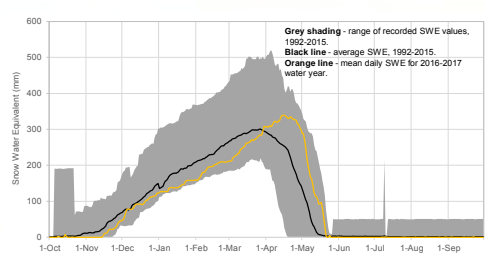
Penticton daily mean temperature: 2016-2017



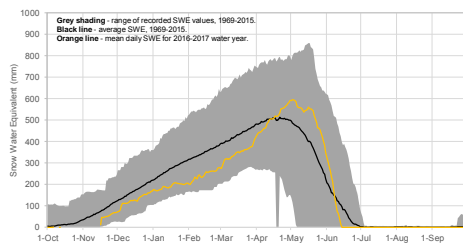
Penticton precipitation: 2016 - 2017



2017 Brenda Mines snowpack



2017 Upper Mission Creek snowpack



Lake Inflow Forecasting Models

- Developed in 1984, revised 1999 and 2011 – PCA Models
- Driven by snowpack, fall/winter valley precip, current rate of lake inflow
- No weather forecasts (other models do, but only at a “prototype” level)
- Snow data – from both automatic and manual stations
- 4 forecast dates (Total inflow volume)
- FWMT Model distributes the forecast inflow and runs outflow scenarios

2017 Okanagan Snow Water Index - % of Normal

January 1	79
February 1	79
March 1	86
April 1	105
May 1	147
May 15	151
June 1	228

Information flow and decision-making process

- RFC develops inflow forecasts (early Feb, March, April, May)
- Manager input forecasts to FWMT (which splits inflow forecast into daily components), and runs outflow scenarios with the FWMT Team
- Manager consults Operations Plan and sets lake outflow based on inflow forecast and input from FWMT Team
- While waiting for the next monthly forecast, Manager may adjust lake outflows based on actual inflows

Inflow forecasts, Operating Plan targets, and actions taken

Period	Forecast Inflow		Operating Plan Target	Action Taken
	(kdam ³)	(% of normal)		
Feb–July	518	101%	341.64 m by end-Feb	Set outflow to achieve 341.64 m by end-Feb
March–July	485	98%	As high as possible	Ignored OP. On March 22, increased outflow to 28.3 m ³ /s
April–July	570	122%	341.44 m by end April	Initially set outflows to meet multiple constraints, then overrode on April 24 and increased outflow to 60 m ³ /s
May–July	554	147%	342.48 m by end-May (full pool)	Edged outflow up to 78 m ³ /s



Forecasts provided in 2017 vs actual

Period	Forecast Inflow		Actual Inflow	
	(kdam ³)	(% of normal)	(kdam ³)	(ratio of actual to forecast)
Feb–July	518	101%	944	1.8
March–July	485	98%	921	1.9
April–July	570	122%	853	1.5
May–July	554	147%	694	1.3



Okanagan Lake – notable elevations

Full pool	342.48 m
200-year elevation	343.05 m
Flood Construction Level (FCL)	343.66 m
1948 peak	343.065 m
1990 peak	342.89 m
1997 peak	342.84 m
2017 peak	343.25 m III



2017 date needed to reach max outflow (60 m³/s) to keep lake below certain elevations

Full pool	342.48 m	February 28
200-year elevation	343.05 m	
Flood Construction Level (FCL)	343.66 m	
1948 peak	343.065 m	April 10
1990 peak	342.89 m	March 23
1997 peak	342.84 m	March 19
2017 peak	343.25 m III	



65 recommendations in 3 categories

- Data and models
- Operational
- Organizational



Strategic recommendation

- Province should increase its commitment to flood preparation, preparedness, response, and recovery
- Province should develop a comprehensive flood risk strategy that considers all 4 of these elements



Recommendations related to Data and Models

- Evaluate adequacy of all the data networks used to provide information to run provincial streamflow forecasting models
- Fill network gaps to enable streamflow forecasts with sufficient accuracy and precision to manage flooding in B.C.
- Improve management of data networks so they can operate on a long-term sustainable basis



Recommendations related to Data and Models

- Upgrade the models used by the provincial River Forecast Centre for forecasting streamflow and flooding
- Develop backup models for use when any of the required model input data is missing
- Increase the frequency at which the models are run
- Investigate the utility of including weather forecasts in the models
- Regularly review and update the models



Recommendations related to Operations

- Revise Operating Plan to explicitly include consideration of uncertainty in streamflow forecasts
- Re-evaluate the 200-year return period flood elevations in all mainstem lakes, and the associated Flood Construction Levels and horizontal setbacks
- Reconsider the delegation of responsibility to local governments for establishing local flood elevations and setback requirements



Recommendations related to Operations

- Reconsider the fragmentation of responsibilities for flood management that currently exists within the provincial government
- Improve the knowledge of specific flooding impacts at specific water levels – this may require improved ground elevation data (eg LIDAR)
- Evaluate capacity of existing infrastructure to pass flows, and consider modifications



Organizational recommendations

- Improve internal and external communication during flooding events
- Increase staffing (e.g. River Forecast Centre) as required to provide the needed level of expertise and capacity
- Improve training and succession planning such that the province is continuously able to meet its water management obligations



Key final messages

- Water Manager (and River Forecast Centre) did a good job with information available
- They could not have predicted the heavy spring rainfall and snow at high elevations
- Climate change is adding pressure on organizations responsible for water management
- Need stronger and long-term Provincial commitment to improve data networks and models, and flood resiliency





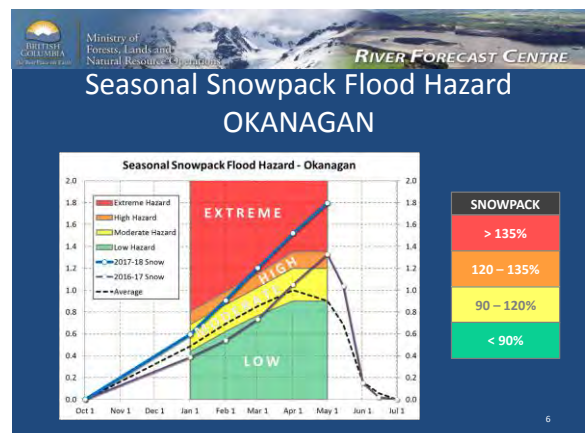
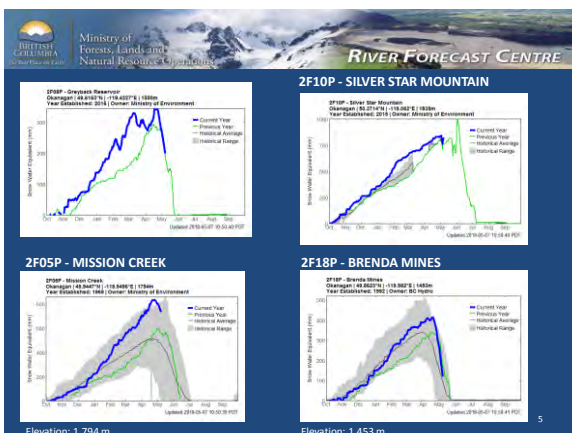
BRITISH COLUMBIA
Ministry of Forests, Lands and Natural Resource Operations

RIVER FORECAST CENTRE

Okanagan Water Supply Webinar - Snowpack Conditions Winter-Spring 2017-18

Dave Campbell – River Forecast Centre
April 18, 2018

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BRITISH COLUMBIA
Ministry of Forests, Lands and Natural Resource Operations

RIVER FORECAST CENTRE

Seasonal Volume Forecasts

	Apr - Jun Runoff				Apr - Jul Runoff			
	Forecast (kdam ³)	Normal (1961-2016) (kdam ³)	% of Normal	Std. Error (kdam ³)	Forecast (kdam ³)	Normal (1961-2016) (kdam ³)	% of Normal	Std. Error (kdam ³)
Okanagan and Kalamalka-Wood Lake	691	349	196%	81	779	376	207%	103
Okanagan Lake Inflow	41	19	214%	6	47	20	229%	11

- Significant increase in volume forecast since last month (~25%)
- Forecast volume similar to what the observed 2017 inflow was

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Ministry of Forests, Lands and Natural Resource Operations

RIVER FORECAST CENTRE

gov.bc.ca/riverforecast

Current Water Levels and Flood Forecast Modeling

- Current River Discharge & Water Level Information
- Access Forecast System data
- Map of Current River Forecast for All River (RSC, Database) etc.
- Water Level of Current (Site) from Forecasting Edge
- Forecasted Forecasts

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BRITISH COLUMBIA
Ministry of Forests, Lands and Natural Resource Operations

RIVER FORECAST CENTRE

MISSION CREEK NEAR EAST KELLOWNA (DRINKWATER) (DRINKWATER) (0101M1L1) - DAILY

- Use caution if looking at CLEVER model results
 - High degree of uncertainty 5 days or more – should only consider trends not forecasted levels
 - Work towards ~10% error for less than 5 days
 - Model highly sensitive to input snow pack (averaged over basin)

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Ministry of Forests, Lands and Natural Resource Operations

RIVER FORECAST CENTRE

Summary

- Extremely high snow pack
 - Increased flood risk and high run-off
- Mid elevation snow pack has been melting rapidly
 - ~7-10 days left of snow <1500m?
 - Abundant upper elevation snowpack (5-10% melted so far)
- In the critical window for many rivers, with significant weather patterns over the next wee (hot then wet then hot again)

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MEMORANDUM

Okanagan Basin Water Board
Regular meeting
June 5, 2018
Agenda No: 8.3

File No. 0550.04

To: OBWB Directors
From: James Littlely
Date: May 28, 2018
Subject: **Operations and Grants Manager Report**

Canadian Environmental Grantmakers' Network

In May I attended the 2018 annual conference of the Canadian Environmental Grantmakers' Network (CEGN). CEGN is a national network of philanthropic foundations and other organizations that support efforts to transition toward a more sustainable world. Member organizations work with non-government organizations, community groups and other charitable organizations to develop and deliver programs that can make our communities healthier and more resilient, while protecting vital ecosystem services and the natural world.

Through our participation in CEGN, OBWB has been able to raise awareness among funders about Okanagan water issues. It has also helped us develop better systems for our grant programs, collaborate with other funders, including bringing increased funding into the Okanagan, and significantly increased our understanding of broader projects and policies that affect the Okanagan, but happen on a larger scale. For example, at the 2015 conference, CEGN hosted an information session on Canada Revenue Agency changes to the rules for charities and non-profits. This information allowed OBWB to pursue its status as a body performing a function of government in Canada, which makes us eligible for increased funding opportunities.

This year's conference included sessions on cross-Canada water monitoring initiatives, First Nations Law, Nurturing Sustainable Communities, and the imperative to promote economic development and conservation together in rural and indigenous Canada.

During the annual conference, I was also pleased to be selected to serve for a two year term on CEGN's board of directors. For more information on CEGN, please visit: cegn.org

Milfoil Control Program Update

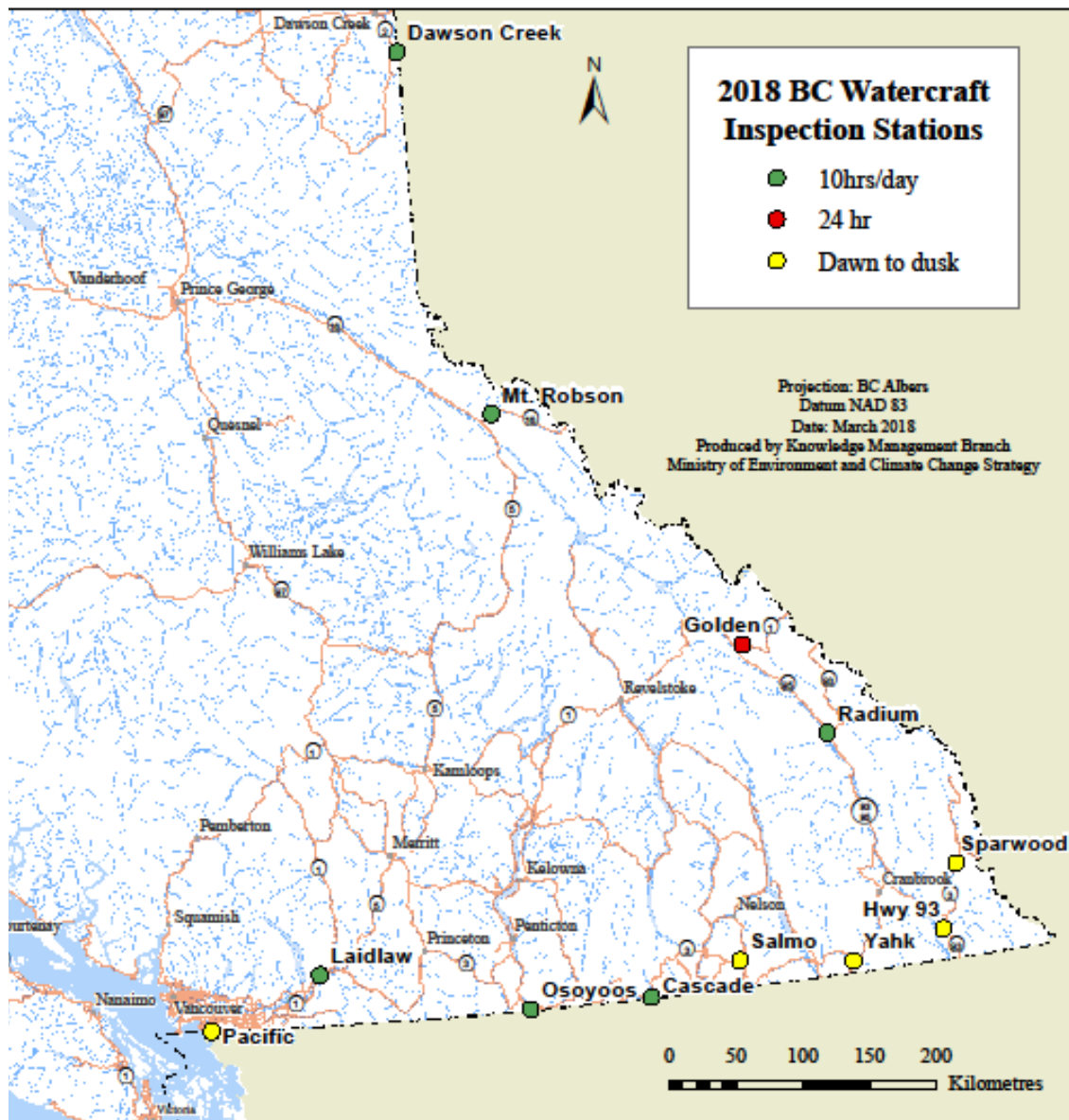
Our milfoil rototilling is complete for the season, as flood levels in Osoyoos Lake meant we pulled the last machine out in early May. We are now conducting seasonal maintenance, and getting ready for a busy summer harvesting season. I am continuing to work on submitting our application for the next five-year environmental permit period, as our current permit expires at the end of August. We are also expecting delivery of the new rototilling machine in early June, as the first on-water test in May identified some necessary changes.

Invasive Mussel Update

On May 14th, the Province of B.C. announced that “for the first time... there will be dedicated, significant annual funding for B.C.’s Invasive Mussel Defence Program.” With a dedicated \$1 million annual budget, and \$3.325 million total being spent this year with funding from BC Hydro, Columbia Basin Trust, Columbia Power and Fortis BC, the 2018 inspection and prevention program includes:

- 64 Auxiliary Conservation Officers
- 12 inspection stations (2 more than 2017)
- Water sampling on over 100 lakes
- 1 multi-purpose dog (and a second in training for 2019)

The map below shows the locations of the 2018 inspection stations.



MEMORANDUM

Okanagan Basin Water Board
Regular meeting
June 5, 2018
Agenda No: 8.4

File No. 0550.04

To: OBWB Directors
From: Corinne Jackson
Date: May 30, 2018
Subject: **Communications Director Report**

Make Water Work (MWW) Launch

We held the launch of MWW – our valley-wide outdoor water conservation campaign – on May 17 beside the UnH2O xeriscape demonstration garden. Mayors and acting mayors representing Armstrong, Vernon, Lake Country, Kelowna, West Kelowna, Peachland, Summerland and Osoyoos were in attendance.

Just like last year, we were once again faced with launching a conservation campaign as communities were also dealing with flooding. The decision to move ahead with the launch was based on several factors, including: despite some Okanagan residents being affected by flooding, many more were already out working in their gardens and turning on the irrigation; We were hearing from local government and utility partners that conservation was needed because water treatment plants were being overburdened; We wanted to launch ahead of the long-weekend, when people would be in their yards and/or heading into garden centres, and garden centre partners were telling us that they were already very busy with people buying plant material; And of course, we were already hearing that we are headed for a repeat of last year – flooding, followed by drought and an extreme fire season.

As part of the launch, we chose to profile the *Make Water Work Plant Collection* and have our partner, the Okanagan Xeriscape Association, discuss the collection – made up of WaterWise perennials, grasses, shrubs and trees and show how to properly plant the beauties.

Hiilite was on hand to videotape the event which will be turned into a promo piece for Make Water Work, demonstrating the why and how to conserve, and encouraging others to pledge to conserve and invite friends and family to join them.

A few photos from the event are below. More can be found at:
www.facebook.com/OkWaterWise/posts/1923202381043943.



Photos: Mayors pledge to Make Water Work, then get a lesson in WaterWise gardening using the Make Water Work Plant Collection. Bottom (l): OXA's Gwen Steele provides gardening instruction, (r) ProSource, one of our Make Water Work contest partners, was on hand for the launch to promote WaterWise irrigation tools.

Don't Move A Mussel (DMM) 2018

The Don't Move A Mussel campaign is underway with radio ads running on Okanagan Bell media stations and newly-designed billboards and buses ads placed throughout the valley. Additional items are in development.



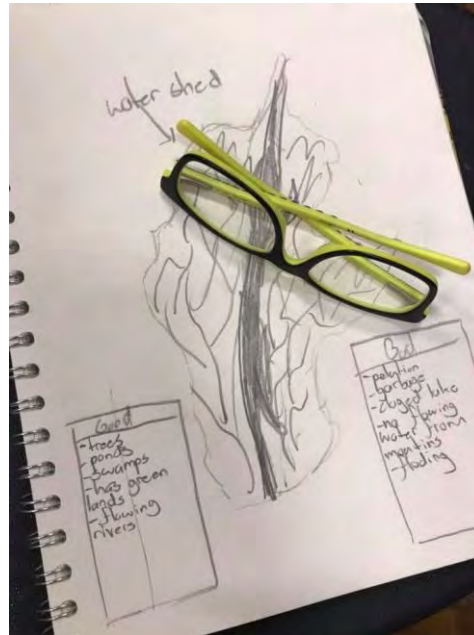
I have talked with B.C. provincial inspection staff about updates to our DMM website. We have had some calls from residents who are bringing boats from mussel-infested areas, wanting to make sure they are mussel-free. We will be updating the website to provide instruction on what to do, as well as updating the inspection station map to include the changed locations and hours, and the two additional stations for 2018.

I am also working with the province and the Okanagan and Similkameen Invasive Species Society (OASISS) to coordinate outreach efforts to assist each other where necessary, but also make sure to spread the message as effectively as possible. Although we have been coordinating with OASISS from the beginning of the DMM campaign in 2013, the province has just recently started to do some outreach beyond the inspection stations.

Other communication initiatives

Work is continuing on the OBWB-Canadian Water Resource Association joint Environmental Flow Needs Conference, set for October 17-18, 2018 in Kelowna. The communications committee is continuing to build out the event’s website and other communication tools, and starting to promote the conference and invite poster submissions.

This month, Ms. Whalen has provided Okanagan WaterWise classroom presentations to Grades 2 and 5/6 classes and has had great feedback. She has also attended a number of events, promoting the Make Water Work and Don’t Move A Mussel messages. A few photos are included below.



Top left: With Grade 5/6 class at Ecole Glenmore Elementary. Top right: student’s illustration of a watershed and what makes for a healthy and unhealthy watershed. Bottom left: Grade 2 students taking the Okanagan WaterWise quiz!



Top: At the Grand Opening of Kelowna's Paddle Trail.
 Left: At the 90th birthday celebration of the Summerland Trout Hatchery with OASISS partner James.
 Bottom: At the Vernon Farmer's Market Green Thumb Festival with MWW outreach partner, RDNO's Hanna.



Summary of Recent Media

- April 26 "False alarm for invasive mussels found on boat at Osoyoos border" *Kelowna Capital News, Salmon Arm Observer*
- May 7 "[Okanagan domestic use water well sign-up frustration mounts.](#)" Lake Country Calendar, Kelowna Capital News, Salmon Arm Observer
- May 8 "B.C. domestic-use water well signup frustration mounts," GroundwaterCanada.com
- May 9 "OXA plant sale a boost for water-wise gardeners," *Kelowna Capital News*
- May 11 "BC 2017 disaster report: Extreme weather here to stay," *Penticton Western News*
- May 15 "[Rising lake shuts down spring milfoil control early.](#)" *Osoyoos Times*
- May 16 "Editorial: Conservation message may not sink in," *Kelowna Daily Courier*
- May 17 "Pledging to Make Water Work," *Kelowna Capital News, Penticton Western News, Summerland Review*
- May 18 "Okanagan Communities Reaffirm Water Conservation Commitment," *Water Canada*
- May 18 "Watersports enthusiasts had lots of craft to try," *Kelowna Daily Courier*
- May 20 "[Mayors get WaterWise.](#)" *Castanet*
- May 23 "Editorial: Incentive to be water-wise and fire smart," *Kelowna Capital News*

Recent Presentations

- April 30 "Being Okanagan WaterWise," to Gr. 5/6 at École Glenmore Elementary – Jocelyn Whalen
- May 10 "Being Okanagan WaterWise," to Gr. 2 at Anne McClymont Elementary – Jocelyn Whalen
- May 18 "Okanagan Basin Water Board & Okanagan Nation Alliance Partnerships," to Enowkin Centre group – Anna Warwick Sears
- May 28 "Okanagan 2018 LiDAR acquisition," to Interior GIS user group – Anna Warwick Sears
- May 29 "The Okanagan Basin Water Board: A social-ecological water governance system in action," to Canadian Water Resource Association (CWRA) national conference – Nelson Jatel
- May 29 "Okanagan EFN Project & Flood Risk Assessment - session chair," to CWRA – Nelson Jatel
- May 29 "Invasive Mussels and Sustainability," to CWRA national conference – James Littlely
- May 29 "Creating adaptive plans and policies in the Okanagan Valley," to CWRA national conference – Kellie Garcia

Upcoming Presentations

- May 30 "Planning, Policy & Governance – session chair," to CWRA – Nelson Jatel
- May 30 "Being Okanagan WaterWise," to Gr. 2 at École Belgo Elementary – Jocelyn Whalen
- June 7 "OBWB Water Management Program Review," to RDOS Board – Anna Warwick Sears
- June 9 "A River Film presentation and Q & A," to Vernon Yacht Club community event – Anna Warwick Sears
- June 20 "OBWB Water Management Program Review," to RDNO Board – Anna Warwick Sears

MEMORANDUM

Okanagan Basin Water Board
Regular meeting
June 5, 2018
Agenda No: 8.5

File No. 0550.04

To: OBWB Directors
From: Kellie Garcia
Date: May 28, 2018
Subject: Policy and Planning Specialist Report

Sustainable Water Strategy

My main task this month has been to continue updating the 2008 Sustainable Water Strategy to include new research and information, address the priorities and challenges of today, and reflect changes to water legislation and regulations. Over the next few months, my board reports will provide more in-depth information on the strategy so you can become familiar with its format and content before receiving the final draft.

As a reminder, the first strategy was released by the Water Stewardship Council in 2008, after more than two years of planning, discussion, consultation, and writing. It contains 45 recommended actions designed to protect water at its source, share water in times of shortages, manage water demand, and identify the best approaches to improve valley-wide governance. The 2008 strategy has guided the priorities and projects of Council and OBWB staff, and has been used to inspire and inform new studies, identify emerging issues, and develop scientific insights into potential solutions. The modernized strategy will take its place as the Council's go-to document on water issues and priorities for the Okanagan valley.

The strategy chapters are organized under the themes introduction/background, water quality, water quantity, and delivery/implementation. This month, I've focused my report on the water quality chapter. The chapter includes information and actions related to **source to tap water protection, ecosystem conservation and restoration, aquatic invasive species, and land use planning.**

While water treatment is touched on as part of the multi-barrier approach, source protection is emphasized in the chapter – including a discussion of Interior Health requirements, the status of planning in the Okanagan, current challenges with managing multi-use watersheds, and opportunities for improvement and collaboration. The advantages of using green infrastructure such as wetlands, foreshores, and riparian areas to safeguard water quality and quantity and attenuate flooding is underscored. Invasive mussels are front and centre in the chapter, with a call to diligently continue the OBWB advocacy campaign. Local government land use policy tools that encourage “water-centric” community design and development practices and minimize risks to communities from floods, droughts and other natural hazards are highlighted. An overview of how to define and scope municipal natural assets is provided, using the Town of Gibsons as a case study.

BC Water and Wastewater Association Conference

On May 14 I attended the BCWWA conference in Penticton. The Auditor General for Local Government (AGLG) shared their learnings from two performance audits, at the Regional District of Okanagan Similkameen and City of Kelowna, on “Local Government’s Role in Ensuring Clean Drinking Water.” Their presentation focused on good practices and areas for improvement and included a summary of their recommendations for the local governments they audited. The AGLG is currently working on a new booklet that highlights best practices in the management of drinking water by local governments in B.C.

In the afternoon, I attended presentations focused on “adverse events.” The OBWB’s drought and flood planning initiatives and constructed wetland guidebook were highlighted by presenters from Associated Environmental Consultants. There was also a presentation on Vancouver’s RainCity Strategy, which is a green infrastructure based rainwater management initiative. A lawyer gave a presentation on the legal risks and responsibilities of local governments related to stormwater management. Lastly, a consultant from Urban Systems summarized key climate trends and variables pertinent to the water industry, identified useful information sources, introduced vulnerability assessment, and provided adaptation examples.

Canadian Water Resources Association Conference

I am presenting at the CWRA conference in Victoria this week and will provide a verbal update at the June board meeting. My presentation is focused on the need for adaptive planning and policies in the Okanagan valley.

May 29, 2018

Michael Cloet, Inspector of Mines, South Central Region
Ministry of Energy, Mines and Petroleum Resources
Via Email: Mike.Cloet@gov.bc.ca

Okanagan Basin Water Board
Regular meeting
June 5, 2018
Agenda No. 9.1

Dear Mr. Michael Cloet,

RE: Opposition to Referral – Mineral Exploration #1621640

The District of Summerland would like to thank the Ministry of Energy, Mines and Petroleum Products for recognizing that an oversight occurred in failing to notify the District of approved plans to work in and around our community watersheds; and for subsequently providing an opportunity to comment on Referral – Mineral Exploration #1621640.

The District of Summerland is strongly opposed to the referral for mineral exploration for the Amarillo property on mineral claims 102045, 1047064, 1047065, 1047439 held by Troubadour Resources Inc. taking place in and around the Summerland Community Watershed and Camp Creek area.

The District of Summerland engaged the services of an industry expert on local watersheds, Dobson Engineering Ltd., to review the referral for mineral exploration #1621640. Dobson Engineering Ltd. outlined the concerns and potential impacts of the proposed work to the watershed and to drinking water quality within the Summerland Community Watershed.

Summerland Mayor and Council, at the May 14, 2018 council meeting, unanimously passed a resolution opposing the Mining Referral Notice of Work from Amarillo – Troubadour Resources Ltd.

We respectfully request that all work for this project cease immediately, based on the information provided by our Engineering consultant, Dobson Engineering Ltd.

Please inform the District of Summerland, through Devon van der Meulen, dvandermeulen@summerland.ca, of any work and/or decisions on this project.

Sincerely,



Kris Johnson, P. Eng.
Director of Works and Utilities

cc: Council
Okanagan Basin Water Board
CAO, Linda Tynan
Manager of Utilities, Devon van der Meulen



The Corporation of the District of Peachland

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Okanagan Basin Water Board
Regular meeting
June 5, 2018
Agenda No. 9.2

April 4, 2018

Honourable Minister Michelle Mungall
Ministry of Energy, Mines and Petroleum Resources
P.O. Box 9380 Stn. Prov. Gov't
Victoria, B.C. V8W 9M6

Dear Minister Mungall,

Re: Mining Referral Notice of Work – Amarillo-Troubadour Resources Inc. –Tracking number 1002066166

The District of Peachland Council is strongly opposed to the the Notice of Work for the Amarillo property on mineral claims 102045, 1047064, 1047065, 1047438 and 1047439 held by Troubadour Resources Inc. Contrary to the statement in the application, portions of the claims are situated within the Peachland Creek Community Watershed and portions are situated within the Trout Creek Community Watershed that is licensed to the District of Summerland. In addition, Council is concerned that this project was not referred to the District of Peachland earlier in the process.

We respectfully request that this project cease immediately, as the work resulting from this proposed exploration will present a hazard to drinking water quality and the watershed as a whole.

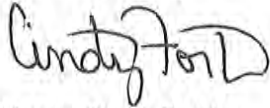
Our Engineering Consultant, Don Dobson, PEng., who has extensive experience in Peachland's watersheds has reviewed the above Notice of Work. His comments are provided to you regarding concerns related to the proposed work and potential impacts within Peachland's watershed.

1. Claim 1047065 – Peach 3 surrounds the Glen Lake Reservoir and 1047064 – Peach 2 and 1047438 – Headwaters 1 have lands that drain towards Glen Lake and Greta Creek that is a tributary to Peachland Creek.
2. Drilling – Drill hole A15 is proposed on the slope east of the Glen Lake Reservoir that drains into the reservoir. A8 appears to be located close to a tributary to Greta Creek and A7 and A9 are proposed on a north-facing slope that drains towards the same tributary. DH6 is situated near the beaver pond that flows into the reservoir. Drill holes A1, 2, 3, 4,5,10,11,12,13 and 16 are also proposed in or near a wetland complex, that is part of the Greta Creek sub-basin and drain towards the reservoir.
3. Trenches – Trenches at A1, A2-3, and A4-5 are proposed on a westerly facing slope near the wetland complex that drains towards the reservoir.

4. Drill water supply – The proposed drill water supply is at the beaver pond that is connected to the reservoir.
5. Access – it is proposed to use existing access that may include inactive non-status forest roads.

Please notify the District of Peachland of any further actions or decisions regarding this project. If you have any questions or wish to discuss further please contact me.

Yours truly,

A handwritten signature in black ink that reads "Cindy Fortin". The signature is written in a cursive, flowing style.

Mayor Cindy Fortin

- c. Council
The District of Summerland
Okanagan Basin Water Board
Director of Operations, Joe Mitchell