

MEMORANDUM

File No.0110.40

To: Mayor and Council, City of Kelowna
From: Anna Warwick Sears, OBWB Executive Director
Date: September 29, 2008
Subject: **Water Management Program Review**

Background: In 2005, the three Okanagan regional districts permitted the OBWB to undertake a Water Management Program – with a goal to improve the OBWB’s ability to assist local governments and other water purveyors to advance water management in the Okanagan valley by defining and promoting solutions to water management issues of basin-wide significance – returning to OBWB’s 1970 mandate. The Program is unique in British Columbia and Canada, and has enabled the OBWB to undertake initiatives and secure external funding that would not be possible in any other jurisdiction.

The OBWB’s Water Management Program is due for renewal on April 1st, 2009. The attached review describes the Program’s activities and accomplishments over the past two and a half years, and evaluates its effectiveness. The Program has brought extensive benefits and value to Okanagan taxpayers over this time, and the OBWB has recommended that the program be maintained in its current form.

The OBWB has requested the three Okanagan regional districts to extend their 2005 resolutions for an additional three years. While the RDCO has made a resolution of support for this program, the OBWB seeks the formal endorsement of the City of Kelowna.

Highlights from the Water Management Program include:

- **Building Partnerships** – The OBWB has built partnerships between many different government agencies, educational institutions and water stakeholders to bridge the interests of Okanagan jurisdictions, leverage funding and create economies of scale.
- **Leading Water Science Initiatives** – The OBWB is a lead agency of the Water Supply & Demand Project assessing future water availability in the Basin, as well as projects to monitor stream flows and pharmaceutical pollution in wastewater. The OBWB has leveraged more than \$2,150,000 in external funds for these projects.
- **Creating a Sustainable Water Strategy** – The Strategy was developed by the Water Stewardship Council at the request of the OBWB – detailing top priority actions for Okanagan communities to prepare for population growth and climate change.
- **Improving Water Conservation and Quality** - \$648,100 in grants have been awarded to 31 projects in RDCO – ranging from groundwater protection planning and Kelowna aquifer analysis to sensitive habitat and foreshore mapping, a Water Use Plan for Mission Creek and supporting implementation of Kelowna’s Landscape and Irrigation Standards.

- **Informing Renewal of the Osoyoos Lake Operating Orders** – The International Joint Commission will be using water science data developed by the OBWB to inform the 2013 Osoyoos Lake operating orders renewal.
- **Protecting Groundwater** – The OBWB is sponsoring research to better understand groundwater problems in the Basin; developing a “Groundwater Bylaws Toolkit” to support local government planners; and working with the Province to strengthen protection for groundwater in the Okanagan.
- **Communicating and Educating about Okanagan Water** – The OBWB has brought together water conservation professionals from around the valley to share best practices; and established a water communication centre with outreach to professionals and stakeholders throughout the valley.

The Water Management Program has provided capacity – through staff and base funding – to meet the mandate established 39 years ago, and initiate a truly regional approach to water planning that bridges the interests of all Okanagan jurisdictions. By working with many partners the Program’s impacts have been far greater than would be possible by any individual organization or agency with significant economies of scale. By focusing on basin-scale issues and opportunities the Program complements rather than duplicates work of individual jurisdictions. Community leaders and the public have called for a basin-approach to water management, and the OBWB’s Water Management Program has taken action.

If the Program is not renewed, the OBWB would return to its focus on milfoil control and sewerage assistance grants, and there would no longer be a single agency working to coordinate Okanagan water management. Individual communities would undertake independent water planning, and make independent arrangements for funding and approvals with the Province.

The OBWB respectfully requests that the City of Kelowna pass the following resolution at your earliest convenience:

“That the City of Kelowna endorses the Regional District of Central Okanagan’s September 15th, 2008 resolution #215/08 for renewal of the OBWB Water Management Program”

The attached review contains the original proposal to enhance the OBWB as Appendix I, which also includes the text of the RDCO’s 2005 resolution approving the OBWB’s Water Management Program. The RDCO’s September 15, 2008 resolution is as follows:

#215/08 NEIS/EDGSON

THAT the Okanagan Basin Water Board update of September 15, 2008 be received;

AND FURTHER THAT the Regional District of Central Okanagan endorses in principle, funding subject to the annual budget approval process, the renewal of the 2005 resolution No. 395/05 permitting the OBWB Water Management Program to continue for an additional three years, with a requirement for an annual review submitted in September of each year and contingent on mutual agreement by the Regional Districts of North Okanagan and Okanagan-Similkameen.

CARRIED



WATER MANAGEMENT PROGRAM REVIEW 2006-2009



"The purpose of the Okanagan Basin Water Board is to provide leadership to protect and enhance quality of life in the Okanagan Basin through sustainable water resource management."

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I. Executive Summary

The OBWB's Water Management Program is due for renewal on April 1st, 2009. This review describes the Program's activities and accomplishments over the past two and a half years, and evaluates its effectiveness and efficiency. The Program has brought extensive benefits and value to Okanagan taxpayers over this time, and it is strongly recommended that the program be maintained in its current form for an additional three years with a new requirement for an Annual Report.

The OBWB was founded in 1970 to lead and coordinate basin-scale water management in the Okanagan. In 2006, this mandate was fully adopted under the Water Management Program. The OBWB's most important contributions in the next decade will be to help local governments prepare for population growth, development and climate change impacts on water supplies. Since initiating the Program, the OBWB has assessed the status of water resources, identified top priorities for water management; formed partnerships with all levels of government and local water stakeholders; and worked to build science-based information for decision makers.

While assessments are still underway, there is a clear need to integrate Okanagan water policy and planning on a basin-scale, and to shift toward implementing policies and agreements that protect water supplies. This review includes recommendations for top priority actions over the next four years – including groundwater regulations, basin-wide drought response agreements, and a regional water conservation strategy. It will take ongoing investments to move these actions forward, but the cost of doing nothing is potentially very great.

There has been much recent debate about Okanagan water governance, and the appropriate role of the OBWB - ranging from “milfoil control only” to “take over water licensing.” Any major new changes to the structure of the OBWB and its water management function should be done in the context of the Ministry of Community Development's ongoing governance review process. In the meantime, the water management activities of the past two years have demonstrated that it is essential to have an organization that bridges the water interests of all jurisdictions, reducing fragmentation and bringing together key information and decision-making tools. Since 2006, the Water Management Program has accomplished the following:

Taking a Stand for Okanagan Water: The OBWB has actively promoted Okanagan water interests to provincial and federal staff and politicians. At a policy level, the OBWB has been a leader in efforts to ensure public lands surrounding drinking water reservoirs are not sold; promoted resolution between Interior Health and water suppliers for Turbidity Notification issues; and pursued Provincial support for groundwater management in the Basin. The OBWB maintains an active dialogue with the International Joint Commission and Osoyoos Lake Board of Control to keep Basin interests on the table through the renewal of international agreements in 2013. The OBWB also represents Okanagan interests in water science studies – ensuring that local needs are met. To educate stakeholders and the public, OBWB staff give lectures, provide media releases, and make information available on websites about water initiatives, water conservation practices, and water quality concerns.

Action on the Ground through Grants to Communities: Over three years, the OBWB distributed \$1,100,000 of Water Conservation and Quality Improvement Grants to 59 projects by 11 local

governments, 10 improvement districts and 6 NGOs for projects that have protected and improved water quality, installed meters and stream flow measurement systems, restored streams and mapped lake foreshore. These projects and many others have built collaboration networks and helped establish best practices for the valley. More than 35 other agencies, organizations or businesses contributed funding or in-kind support to these projects.

Water Science for Decision Making: The OBWB has been the local lead agency for an historic effort to develop a water budget for the Okanagan Basin – establishing current and future water needs and how they will be affected by climate change and population growth. This will have a wide range of uses from drought planning to license allocation. The OBWB also plays a lead role in the Groundwater Assessment of the Okanagan Basin, in reviewing the hydrometric (stream-flow) monitoring network, and is leading a project to test for endocrine disrupters in wastewater discharges to Okanagan Lake. The OBWB is completing a Groundwater Bylaws toolkit to help local governments reduce water conflicts. Together, these projects have involved partnerships with 22 agencies and organizations, and have leveraged over \$2,150,000 in external grants.

Priorities for Adapting to Change: The Okanagan Water Stewardship Council, with representatives from 27 agencies and organizations, has drafted a Sustainable Water Strategy for the Okanagan Basin. This was created through a 2-year, multi-stakeholder process that lays out the key water management gaps and priorities to prepare for population growth, development and climate change. The Strategy highlights a number of key gaps, including the need for groundwater protection and Basin-wide drought response plans.

The Water Management Program has provided capacity – through staff and base funding – to meet the mandate established 39 years ago, and initiate a truly regional approach to water planning that bridges the interests of all Okanagan jurisdictions. By working with many partners, the impacts the Program are far greater than would be possible by any individual organization or agency with significant economies of scale. By focusing on basin-scale issues and opportunities the Program complements rather than duplicates work of individual jurisdictions. Community leaders and the public have called for a basin-approach to water management, and the OBWB's Water Management Program has taken action.

II. Summary of Recommendations

A. Recommendations for the OBWB for the renewal and strategic direction of the OBWB's Water Management Program.

1. Recommendation for Operations. *Renew the OBWB's Water Management Program for an additional three-year period with the ability to engage in multi-year planning within the limits of legislation and subject to the following:*

- *The OBWB may requisition up to a ceiling of two-cents (\$0.02) per \$1000 assessment to support the activities of the Water Management Program.*
- *The OBWB will issue an Annual Report each September commencing in 2009 that will detail program activities and include audited financial statements.*
- *The OBWB's Water Management Program will undergo a comprehensive review after three years as a condition of renewal.*

2. Recommendation for Water Conservation and Quality Improvement Grants Program. Renew the Water Conservation and Quality Improvement Grant program under its existing terms of reference at a level of \$300,000/year or greater, subject to the review conditions specified for the Water Management Program as a whole.

3. Recommendation for Director Positions. Maintain OBWB Director positions with non-regional district appointees permitted to vote on all but financial matters; and continue to develop mechanisms for involving ONA Director-representatives in OBWB projects and programs.

4. Recommendation for Water Stewardship Council. Maintain the Okanagan Water Stewardship Council under its existing terms of reference and funding level. Program renewal will strengthen Council member relationships, sharing of best practices and maintain a forum to explore emerging water management issues. The OBWB should review Council membership structure to increase representation from large municipalities.

5. Recommendation for Staffing. Maintain current OBWB staff positions, extending contract terms to 2012 on approval of mandate extension.

6. Recommendation for Communication. Make outreach to regional and municipal governments a central priority, developing specific communication tools and strategies such as the monthly Board Report and an Annual Report of activities presented in September of every year.

B. Recommendation for Regional Board resolutions: As the recommendations to the OBWB above continue the existing program with few changes, it is recommended that the Regional Boards renew their 2005 resolutions endorsing the OBWB Water Management Program:

“Whereas water underpins the economy and quality of life; and

Whereas water management in the Okanagan requires consideration of climate change and population growth impacts to the Basin as a whole; and

Whereas Okanagan water supplies are interconnected and interdependent; and

Whereas sustainable water management must be based on a scientific assessment of Okanagan water supply and demand; and

Whereas collaborative governance is essential to reduce conflict and maintain equity; and

Whereas senior governments want a strong local partner to action projects; and

Whereas the Okanagan Basin Water Board’s Water Management Program has made significant progress supporting basin-wide water sustainability; therefore

Be it resolved that the Regional Board endorses renewal of the 2005 Resolution No. [..] and permits the OBWB Water Management Program to continue for an additional 3 years, with a requirement for an Annual Review submitted in September of each year”

III. Background

The Proposal to Enhance the Effectiveness of the OBWB: In 2004 and 2005, in response to widespread concerns about the sustainability of Okanagan water resources, an effort was initiated to return the OBWB to its original 1970 mandate: to take a leadership role in defining and promoting solutions to water management issues of basin-wide significance, assisting local governments and water purveyors in the Okanagan valley.

Initial recommendations were made by a committee instituted at the 2004 workshop: “Running on Empty – Water and our Common Future.” The committee included Environment Canada; Water, Land and Air Protection; Land and Water BC; Community Futures; the Water Supply Association of BC; UBC-O; and the Okanagan Partnership. These recommendations were followed by an Okanagan Partnership white paper and a letter from the Water Supply Association of BC. In consultation with these groups, the OBWB drafted a *Proposal to Enhance the Effectiveness of the OBWB* (Appendix I). In 2005, the regional districts approved the following operational changes, forming the basis of the OBWB’s Water Management Program, and permitting the OBWB to:

1. Approve its own annual capital and operating budgets for a three-year period [FY 2007 - FY 2009] within the limits of its legislation;
2. Administer a Water Conservation and Quality Improvement grant program;
3. Add 3 members – a representative from the Okanagan Nation Alliance; from the Water Supply Association of BC; and the Chair of the Okanagan Water Stewardship Council. These representatives may vote on all but financial decisions;
4. Form an Okanagan Water Stewardship Council to act in an advisory role to the Water Board; and
5. Hire additional staff as required to administer the water management program and as administrative support.

The proposal requested a 5-year trial period – seen as the time needed to demonstrate the value of the proposed enhancements – followed by a review of the Program. The term was shortened to 3 years at the request of the Regional District of North Okanagan.

Legal Authority: The OBWB was established under the Municipalities Enabling and Validating Act through Supplementary Letters Patent (SLPs) to the three Okanagan regional districts in 1969 (RDOS and RDCO) and 1970 (RDNO). The following sections review the legal authority of the OBWB’s Water Management Program. *No additional changes to the SLPs are needed to continue the Water Management Program in its current form.*

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

SLP Article 3. *The objects and purpose of the Water Board shall be:*

- (i) *to organize or receive proposals from private interests, local organizations or agencies and all levels of governments concerning water resources utilization and management in the best interests of man;*

- (ii) to define problems and determine such factors as priorities, economic feasibility, responsibility, necessary support legislation and required action;*
- (iii) to provide communication and coordination between various levels of government and government agencies involved with water resources utilization and management;*
- (iv) to present proposals and recommendations to appropriate agencies, being municipalities or governments, according to jurisdiction and responsibility;*
- (v) to participate financially or otherwise, in such surveys, investigations or projects on behalf of municipalities, electoral areas or regional districts as may be authorized by the participating regional districts.*

Water Management Assessments. The current Water Management Program funding agreement allows the OBWB to assess up to \$0.02/\$1000 assessment to cover program costs. Under its SLPs, the OBWB can never requisition more than \$0.036/\$1000 for operating costs (i.e., water management and milfoil combined) unless agreed to by the member municipalities. In 2008, the milfoil requisition was \$0.011/\$1000. The sewage facilities grants program is allowed a separate levy of up \$0.21/\$1000, but requisitioned only \$0.043/\$1000 in 2008.

SLP Article 6. ... *the annual cost of the Water Board shall not exceed the product of \$0.036 per \$1,000 on the assessed values within the Basin unless assented to by the owner-electors of the participating member municipalities thereof.*

SLP Article 13. ... *all participating regional districts except in respect of those municipalities, electoral areas or parts thereof lying outside the Okanagan Basin shall contribute to the cost of constructing or up-grading sewage facilities ... but the total contribution required from all participating member municipalities in all participating Regional Districts shall not exceed the amount raised by a levy of \$0.21 per \$1,000 on the net taxable value of land and improvements...*

Addition of New OBWB Directors. The expansion of the OBWB membership required an amendment to the SLPs, finalized by the Ministry of Community Services in 2006.

SLP Article 7 (b). *In addition to the three Directors from each of the three participating Regional Districts there shall be three Directors on the Water Board as follows:*

- 1. One Director who shall be a representative from the Okanagan Nation Alliance;*
- 2. One Director who shall be a representative of the Okanagan Water Stewardship Council; and*
- 3. One Director who shall be a representative of the Water Supply Association of BC.*

Establishment of Okanagan Water Stewardship Council. The establishment of the Okanagan Water Stewardship Council reflected a long-standing part of the OBWB mandate, given by *Article 14* of the SLPs that directs the OBWB to establish a Liaison Committee.

SLP Article 14. The Water Board shall establish a Liaison Committee consisting of persons appointed by such municipalities, regional districts, improvement districts and Government agencies as the Water Board may determine, and the Liaison Committee shall advise on such matters as may from time to time be referred to it by the Water Board.

IV. Purpose and Scope of Review

The Water Management Program was established under an agreement that it would be reviewed by the regional districts at the end of its 3-year trial period. The review gives the regional districts the ability to assess whether the goals were achieved, and the continued value of extending the program.

The overall goal of the *Proposal to Enhance the Effectiveness of the OBWB* was to improve the OBWB's ability to assist local governments and other water purveyors in improving water management in the Okanagan valley by defining and promoting solutions to water management issues of basin-wide significance – a renewal of OBWB's original mandate.

This review evaluates the effectiveness and efficiency of key aspects of the Water Management Program, with emphasis on the components, such as the grants program, that comprised the Program as it was initially approved. The review assesses the Program's vision and strategic direction, costs and benefits, areas of core success and Program weaknesses.

This review assumes that the OBWB will continue in its current form and does not address larger questions of water governance in the Okanagan. In 2007, the Ministry of Community Services initiated a governance review to evaluate how to best address matters requiring valley-wide management. Water was a top issue of concern, and there was broad agreement on the need for a Basin approach. The OBWB is one of several possible models for water governance (see Appendix VIII for an outline of its structure and voting procedures).

The governance review is ongoing, and the Ministry has committed to the study the costs and benefits of different governance models, and to more extensive consultation. Any new substantive changes to the structure of OBWB and its water management function should occur within the context of the governance review process. Meanwhile, the OBWB's water management program is a mechanism for moving forward with essential basin-wide projects as the governance review reaches resolution.

V. Water Management Vision

The purpose of the OBWB is to “provide leadership to protect and enhance quality of life in the Okanagan Basin through sustainable water resource management.” To be sustainable, water management must meet the needs of residents and agriculture, supporting a vibrant culture and healthy economy while protecting wildlife and natural areas. This can only be achieved through collaborative action between all levels of government, First Nations, water utilities, and the public. At a workshop in October 2007, OBWB Directors put forward the following vision for water in the Okanagan.

Vision for Sustainable Water Quantity:

- Water science is used as a guide for water and land management
- First Nation's water needs are known and taken into consideration
- Local data management systems store water information in a readily-accessible form for local governments and other stakeholders
- Reservoir storage is managed for maximum water efficiency and environmental protection
- Water is protected for agriculture and the environment
- Water is valued and priced appropriately

Vision for Sustainable Water Quality and Watersheds:

- Lakeshores, riparian areas and wetlands are protected and restored for healthy fisheries and ecosystems
- Current and potential upper reservoir areas are protected from pollution and development
- Recreational use of lakes and reservoirs regulated to protect quality
- Groundwater recharge areas are protected from contamination
- Stormwater is managed to reduce contamination of ground and surface water
- Wastewater and reclaimed water are used effectively
- There is a well-developed understanding of the sources and impacts of contaminants
- Water sources are protected through multi-jurisdictional collaborative governance

Vision to support Sustainable Water Management:

- The public has great awareness of the value of water and their role in protecting it
- Adequate funding is available through a variety of sources and mechanisms for Okanagan water projects
- Okanagan communities, senior governments, and water stakeholders work collaboratively to achieve the vision

VI. Strategic Action and Economies of Scale

The Water Management Program is structured to help achieve the OBWB's goals for water sustainability in a cost-effective way that maximizes benefits to local governments. The OBWB bridges the interests of all Okanagan jurisdictions, and has a unique capacity for implementing regional projects and program. Truly regional activities are difficult or impossible for individual local governments to lead; that are outside local government's mandate; or where a basin-wide approach greatly increases efficiency.

Economies of scale are created by pooling funds, sharing resources, and by multiplying the value of local contributions by leveraging dollars from outside the Basin. All Basin residents contribute at an equal rate to the Program. Rather than each jurisdiction hiring professional staff to manage water science and policy projects, grants and planning initiatives, the OBWB centralizes these activities in one location. The Water Management Program undertakes the following strategic actions:

- **Implementing basin-wide programs** for watermilfoil control, wastewater infrastructure funding, water research and management – benefiting all Basin residents
- **Advocating and representing** local needs to senior government planners and policy makers – protecting Okanagan interests
- **Providing science-based information** on Okanagan water to local government decision makers and water managers – for sustainable long-term planning
- **Increasing the effectiveness of water projects and research** by communicating and coordinating between government, non-government, universities and businesses
- **Expanding local capacity by building funding opportunities** through providing leverage grants, securing external dollars and identifying cost-sharing partners

The OBWB's activities and decisions are strengthened by multi-stakeholder technical advice from the Water Stewardship Council, and extended by the Water Conservation and Quality Improvement grant program.

VII. Looking Forward: Implementing Projects for Water Sustainability

The most important contribution the OBWB can make in the next decade is to help local governments prepare for population growth, development and climate change impacts on water supplies. This requires an in-depth understanding of the status of water resources, and close monitoring of change through time. It will also take an integrated basin-wide planning process for adapting to change including developing best practices, water use agreements and harmonized water policies.

The Water Stewardship Council's Sustainable Water Strategy lays out gaps and priorities for adapting to change in the Basin, with recommendations for OBWB partnerships with local stakeholders and senior governments. Similarly, the new BC Living Water Smart Plan is the Province's roadmap for water policy into the future - implemented in partnership with local governments and others. These plans have strong overlap in approach to sustainable water management. With the need and the direction now clearly laid out, it is time to shift toward implementing policies and agreements to protect our water supplies and integrate Okanagan water policy and planning on a basin-scale.

Several significant projects are now underway, including the Water Supply & Demand Project assessment of the Basin's water budget, a study on the concentration of endocrine disrupters in treated wastewater, a 'toolkit' to support development of harmonized groundwater bylaws, and the ongoing Groundwater Assessment of the Okanagan Basin. These projects are delivering the tools and information that local governments and the Province need for infrastructure planning and to prepare for population growth and climate change. The OBWB's research also provides information for the 2013 renewal of the Operating Orders for Osoyoos Lake, ensuring that the Okanagan's water needs are considered during the development of this U.S.-Canada agreement by the International Joint Commission. Details of ongoing Water Management partnerships are given in Appendix II.

There is a great deal to be accomplished over the next few years to make Okanagan water supplies resilient to climate change, population growth and development. We need more complete water science and we need basin-wide policy agreements. Many of the biggest projects require inter-jurisdictional agreements for how communities will respond to drought, implement water conservation strategies, and regulate large groundwater extractions. These policies can only be forged through an inclusive process involving all Okanagan jurisdictions. The OBWB is the appropriate body to lead and convene the process, but the decisions must come from the communities.

Top priority water management projects, based on current objectives and strategic planning, are given below, with detailed descriptions and budget implications provided in Appendix III.

Table 1. Top Priority Water Management Projects: see also Appendices II and III

Ongoing Projects	Completion Dates
Water Supply & Demand Project Phase II	12/2009
Endocrine Disrupter Project	12/2009
Groundwater Bylaws Toolkit	11/2008
Groundwater Assessment of the Okanagan Basin	2010
Recommended Future Projects	
Sustainable Water Strategy Public Outreach & Implementation	2009 - 2012
Lake Evaporation Study	12/2010
Regional Water Conservation Strategy	12/2010
Water Supply & Demand Project Phase III	12/2011
Water Data Hosting and Management	06/2012
Groundwater Management Pilot Project	12/2012
Basin-wide Drought Plan	12/2012
First Nations Capacity Building	ongoing

As the Okanagan's water management priorities are closely aligned with those of government, and the OBWB has a very successful partnership track-record, we can anticipate continued high levels of provincial funding for basin-wide projects. Two essential elements for receiving large external water management grants and maximizing local benefits are:

- ***A consistent source of local matching funds.***
- ***Adequate staff capacity to participate as full partners.***

OBWB staff play key roles in grant writing and project management in Okanagan water partnerships. When matching funds from the OBWB and the Province are combined, we have great leveraging power for federal grants. The Water Management Program renewal should include a yearly allocation toward an implementation reserve to support water management initiatives, and staff to move projects forward and secure additional resources. Regional districts receive additional value for their tax dollar by sharing costs across the Basin.

VIII. Looking Back: A Review of the First Two and a Half Years

A. Water Management Program Financial Review

Financial summaries of Water Management Program income and expenses are given in Appendix IV, and additional details are provided below.

Strengths and Successes: Having the ability to engage in multi-year planning under a requisition ceiling of two-cents per \$1000 assessment has given the OBWB greater efficiency and flexibility for developing and implementing water management programs. This rate is well within the limits set by legislation. Having a stable source of funding and the ability to carry over funds between years has allowed the OBWB to match each tax dollar with leveraged contributions from other granting agencies.

Areas of Concern and How They Can Be Addressed: Some political leaders have asked for greater financial transparency and better communication procedures. One way to further improve communication and accountability, would be for the OBWB to institute a practice

of Annual Reporting, commencing in 2009, with a full review of the function every three years. The OBWB should also consider hosting an annual general meeting of all Regional District Directors at the release of the Annual Report.

Recommendation 1. Renew the OBWB's Water Management Program for an additional three-year period within the limits of legislation and subject to the following:

- *The OBWB may requisition up to a ceiling of two-cents (\$0.02) per \$1000 assessment to support the activities of the Water Management Program.*
- *The OBWB will issue an Annual Report each September commencing in 2009 that will detail program activities and include audited financial statements.*
- *The OBWB's Water Management Program will undergo a comprehensive review after three years as a condition of renewal.*

Base Funding and Costs

The OBWB is funded through property taxes on all lands within the Okanagan watershed. Every resident contributes at the same rate throughout the Basin, and funds are directed to projects that have distinct basin-wide benefits.

The current Water Management Program agreement allows the OBWB to assess up to 2-cents (\$0.02) per \$1000 assessment to cover program costs. Under its legislation, the OBWB can never requisition more than 3.6-cents per \$1000 assessment to cover program costs (*i.e.* watermilfoil and water management together) unless agreed to by the member municipalities. In 2008, the milfoil assessment was \$0.011 per \$1000. In the absence of alternative funding mechanisms, this legislative cap controls the growth of the Water Management Program. As property values have risen over the term of the program, the net revenue from the 2-cents per \$1000 assessment increased and additional funds were allocated to regional projects or Water Conservation and Quality Improvement Grants.

In the future, it will not be necessary to requisition 2-cents per \$1000 each year, and cost projections stay relatively constant for the next 3 years. However, there are a number of very substantial projects on the horizon – including the next phase of the Water Supply & Demand Project – that will involve extensive public consultation and require adequate funding to implement successfully. Under the proposed accountability and reporting structure of Annual Reports and 3-year reviews, the OBWB needs the flexibility of a reliable funding source for planning long-term, multi-year projects so it is recommended to retain this requisition ceiling.

Sustainable Water Strategy – Implementation Reserve

The Implementation Reserve was designed to provide the Water Stewardship Council with funds to implement high-priority projects with distinct regional benefits. Early in the first year of the Program, the Council determined that the most effective approach would be to carry over a majority of these funds so that they would be available to implement recommendations of the Sustainable Water Strategy. An income and expense summary for the Regional Projects portfolio is given in Appendix IV (Schedule D). It is essential to maintain a matching grant fund for water management projects into the future.

Leveraged Funding

The ability to leverage external senior government funding was one of the reasons for establishing the Water Management Program. Within a very short review period (April 2006 – August 2008), the OBWB has exceeded all expectations by nearly doubling Program revenues through leveraged senior government resources. These external funds were brought to the Okanagan rather than going elsewhere in BC or Canada. The leverage capital came from the Regional Projects fund and the Sewage Facilities Reserve. See Appendix II – Water Management Project Partnerships, and Appendix VII – Water Stewardship Council Review for more detail on fund leveraging.

Key to the OBWB's leveraging success is our ability to carry-over funds from one fiscal year to the next and assist with financial administration of multi-agency research partnerships. Between April 2006, and August 2008, the Water Management Program leveraged more than \$2,150,000 in external grants and in-kind contributions. This is close to the total sum of requisitions for the entire 3-years of the Water Management program (\$2,274,227). The figure for leveraged dollars does not include additional amounts leveraged by recipients of OBWB water conservation grants (see below and Appendix VI), or the in-kind contributions of Water Stewardship Council members, estimated at \$182,250. The OBWB has several large Water Management funding applications pending or in preparation, so the total leveraged dollars are likely to increase this fiscal year.

Grant leveraging means that every tax dollar spent on a project is increased by matching contributions by other agencies. A leveraging index (LV) is one way to measure this increase in purchasing power. An LV of 2.0 means that the value of each tax dollar is multiplied by two, and pays for two dollars worth of project value.

$$LV = \frac{\text{OBWB Contribution} + \text{Leveraged Contribution}}{\text{OBWB Contribution}}$$

Table 2. Leveraged Funding for Water Science and Policy Projects

Water Science and Policy Projects	OBWB Funding	Leveraged	LV
Water Supply & Demand Project and related studies	\$385,000	\$1,932,090	6.0
Groundwater Assessment of the Okanagan Basin	\$0	\$145,000	∞
Hydrometric Monitoring Network Review	\$8,000	\$32,000	5.0
Endocrine Disrupter Study	\$30,000	\$41,000	2.4
Total	\$423,000	\$2,150,090	-

Projections for Future Fund Leveraging

As the OBWB develops new projects and programs, we anticipate continued strong support from senior governments and private granting foundations. The Okanagan has become a centre for water science in western Canada. We are an ideal pilot area for evaluating the effects of climate change and population growth in an arid environment, UBC-O is a resource for scientific expertise, and the OBWB can act as a local funding partner and project coordinator.

Both the Province and Government of Canada are poised to invest in community-driven projects to adapt to climate change, and this is also the focus of OBWB water management initiatives. Budget projections for future projects include anticipated external grants, however all projects are scalable, and can be adapted to increases or decreases in available funding.

B. Water Conservation and Quality Improvement Grants Review

The terms of reference for the WCQI are given in Appendix V. A complete list of grant awards and project outcomes is given in Appendix VI.

Strengths and Successes: Over the three funding cycles of its operation, the WCQI grant program has distributed \$1,100,000 to 59 projects by 11 local governments, 10 improvement districts and 6 NGOs for projects that have led to significant improvements in water conservation and water quality protection. These projects have built communication and collaboration networks between participating local governments and organizations and helped establish best practices for the valley. More than 35 other agencies, organizations or businesses contributed funding or in-kind support to these projects, leveraging substantial external grant funds from senior governments and private donors such as the Real Estate Foundation.

Areas of Concern and How They Can Be Addressed: Some local governments have felt that improvement districts should not compete for grant funds through this program. However, the Program's philosophy is that projects should contribute to the greater good of Basin residents either directly by improving water quality and conservation, or indirectly by increasing collaboration and developing best practices. In addition, many residents of municipalities who contribute to OBWB are served by improvement districts and benefit from grants to these organizations. As grant distributions are proportional to assessed values within regional districts, awards to RDNO and RDOS are less than awards to RDCO. The original level of \$300,000 should be considered a minimum in order to fund more than one or two projects per year in RDNO and RDOS.

Recommendation 2. Renew the Water Conservation and Quality Improvement Grant program under its existing terms of reference at a level of \$300,000/year or greater, subject to the review conditions specified for the Water Management Program as a whole.

Program Overview

The terms of reference for the WCQI program were approved by the regional districts in 2005. The program's purpose is to:

- *Assist local governments in addressing issues that enhance valley wide sustainable use of water*
- *Foster and enable tangible, on the ground, water quality and conservation improvements;*
- *Build a collaborative approach to water management and promote more uniform standards and best practices*
- *Increase knowledge sharing about effective programs, and lead to the development of innovative solutions*

Eligible applicants are local governments, improvement districts, and non-profit organizations that receive a resolution of support by a participating local government. Projects have ranged from meter installation to groundwater protection planning, natural resource mapping and creek restoration - which have all brought direct benefit to communities. This program has also been successful in improving communication and links between local governments and organizations, and has allowed the OBWB to build connections with water departments within member municipalities and other water stakeholders.

In 2006 and 2007, \$300,000 was distributed each year. In 2008, grant funding was increased to \$500,000. In total over three years, \$1,100,000 WCQI funds matched more than \$1,900,000 in cash and in-kind contributions from other sources, as well as an additional \$2,790,000 contributed by two large metering projects. In some cases, funding partners were local governments, but many recipients were also able to secure support from NGOs, universities, senior government and industry (see Table 2, below) For a number of projects, the third-party contributions would not have been possible without seed funds from the WCQI program (see Table 3.). Each year, the program has been over-subscribed and competitive, with funds directed to the best projects. Partial funding is often awarded to allow a greater number of worthy projects to go forward.

Table 3. WCQI Grant Partners in Addition to Local Governments

Federal Partners

Canada-BC Water Supply Expansion Program, Fisheries and Oceans Canada, Habitat Conservation Trust Fund, Pacific Agriculture Research Centre, Geological Survey of Canada

Provincial Partners

Ministry of Environment, Ministry of Agriculture, Ministry of Forests and Range, Ministry of Sports, Tourism and the Arts, Direct Access Gaming Grants, Interior Health

First Nations Partners

Okanagan Nation Alliance, Okanagan Indian Band, Westbank First Nation, Osoyoos Indian Band

University Partners

Simon Fraser University, UBC – Okanagan, Queens University

Industry Partners

Gorman Bros. Lumber Ltd., Cattlemens Association, Coldstream Ranch Ltd., Tolko Industries Ltd., Irrigation Association of BC, Professional Landscape Association of BC, Georgia Laine Development

NGO Partners

Real Estate Foundation, Ducks Unlimited, TD Great Canadian Shoreline Cleanup, Vancouver Foundation, Honda Foundation, Community Mapping Network, Friends of Mission Creek, Okanagan River Restoration Initiative, Osoyoos Lake Water Quality Society, South Okanagan Similkameen Conservation Program, Friends of Park Rill.

Grant distributions are proportional to assessed values within regional districts. The program allows for unallocated dollars within a regional district to be distributed in other parts of the valley, but this never occurred.

The OBWB invests considerable time in tracking the progress and success of projects. Projects are tracked through site visits, mid-term and final reporting requirements. All funded projects have been completed on schedule and met their objectives or are on track to do so. Awardees report that the program is perceived to be well managed and fair. All grant recipients must

publicize their projects to further raise awareness of water issues, and make the results and products publicly available.

The following projects are examples where OBWB grants were important for enabling recipients to implement projects in a timely way and bring in substantial third-party contributions.

Table 4. Examples of WCQI Grants with Substantial External Contributions

Water Conservation and Quality Improvement Projects	OBWB Funding	Partner Contributions
Delineating Kelowna Aquifers with Seismic Reflection	\$25,000	\$168,000
Joe Rich Channel Restoration	\$15,000	\$59,586
Waterscape Poster Teacher's Guide Outreach	\$20,000	\$65,000
Mission Creek Water Use Plan	\$30,000	\$109,500
Sensitive Habitat Inventory Mapping in RDOS	\$16,350	\$42,750
Web-based Irrigation Management – Summerland & Vernon	\$12,500	\$45,000
Foreshore Inventory Mapping – Okanagan Lake North	\$29,590	\$20,800

OBWB has recently been in contact with the President of the Canadian Environmental Grantmakers Network. By making grants through the WCQI program, we are eligible to join this network, which includes all the major private and public environmental funding agencies in Canada. It would be valuable for the OBWB to obtain membership with this group to improve our granting practices and expand funding opportunities for Okanagan organizations by increasing the awareness of Okanagan issues among other members.

C. OBWB Director Positions Review

As part of the establishment of the Water Management Program, three new Directors were added to the Water Board, representing the Okanagan Nation Alliance, the Water Supply Association of BC, and the Chair of the Water Stewardship Council. The objective was to better connect the OBWB to the broader water stakeholder community and improve working relationships with First Nations.

The change required an amendment to the SLPs, formalized in 2006. The new Directors are permitted to vote on all but financial matters which are left to the authority of the nine elected representatives of the three regional districts (see Appendix XIII). The only associated costs are meeting pay (\$130/day) and mileage claims.

Strengths and Successes: The addition of new Directors to the OBWB has enriched the knowledge base at the Board table, providing special insight on water management issues. Their presence has contributed to the OBWB's well-informed positions on issues such as opposition to sale of lease lots and concerns over the Interior Health's turbidity notification program. The meetings attended by the representatives from the ONA uncovered a common interest in water sustainability and established trust and mutual respect.

Areas of Concern and How They Can Be Addressed: The greatest concern with the new OBWB Director positions is that the ONA Director and Alternate have only been able to attend a small number of Board meetings. However, they receive and review all Board agenda materials and

have repeatedly expressed their satisfaction with the Board and their interest in continuing involvement as their schedules allow. We could ensure participation if every fourth OBWB meeting were held at an ONA council chamber or hall.

Recommendation 3. *Maintain OBWB Director positions with non-regional district appointees permitted to vote on all but financial matters; and continue to develop mechanisms for involving ONA Director-representatives in OBWB projects and programs.*

D. Water Stewardship Council Review

The Water Stewardship Council acts in an advisory role to the Board and the Council Chair is a voting member on the Board (excluding financial decisions). The goal of forming the Council was to capitalize on local water management expertise and to support communication among Okanagan water stakeholders. The Council meets regularly to improve long-term decision making – in light of current trends of rapid growth, climate change and uncertain water supplies – using its collective expertise to identify basin-wide water issues and develop solutions that reflect the best science and innovative policy. The Council recommends actions that can be undertaken within the bounds of the OBWB mandate. A detailed review of the Council is given in Appendix VII, including an assessment of how the Council has met its objectives.

Strengths and Successes: The Council provides Okanagan tax payers, elected leaders and the business community with a valuable forum for multi-stakeholder perspectives, making recommendations for projects and policies that are grounded in technical expertise. The Council is now concluding a 2-year research process to develop a Sustainable Water Strategy for the Basin. Council attendance has been consistently high, and Council members have voiced strong interest in continuing participation. The Council has built bridges between stakeholder groups such as fisheries interests, development and agriculture – reducing current and future conflicts.

Areas of Concern and How They Can Be Addressed: The planning departments of the three regional districts have permanent seats on the Council, but concerns have been raised that there are no representatives from the planning, environmental, or utility staff of large municipalities – who have specific challenges and expertise not represented by the existing Council membership. Council composition should be reviewed to increase representation from the operational staff of municipal governments. This would also improve communication between the Council and local government.

Recommendation 4. *Maintain the Okanagan Water Stewardship Council under its existing terms of reference and funding level. Program renewal will strengthen Council member relationships, sharing of best practices and maintain a forum to explore emerging water management issues. The OBWB should review Council membership structure to increase representation from large municipalities.*

Council Structure and Costs

The Council members represent a range of water stakeholder groups and local sources of technical expertise. Members are nominated for 18 month terms by their respective organizations, and these nominations are ratified by the OBWB. OBWB staff organize Council meetings, manage projects, produce agendas and record minutes, provide information requested by the Council, and participate in special meetings, events and projects organized by the Council.

Council membership is by organization rather than by individual. For example, the South Okanagan-Similkameen Conservation Partnership selects their own representative to the Council. The composition of the Council was designed to provide a breadth of knowledge for advising the OBWB. Member organizations were chosen from the following: (1) organizations or agencies with expertise in water issues – such as the BC Groundwater Association, (2) government agencies with operational responsibilities – such as the Ministry of Environment water licensing division and regional district planners, and (3) water stakeholder groups – such as the Urban Development Institute. The idea was to have a mix of knowledge, responsibility and interests to deliberate issues and find common solutions. Council composition also seeks to balance representation from the North, Central and South Okanagan. To keep the Council at a workable size, more emphasis was placed on maintaining a spectrum of interests and voices than on comprehensive representation.

Council members volunteer their time, and representatives from outside the Basin (Provincial staff) cover their own travel costs. As a consequence, the overhead for the Council meetings is relatively low – including the cost of monthly lunches and rental of meeting spaces, and honorariums for invited speakers. Additional Council-related expenses include staff expenses for attending conferences or workshops pertaining to Council business, and a small budget for consulting fees on Council projects (such as facilitating workshops, or technical writing). In all, ongoing expenses are less than \$35,000 a year. The value of the volunteer time donated by Council members is estimated to be at least \$60,000/year (see Appendix VII).

Council Vision

The Vision of the Okanagan Water Stewardship Council is that: *The Basin will have clean and healthy water in sufficient abundance to support the Okanagan's natural ecosystems, agricultural lands and high quality of life for perpetuity. Accurate, up-to-date water information and scientific knowledge will support community and regional planning. Water will be managed in a spirit of cooperation, and a valley-wide ethic of conservation will create a lasting legacy of sustainable water resources for future generations.*

Council Goals

The goals of the Okanagan Water Stewardship Council are:

1. To adopt an ecosystem-based approach for water resource management planning;
2. To increase understanding among all stakeholder of the value of water and knowledge about the state of the Basin's water resources;
3. To promote changes in human behavior related to water resources, leading to greater water conservation and protection of water quality;

4. To advance effective and innovative water policy, promote good governance, and build support for wise management of water resources in the Basin; and
5. To engage the public and all stakeholders in shaping water policy for the Basin.

Table 5. Quotes from Council Members:

“I feel that the Council represents all walks of life and their interests in preserving the great assets of the Valley that has attracted people to the Valley. The Development Industry is always faced with growth issues and the sustainability of water in the Valley. The OBWB needs to be given the authority to manage the Basins Water supply and make decisions that will insure a sustainable water supply for all! I feel the Council provides the Eyes and Ears for the Board and through the collaborative efforts of all the council member we can help the Board make the difficult decisions needed to manage our Precious Resource, Water!” **Grant Maddock**, Urban Development Institute

“I think the council has been a great success in the amount of shared information and perspectives from all the stakeholders. I have personally learned a lot from the members and guest speakers. As a die-hard agriculturist / food supply advocate, I have been so impressed with the attitude around the table, for the need of farm land and water. Gone are the days when we can simply take the attitude that we can rely on other parts of the world for our food supply.” **Gord Shandler**, Water Commission, BC Fruit Growers Association.

“The OBWB Stewardship Council has been a very successful venue for allowing representatives of all water stakeholders/groups to express their opinion and for the exchanging of information. Our successes are speaking as one voice for the Okanagan basin for important issues such as governance, groundwater protection and development around reservoir lakes.” **Lorne Davies**, OCEOLA Fish and Game Club

Additional quotes are given in Appendix VII.

E. Review of Water Management Staffing

Current staffing levels are adequate for maintaining existing program areas and allowing the Water Management Program to develop at a measured pace to meet the needs of the Basin. Any large new initiatives such as a staff-intensive Water Management Plan consultation process would require additional contracted support.

Strengths and Successes: The success of the OBWB’s Water Management Program is a direct result of the quality of its staff, and their personal commitments to water sustainability in the Okanagan. All staff are highly experienced, well educated and trained for their positions. The program is run from a single office and has very low overhead.

Areas of Concern and How They Can Be Addressed: The most critical staffing issue is that Water Management staff are on term contracts that expire on March 31st, 2009. It is very difficult to attract and retain trained and effective staff on this basis. For this reason it is essential to secure stable funding for the Program.

Recommendation 5. Maintain current OBWB staff positions, extending contract terms to 2012 on approval of mandate extension.

Water Management Staff Positions

The Water Management Program is staffed with the following positions. Both the Executive Director and the Administration & Communication Specialist share their time with other OBWB programs. Salaries and benefits make up a substantial portion of the Water Management Program operating budget because of the nature of organization – providing communication, expertise and project management. Individual salaries are at or below the 50th percentile of comparable positions in the external marketplace, according to a compensation review conducted by Tim Dillon and Associates in April 2008.

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

The current Executive Director, Anna Warwick Sears, has a Ph.D. in Biology, and before coming to the OBWB was the Research Director for an environmental NGO, responsible for developing watershed management plans and managing an aquatic weed control program.

- **Water Stewardship Director** – Reports to Executive Director. The Water Stewardship Director is the primary staff to the Water Stewardship Council, managing Water Management projects and initiatives, participates in strategic planning and development of Council work plans, and engages in outreach with technical experts and community members. This is a term position.

The current Water Stewardship Director, Nelson Jatel, has a B.Sc. in Freshwater Science, and before coming to the OBWB was the Executive Director of the Okanagan Partnership where he created programs bridging environmental and economic concerns for sustainable prosperity in the Okanagan.

- **Water Stewardship Coordinator** – Reports to Executive Director and Water Stewardship Director. The Water Stewardship Coordinator is responsible for managing the Water Conservation and Quality Improvement Grants program, liaising with Stewardship Groups and providing technical support to water management projects and other OBWB programs as required. This is a term position.

The current Water Stewardship Coordinator, Genevieve Dunbar, has a B.Sc. in Environmental Science, and before coming to the OBWB worked for the BC Lake Stewardship Society, building the capacity of community groups to monitor and restore lake water quality.

- **Administration & Communication Specialist** – Reports to Executive Director. The Administration & Communication Specialist is responsible for recordkeeping and organization of OBWB systems, and communication between the OBWB and the community at large. This is a term position.

The current Administration & Communication Specialist, Monique Stone, has a B.A. in business management, and is a former business owner and office manager for Habitat for Humanity.

F. Review of Communication & Outreach

Strong communication between the OBWB and local government, aboriginal bands, senior levels of government, water researchers and local residents is a crucial component of the Water Management Program, to develop a shared understanding of the status of Okanagan water resources and the interdependence of Okanagan communities.

Strengths and Successes: The OBWB has become a communications hub for Okanagan residents, researchers, and media representatives and water stakeholders looking for information on Okanagan water issues. This activity is greatly aided by the monthly meetings of the Water Stewardship Council. The OBWB has developed a number of communication tools and strategies to reach specific audiences, and there is an increased understanding of water issues in the community.

Areas of Concern and How They Are Addressed: A number of local politicians have expressed concern that they are not well-enough informed about OBWB activities – demonstrating the need to develop communication tools specifically for local government. In addition to improving distribution of the OBWB's monthly Board Report summary of meetings, communications would be improved through the development of an Annual Report and more frequent delegations to Okanagan local governments. It may also be useful to host an annual general meeting to coincide with the release of the Annual Report, and invite all regional district Directors to attend and share their concerns about water issues.

Recommendation 6. Make outreach to regional and municipal governments a central priority, developing specific communication tools and strategies such as the monthly Board Report and an Annual Report of activities presented in September of every year.

Communications Overview

With many distinct audience groups, a number of support tools have been developed to facilitate Water Management communications.

Press coverage: There has been excellent independent press coverage of OBWB and Water Stewardship Council initiatives, and of projects funded through the Water Conservation and Quality Improvement Grant Program, with over 50 news stories within a 2-year period along with a special televised feature on David Suzuki's The Nature of Things. OBWB staff and Directors are often called by reporters to comment on current water-related news stories.

Board reports: In May 2008, OBWB staff developed a new communication tool, the monthly Board Report, to help inform a number of Okanagan and external audiences with up-to-date information about the activities, projects and policies of the Board. These Board Reports are distributed to all OBWB Directors, Water Stewardship Council Members, and the CAOs, Board

Chairs and Mayors of all regional districts and municipalities and hope to have them included in the agenda packages for all regional boards and municipal councils.

Websites: The OBWB has developed an extensive corporate website (www.obwb.ca) with information on all of program areas and providing a web presence for the Groundwater Assessment of the Okanagan Basin, the Okanagan Waterscape Poster, and the Water Supply & Demand Project. Through a project of the Water Stewardship Council, the OBWB has developed an Okanagan Water Community of Interest website on Waterbucket (www.waterbucket.ca/okw) – a partnership with the Provincial Water Sustainability Committee which includes the Ministry of Environment, Ministry of Community Development, Environment Canada, BC Hydro, and BCWWA.

Public outreach: OBWB staff participate at public forums and conferences to support the sharing of water management and science ideas and best practices; examples include the Osoyoos Lake Water Science Forum, BCWWA, the Kelowna Roundtable, the Okanagan Partnership Summit, the Okanagan Groundwater Symposium, World Water Day, UBC-O's Urban Forum, the BC Lake Stewardship Society Conference, the Ministry of Agriculture's Water Connections workshop, and many others. The OBWB has also included articles in the Waterlines Newsletter that is distributed with many of the utilities' water bills.

Presentations to local and senior government. OBWB staff have provided updates and presentations to all three Regional Districts, The Cities of Penticton, Vernon, Kelowna, and the Districts of Westside, Coldstream and Summerland. And meetings have been held with a number of individual Mayors, Administrators, and Councilors. Delegations have also been taken to the Okanagan Nation Alliance Chief's Executive Council and Natural Resources Committee, the Okanagan Indian Band, Westbank First Nation, and economic development officers of the Osoyoos Indian Band. In February, 2008 OBWB staff were invited to update the BC Conservative Caucus of Federal Members of Parliament about Okanagan Water issues. OBWB staff have also met informally with Okanagan MLAs and their staff.

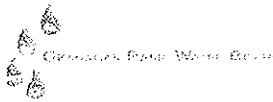
Stakeholder Outreach: there has also been extensive outreach into the water stakeholder communities. The WCQI grants has been a great mechanism for forming relationships, and keeping track of water projects through our site visits and project tracking. OBWB staff have convened the Water Conservation Professional roundtable to support the sharing of best practices among local government staff to support increased efficiency, reduced redundancy and the adoption of best practices. The OBWB acts as a communications hub for local residents, university researchers, and many other groups interested in Okanagan water issues.

One Watershed – One Water Conference: One of the most important tools for communicating about Okanagan Water Management is the upcoming One Watershed - One Water Conference, which is co-sponsored by the OBWB and the Canadian Water Resources Association BC Chapter. This Conference will feature updates of the Water Supply & Demand Project, highlight recent efforts by the International Joint Commission and Osoyoos Lake Board of Control, and serve as the public launch of the Okanagan Sustainable Water Strategy developed by the Water Stewardship Council.

IX. Conclusion

The OBWB's Water Management Program is unique in the Province, and in a short time has produced impressive results for water sustainability – bringing together the Okanagan community, building partnerships, and moving forward critical water assessments. Community leaders and the public have strongly expressed the need for leadership, planning and oversight of basin water resources, and the Okanagan Basin Water Board has taken action through this Program. It is strongly recommended that the Program be renewed for another three-year term, to continue ongoing work and take steps to implement plans and agreements to prepare for population growth, climate change, and other long-term changes in the valley.

Appendix I. 2005 Proposal to Enhance the OBWB and Supporting Resolutions



Agda No.: 5.9.

☒ RB ☐ In-Cam ☐

Date: May 3/05

Okanagan Basin Water Board
9848 Aberdeen Road, Vernon, BC, V1B 2K9
250-550-3773

Proposal to Enhance the Effectiveness of the Okanagan Basin Water Board

Presentation to Regional District of North Okanagan

May 3, 2005

Summary:

The purpose of this proposal is to request Regional District approval for the Okanagan Basin Water Board (Water Board) to implement the following:

- Improve the way the Water Board functions by establishing an Okanagan Water Stewardship Council,
- Add 3 members to the Water Board,
- Permit the Water Board (within defined limits) to approve its own annual capital and operating budgets; and,
- Enhance the Water Board's immediate value to the community by permitting initiation of a program to deliver water conservation and management benefits throughout the Okanagan on an ongoing basis.

Background:

In response to widespread frustration over the long-term inability of the OBWB to function effectively in exercising the mandate given it under the Okanagan Basin Agreement, the participants of the workshop entitled "Running on Empty – Water and our Common Future" (March 2004) struck an independent committee to look at ways to improve the usefulness of the Board. The committee submitted a report to the OBWB in May of 2004.

Concurrently, the Okanagan Partnership made a proposal to the Water Board and to the three regional districts for a coordinated approach to Valley water management and a mandate for an Okanagan Basin Water Council with powers to implement and coordinate a variety of basin wide management policies.

The Water Supply Association of BC reviewed the Partnership recommendation and forwarded comments on what would best fit the needs and autonomy of water purveyors.

The Regional Districts of Central Okanagan and Okanagan-Similkameen approved the Partnership recommendation in principle while the North Okanagan Regional Board asked the OBWB to review the discussion paper and return with recommendations.

In March of 2005 the Partnership proposal was discussed by the Water Board, representatives of the 2004 workshop subcommittee, Environment Canada and

Provincial Water Land and Air Protection and Land and Water BC representatives, Community Futures, the Water Supply Association, and UBC Okanagan and the Okanagan Partnership. The outcomes were to:

1. Prepare a two-stage plan to enhance the effectiveness of the Okanagan Basin Water Board.
2. Draft Terms of Reference for a Water Conservation and Quality Initiatives Program
3. Draft Terms of Reference for a Water Stewardship Council which would act in an advisory capacity to the OBWB.
4. Prepare a document that would be presented to the three regional district boards for permission to put into effect the procedures described in the plan.

The Okanagan Basin Water Board has a role in defining and promoting solutions to water management issues of basin-wide significance. The Water Board has the capacity to provide effective leadership in promoting policy change but its intent with these recommendations is not to change its mandate or to extend its authority into the jurisdictions of existing agencies. The Board does not intend to dictate land use policy to local government or to take over assets from water utilities, or duplicate the role of water utilities. Rather, by enhancing the operation of the Board through these recommendations, the Water Board seeks to improve its ability to assist local governments and other water purveyors in improving water management in the Okanagan Valley.

The proposals presented herein have their roots within, and are consistent with; the Supplementary Letters Patent of the Water Board, in particular the following articles:

- To organize or receive proposals from private interests, local organizations, or agencies and all levels of governments concerning water-resources utilization and management in the best interests of man;
- To define problems and determine such factors as priorities, economic feasibility, responsibility, necessary support legislation, and required action;
- To provide communication and co-ordination between various levels of government and government agencies involved with water-resources utilization and management;
- To present proposals and recommendations to appropriate agencies, being municipalities or governments, according to jurisdiction and responsibility;
- To participate, financially or otherwise, in such surveys, investigations, or projects on behalf of Municipalities, Electoral Areas, or Regional Districts as may be authorized by the participating Regional Districts;
- Establish a Liaison Committee consisting of persons appointed by such Municipalities, Regional Districts, Improvement Districts and Government Agencies as the Water Board may determine, and the Liaison Committee shall

advise on such matters, as may from time to time be referred to it by the Water Board.

Recommendations:

The recommendations are summarized as follows:

- Improve the way the Water Board functions by establishing an Okanagan Water Stewardship Council (OWSC) to provide technical advice to the Water Board (see attached terms of reference); by adding 3 non-voting members to the Water Board; by permitting the Water Board (within defined limits) to approve its own annual capital and operating budgets; and,
- Enhance the Water Board's immediate value to the community by initiating a program to deliver water management benefits throughout the Okanagan on an ongoing basis. (See attached terms of reference)

The proposal to establish an Okanagan Water Stewardship Council is consistent with the requirement stated in the Supplementary Letters Patent that the Water Board shall establish such a Liaison Committee. The new water management benefits program will be referred to as the Water Conservation and Quality Initiative Program. Recommended Terms of Reference for the Okanagan Water Stewardship Council and for the Water Conservation and Quality Initiative Program are appended to this report.

Additional actions must be taken to implement the Water Board recommendations. The Water Board requests approval from the Regional District to implement each of the following elements of the proposal:

1. Permit the Water Board to approve its own annual capital and operating budgets within the limits of its legislation and subject to a five year plan consisting of the following practices:
 - The Water Board will requisition annually, a maximum amount of two-cents (2¢) per \$1000 assessment additional to that required to meet current sewage facilities grant obligations – this funding to be used to support the Water Stewardship Council and the new Water Conservation and Quality Initiative Program.
 - Permit the Water Board to fund water conservation and quality improvement projects of local government design as outlined in Appendix 1.
 - For fiscal year 2005 – 2006 only, permit the Water Board to use the sewage grant fund surplus to fund project costs in an amount consistent with the two-cent additional ceiling. (this will use 30% of the fund surplus)
 - Make the two-cent increase subject to review by the regional boards after a five-year period (and subject to review initiated by the Water Board at any time). The Water Board will commence the two-cent additional requisition in fiscal year 2006 – 2007.

- Hire staff as needed to administer the water conservation initiatives program and act as administrative support to the Water Stewardship Council.
 - The regional boards will review these practices after a five-year period.
2. Permit the addition of three members to the Water Board:
 - A representative of First Nations as designated by the Okanagan Nation Alliance;
 - A representative of water purveyors as designated by the Water Supply Association of B.C.; and,
 - The Chair or designate of the Water Stewardship Council.

These representatives will vote on all matters except financial decisions.

3. Permit the Okanagan Basin Water Board to establish Terms of Reference for the Water Stewardship Council (Appendix 2) to be reviewed by the regional boards following a five-year term.

A five year term is requested for the following reasons:

- An adequate time period to demonstrate the value of the proposed enhancements is needed.
- A short term Okanagan Valley water management program will not meet the requirements to leverage Federal and Provincial government assistance.
- The amount of money generated by the increased assessment is relatively small (approximately \$8 per household) and the limit is well defined.

In order to ensure that the recommended changes to the Water Board are consistent with the Supplementary Letters Patent, it is necessary to take the following actions:

1. Amend the Supplementary Letters Patent to allow expenditures commencing in fiscal year 2006 –2007 for projects other than sewage facilities grants. The Water Board is currently permitted in its Supplementary Letters Patent to assess a maximum of 21¢ per \$1000 assessment for sewage grants and 3.6¢ for milfoil control.

The current Water Board requisition is:

- 8.9¢ (\$1.9 million) to meet the obligations of sewage grants
 - 2.3¢ (\$516,000) for milfoil control
 - An additional 2¢ per thousand dollars assessment would generate approximately \$427,000 based on current assessments.
2. Amend the Supplementary Letters Patent to allow additional membership on the Water Board as outlined above.



REGIONAL BOARD REPORT

Administration Services Department

For the Board October 20, 2005

DATE: October 14, 2005 **File No.:** 5285.01

TO: J. Johnson, Chief Administrative Officer

FROM: T. Batten, Director of Administration Services

RE: Proposal to Enhance the Effectiveness of the Water Board

Recommended Motion:

THAT the RDOS Board amend resolution No. B187/05 by removing “a five year period” and replacing it with “a three year period”.

Background:

At the May 19, 2005 Corporate Issues Board Meeting the Board passed the following resolution (B187/05):

THAT the RDOS Board endorse in principal the following recommendations of the Okanagan Basin Water Board:

1. Permit the Water Board to approve its own annual budget for a five year period.
2. Permit the Water Board to administer a Water Conservation and Quality Improvement Initiatives Program
2. Permit the addition of 3 members to the Water Board
3. Permit formation of an Okanagan Water Stewardship Council to act in an advisory role to the Water Board
4. Permit hiring of additional staff as required

Relevant Information:

North Okanagan Regional District has approved the Proposal to enhance the effectiveness of the Water Board for a 3 year term rather than the 5 year period that was proposed by the Okanagan Basin Water Board. The Okanagan Basin Water Board is requesting that the Regional District Okanagan-Similkameen amend their resolution to reflect a 3 year term.

Respectfully submitted,

T. Batten, Director of Administration Services

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REGIONAL DISTRICT OF CENTRAL OKANAGAN

RESOLUTION

#395/05

DAY/NOVAKOWSKI

THAT Resolution #212/05 be rescinded;


AND FURTHER THAT the Regional Board of the Regional District of Central Okanagan endorses the Okanagan Basin Water Board (Water Board) implementing the following:

- Permit the Water Board to approve its own 3-year annual capital and operating budgets;
- Permit the Water Board to administer a Water Conservation and Quality Improvement Initiatives Program;
- Permit the addition of three members to the Water Board;
- Permit formation of an Okanagan Water Stewardship Council to act in an advisory role to the Water Board;
- Permit hiring of additional staff as required.

CARRIED

I, W.B. d'Easum, Chief Administrative Officer of the Regional District of Central Okanagan, do hereby certify that the above is a true and correct copy of a resolution which was amended and adopted by the Regional Board at its regular meeting held the 17th day of October 2005.

Dated at Kelowna, B.C.
this 19th day of October 2005



W.B. d'Easum
Chief Administrative Officer

7.C.4. New and Unfinished Business**7.D WHITE VALLEY PARKS AND RECREATION****7.D.1. Reports****7.D.2. Correspondence****7.D.3. Bylaws and Resolutions****7.D.4. New and Unfinished Business****7.E. OTHER SERVICES****7.E.1. Reports****a. Building Inspection Report – July, 2005**

Moved by Director Phillips

Seconded by Director Hansma

“That the Building Inspection Report for the month of July, 2005 BE RECEIVED for information.”

No. 407/05

CARRIED

7.E.2. Correspondence**7.E.3. Bylaws and Resolutions****7.E.4. New and Unfinished Business**

a. Memorandum from Jody Anderson, Deputy Corporate Officer – August 31, 2005 – Proposal to Enhance the Effectiveness of the Okanagan Basin Water Board

Director O’Keefe left the room.

Moved by Director Hansma

Seconded by Director Oglow

“That the Regional Board, of the Regional District of North Okanagan, support the Proposal to Enhance the Effectiveness of the Okanagan Basin Water Board, for a period of no longer than three (3) years unless all participants unanimously agree to renew.”

No. 408/05

CARRIED

Director Hansma expressed concern that both the federal and provincial governments may require a five year plan prior to providing funding, but that the issue could be brought back to the table if required.

Director O’Keefe returned to the meeting.

Appendix II. Water Management Projects and Partnerships

Water Management Partnerships

The following are descriptions of existing OBWB water management partnerships.

Water Supply & Demand Project

The goal of the WS&DP is to quantify current and future water needs in the Basin, and the effects of climate change and population growth. It will produce a water budget for determining future license allocations and other water policy decisions such as valley-wide drought plans. The Project will be completed in 2009.

The principal partners are the OBWB and the Ministry of Environment, who chair the steering committee and project working group. Other partners include the Ministry of Community Services, Ministry of Agriculture and Lands, Environment Canada, Agriculture Canada, Fisheries and Oceans Canada, the Okanagan Nation Alliance, UBC-O, SFU, the BC Agriculture Council, and the Water Supply Association of BC.

OBWB represents local government's interests in the project, and is responsible for financial management of most of the funding, as well as hosting the WS&DP webpage. OBWB has the ability to carry-over funds from one fiscal year to the next, and so can receive end-of-year funding from senior governments.

OBWB cash contributions	\$360,000
External cash grants managed by OBWB	\$1,390,890
Cash grants managed by MAL	\$221,000
In-kind technical support contributions	\$245,000
<hr/>	
Total WS&DP revenue and contributions	\$2,216,890

Related Projects

The following projects use data and models from the Water Supply and Demand Project – extending the value of the results.

Osoyoos Lake Studies: The International Joint Commission (IJC) is conducting studies to inform the 2013 renewal of the Osoyoos Lake operating orders. The IJC will use WS&DP data and models to establish water use, water demand and future water availability on Osoyoos Lake, and projected climate change impacts. The Plan of Study will be completed in 2009. Budget: \$140,000.

Visualizing Climate Change: Jon Corbett, a Geography professor at UBC-O, has received a federal research grant to develop an interactive web-based tool for the public to access and visualize WS&DP information on climate change and long-term water trends. The project will be completed in 2010. Budget: \$75,200.

Domestic Irrigation Demand: The BC Agriculture Council, the Ministry of Agriculture, and Agriculture Canada have extended the Irrigation Demand Model from agriculture to residential areas, identifying irrigated lawns, parks and public areas. This project is funded directly by the OBWB. The project will be completed in October, 2008. Budget: \$25,000.

Groundwater Assessment of the Okanagan Basin

The Groundwater Assessment of the Okanagan Basin (GAOB) is a large-scale, coordinated effort initiated in 2004 to guide Okanagan groundwater studies. The GAOB is developing tools for water budgets and water use planning; vulnerability assessments to minimize development impacts on groundwater; and methods to transfer these tools to decision makers. The OBWB assists with financial administration of this program, and hosts the GAOB webpage on the OBWB website. The OBWB contributes in-kind support and has received \$145,000 in grants from MoE for disbursement to groundwater projects under the direction of the GAOB.

The GAOB working group includes the OBWB, the Ministry of Environment (MoE), the Geologic Survey of Canada, the Canadian Water Network, Environment Canada, UBC-O, UBC, SFU, and the BC Groundwater Association.

Cash grants from MoE administered by OBWB	\$145,000
Cash grants and in-kind contributions from other agencies	<u>\$1,400,000</u>
Total GAOB revenue and contributions	\$1,545,000

Related Projects

The OBWB has made \$117,900 in cash grants for GAOB-linked groundwater projects through the Water Conservation and Quality Improvement program.

- Delineating Kelowna/Wood Lake Buried Valley Using Seismic Reflection (2008)
 - \$25,000 – RDCO
- Preliminary Hydrogeological Assessment of Joe Rich (2008)
 - \$2,500 – RDCO
- Surface/Groundwater Interaction – Middle Vernon Creek (2008)
 - \$24,000 – Oceola Fish and Game Club
- Groundwater Protection Measures: Well Casing and Raising (2008)
 - \$15,000 – Larkin Waterworks District
- Groundwater Protection Planning – Phase 2 & 3 (2007 & 2008)
 - \$35,000 – Kelowna Joint Water Committee
- Groundwater Meter Installation (2006)
 - \$16,400 – Grandview Waterworks District

Hydrometric Monitoring Governance Project

Stream-flow and snow-pack monitoring is essential for long-term water planning and the ability to respond to climate change, droughts and flooding. The goal of this project is to re-establish and expand the network of monitoring stations in the Basin, and develop a mechanism for shared network governance between local governments and stakeholders and senior government agencies. This project is a pilot for other hydromonitoring governance efforts in BC.

Partners include the OBWB, Ministry of Environment, Environment Canada, and Water Highway BC (a water professionals group), BC Hydro and other industry representatives.

OBWB cash contribution	\$8,000
Ministry of Environment cash and in-kind contribution	<u>\$32,000</u>
Total Hydromonitoring Governance revenue and contributions	\$40,000

Endocrine Disrupter Project

Over a period of two years, samples of wastewater will be collected from treatment plants and receiving waters in Vernon, Kelowna and Penticton and tested for a set of priority endocrine disrupters (EDs). The work will be coordinated with Environment Canada (EC)¹ and their initiatives to identify EDs in wastewater and measure their effects in organisms. The majority of the funding will support a graduate student working at UBC O and EC labs.

This project was initiated by the Okanagan Water Stewardship Council. The OBWB is managing the project and administering funds. The Health Canada grant came through a joint application between the OBWB and Okanagan Indian Band. Ministry of Environment and Interior Health have also given grants. Environment Canada is contributing in-kind support.

OBWB cash contribution	\$30,000
Health Canada cash contribution	\$25,000
Ministry of Environment cash contribution	\$12,000
<u>IHA cash contribution</u>	<u>\$4,000</u>
Total Endocrine Disrupter revenue	\$71,000

Groundwater Bylaws Toolkit

This project seeks to increase efficiency of local government staff for implementing sustainable groundwater policy. The Toolkit will support the sharing of local bylaws best practices and relevant groundwater science. It will also support the updating of old bylaws and in some jurisdictions the creation of new ones.

This project was initiated by the Okanagan Water Stewardship Council. Project partners include the OBWB, the Wetland Stewardship Partnership¹ (developers of the Green Bylaws Toolkit), the POLIS Foundation, and the Groundwater Association of BC. Grant proposals have been submitted to the Ministry of Community Services, UBCM (Gas Tax Innovations Fund), and the Real Estate Foundation. The scope of the project depends on the ultimate funding commitments of these organizations.

Cash grant from OBWB	\$20,000
<u>Amount of pending grant applications</u>	<u>\$77,000</u>
Total Budget for Groundwater Bylaws Toolkit	\$97,000

¹ The Wetland Stewardship Partnership (WSP) is a multi-agency group dedicated to the conservation of wetlands and other sensitive ecosystems. WSP Partners include BC Hydro, Ducks Unlimited Canada, Environment Canada, BC Nature (Federation of BC Naturalists), Fisheries and Oceans Canada, Grasslands Conservation Council of BC, Ministry of Environment, Nature Conservancy of Canada, Union of BC Municipalities, BC Wildlife Federation, Pacific Salmon Foundation, and Ministry of Forests and Range.

Appendix III. Proposed Future Water Management Projects

Proposed Future Water Management Projects for the OBWB

The most important contribution the OBWB can make in the next decade is to help local governments prepare for population growth, development and climate change impacts on water supplies. This requires a detailed understanding of the status of water resources, and close monitoring of change through time. It will also take an integrated basin-wide planning process for adapting to change including developing best practices, water use agreements and harmonized water policies.

The Water Stewardship Council's Sustainable Water Strategy lays out gaps and priorities for adapting to change in the Basin, with recommendations for OBWB partnerships with local stakeholders and the Province. Similarly, the new BC Living Water Smart Plan is the Province's roadmap for water policy into the future - implemented in partnership with local governments and others. These plans have strong overlap in approach to sustainable water management.

As the Okanagan's water management priorities are closely aligned with those of government, and the OBWB has a very successful partnership track-record, we can anticipate continued high levels of provincial funding for basin-wide projects. The two essential elements for receiving large external grants for water management projects and maximizing the local benefits are:

- ***A consistent source of local matching funds.***
- ***Adequate staff capacity to participate as full partners.***

OBWB staff play key roles in grant writing and project management in Okanagan water partnerships. When matching funds from the OBWB and the Province are combined, we have great leveraging power for federal grants. The Water Management Program renewal should include a yearly regional projects allocation to support water management projects, and staff to move the projects forward and secure additional resources. Regional districts receive even more added value for their tax dollar by sharing costs across the Basin.

Ongoing Projects

Since 2006, the OBWB has been a lead partner in a number of basin-wide projects that will be ongoing through 2009, and continuing OBWB involvement is needed to get the greatest benefits for Okanagan local governments. These projects have received extensive support from government, which will continue. Projects include:

- Water Supply & Demand Project Phase II completes the Okanagan water budget (Summer 2007 - December 2009).
- Endocrine Disrupter Project (September 2008 - December 2009).
- Groundwater Bylaws Toolkit (June 2008 – December 2008)
- Groundwater Assessment of the Okanagan Basin (April 2005 – 2010/beyond).

Budget Implications: The OBWB 2009-10 Budget should include \$30,000 for matching funds to cover additional costs for completing *Phase II* of the WS&DP.

Recommendations for Future OBWB Water Sustainability Projects

The following regional projects are well within the OBWB's mandate and will bring substantial value to Okanagan communities. Recommendations from the Sustainable Water Strategy and commitments from the BC Living Water Smart Plan are listed. Where budget implications are listed, they specifically refer to OBWB matching funds rather than the overall project cost.

1. Water Supply & Demand Project *Phase III*

Phase II of the WS&DP lays out current and future water needs in the Basin, and develops scenarios to evaluate the effects of climate change and population growth. It creates a water budget for determining future license allocations and will inform other water policy decisions such as valley-wide drought plans. It will not make specific policy recommendations.

Phase III uses the scenarios and water budget to analyze risks, and identify what changes to water management may be needed to avoid water shortages and environmental impacts. It will highlight options and choices to be made by decision makers. For this reason, *Phase III* will include an extensive communication and consultation process to present results to the public, political and community leaders, planners, water purveyors and others. The budget cost for the total project is \$315,000 over two years.

Phase III sets the stage for other essential planning processes such as development of basin-wide drought plans, and groundwater management plans. It will help communities meet the new provincial requirements for adaptation to climate change as a condition of infrastructure funding (see Box 1, below), help resolve First Nations treaty water negotiations, and inform decisions for environmental water needs and managing water for agriculture.

Budget Implications: *Phase III* of the WS&DP will require OBWB matching funds and ongoing OBWB staff time. The OBWB Budget should include \$42,000/yr for two years.

Box 1. Strategic Directions for Water Supply & Demand Decision Making

Living Water Smart: The BC Water Strategy's Commitment

- *Adapting to climate change and reducing our impact on the environment will be a condition for receiving provincial infrastructure funding.*
- *By 2012, new approaches to water management will address the impacts from a changing water cycle, increased drought risk, and other impacts on water caused by climate change.*
- *Government and First Nations' treaty water negotiations and other related agreements support providing a clean and safe domestic, agricultural and industrial water supply for First Nations communities.*
- *Legislation will recognize water flow requirements for ecosystems and species*
- *Government will secure access to water for agricultural lands.*

2. Lake Evaporation Study

Evaporation from the main valley lakes is thought to be one of the largest sources of water loss to the Basin. However, there are almost no physical measurements to verify the extent of these losses. Evaporation estimates vary between 350 – 1000 mm/yr. The accuracy of this number determines in large part how much lake water is available for human use. *Phase II* of the Water Supply and Demand Project uses estimates with a margin of error that should be reduced.

Accurate estimates of lake evaporation are essential for long-term Water Management Planning in the Okanagan. These will require two years of physical measurements of lake surface temperature, wind speed and solar radiation taken from meteorological buoys that are cross-calibrated to local weather stations. Environment Canada has the expertise and much of the equipment to conduct this study. The total cost of transportation, addition sensors and other equipment as well as tech support is likely to be at least \$300,000 over two years. If matching funds are made available, it could likely be initiated in 2009-2010.

Budget Implications: The OBWB should budget \$30,000 a year for 2009-10 and 2010-11 for matching funds to the Lake Evaporation project. It will require minimal OBWB staff time.

Box 2. Strategic Directions for Lake Evaporation

Okanagan Sustainable Water Strategy Recommendation

- *Collect physical meteorological data on evapotranspiration and lake evaporation to validate model outcomes and derive accurate estimates of evaporative water loss.*

Living Water Smart: The BC Water Strategy's Commitment

- *Government is expanding BC's hydrometric and other climate-related networks.*

3. Water Data Hosting and Management

The Water Supply & Demand Project is producing a large volume of essential data that form a baseline for predicting water trends in the valley. The data must be stored and updated over time and needs a stable location with ongoing tech support. The Project Steering Committee sees the OBWB as the optimal host for these data, maintaining the system and making the data available for users on an as-needed basis. The total project cost will be approximately \$165,000 over three years, with most of this paid by senior government partners.

Other ongoing Okanagan natural resource mapping and monitoring projects are also compiling data sets and models for long-term monitoring of water supplies in the Basin. This includes watershed risk assessments by water utilities, and the Okanagan Irrigation Management Tool for irrigators to improve water efficiency. The Province is also set to invest in expanding their water data collection and reporting (see Box 3, below). To get the most benefit, Okanagan data management systems must be integrated with BC data networks. These projects have a shared need to reduce redundancies, organize, store and provide information in an easily accessible form. There may be a role for the OBWB to host such data resources in the future.

Budget Implications: Initial expenses are relatively low, and will not exceed \$20,000/yr for the OBWB. The Water Supply & Demand funding partnership would provide the server and associated hardware and software costs. The OBWB would be responsible for establishing a secure location for the server with high speed internet access and providing tech support to maintain it. The best option would be for the OBWB to contract with another local government (as now with RDNO) for routine tech service.

Public sector users who need detailed reports, or model runs could make arrangements with a contractor already familiar with the system, at limited cost to the OBWB. This is the current arrangement with the International Joint Commission for information on Osoyoos

Lake. Industry could make similar arrangements for data access, but pay a user fee for upkeep of the system.

In the future, if the OBWB is seen as the best home for other information resources, appropriate partnerships and funding agreements can be worked out at that time. However, it is reasonable to assume that the OBWB may need to allocate more of its budget to information management in the future as the data and information from our own projects increases.

Box 3. Strategic Directions for Water Data Management

Okanagan Sustainable Water Strategy Recommendation

- *That the OBWB create and maintain an Okanagan Basin Information Network to support water management.*

Living Water Smart: The BC Water Strategy's Commitment

- *By 2012, government will require all large water users to measure and report their water use.*
- *Government will publish a report on the state of our water by 2012, and every five years after that.*

4. Groundwater Pilot Project

As Okanagan surface waters become fully allocated, residents and water utilities will turn to groundwater. There are few limits and no license requirements for well development in BC, even where groundwater is closely linked to surface sources. It is especially important to be proactive where development relies on this water resource.

In the South Okanagan, water levels are dropping in the Faulder aquifer. In the Central Okanagan there is concern about groundwater depletion in the Joe Rich area, and the potential for new developments on wells that are hydrologically connected to surface water supplies. There are also groundwater-reliant areas distributed throughout the North Okanagan, and development of new wells by water utilities and developments. On March 4th, 2008 the OBWB passed the following resolutions:

"That the Okanagan Basin Water Board encourages the B.C. government to license groundwater withdrawals starting with a pilot licensing program within the Okanagan Basin,

and

That the Okanagan Basin Water Board enter into discussions with the B.C. government to determine the scope and contents of the pilot licensing program within the Okanagan, and the most appropriate implementation and funding mechanisms for the program."

The Groundwater Pilot Project would include several components – developing a database for groundwater activity in the Okanagan, quantifying existing well withdrawals, updating local bylaws (implementing the groundwater bylaw toolkit), developing reporting systems for well drillers, and working with the Province to integrate this information into the surface water regulatory system. It would also require an extensive public consultation process.

Groundwater regulation, up to and including licensing, is permitted through the Water Act under a legislated Water Management Plan. BC's new commitments to regulating groundwater, and their investment in the Groundwater Assessment of the Okanagan Basin, make it very likely that they will support this effort.

Budget Implications: The Township of Langley is the first local government in BC to embark on this process. They invested more than \$130,000 in cash along with in-kind staff time over 2 years, and the Province provided \$300,000 for the public consultation process. A similar process in the Okanagan, with multiple jurisdictions and greater area will likely take \$765,000 over three years. Assuming a similar scale of provincial contribution, this would require \$70,000/year in OBWB matching funds.

Box 4. Strategic Directions for Groundwater Management

Okanagan Sustainable Water Strategy Recommendations

- *Develop a Pilot Project in partnership with the Province and local governments to improve groundwater regulations and requirements for groundwater monitoring.*
- *Prepare a Water Management Plan for the Basin that addresses groundwater licensing.*

Living Water Smart: The BC Water Strategy's Commitment

- *The Groundwater Protection Regulation will protect the quality and quantity of our groundwater.*
- *By 2012, government will regulate groundwater use in priority areas and large groundwater withdrawals.*
- *Government will support communities to do watershed management planning in priority areas.*
- *Government will improve the quality and protection of drinking water sources.*

5. Basin-wide Drought Plan or Water Use Plan

All Okanagan communities are connected hydrologically through the lake system. Some communities draw directly from the lakes, and others rely on reservoirs – diverting water before it can reach the lakes. As a consequence, lake levels and water availability during extended drought conditions are a shared responsibility of all Okanagan communities.

After the BC-wide water shortages in 2003, the government provided funding and a template for communities to develop drought response plans, and a number of Okanagan communities have now adopted plans. Water use plans are a mechanism for implementing a drought plan and resolving conflicts in a specific basin and address water use during non-drought periods, which benefits fisheries. Summerland has a water use plan, and others are underway or planned for Mission Creek and Middle Vernon Creek.

Nonetheless, individual drought plans and water use plans in the Basin are not coordinated with one another and do not have common trigger points. If the level of the Okanagan Lake begins to fall during an extended, multi-year drought, there are no agreements in place for how water utilities and license holders will coordinate their responses. Having these agreements would minimize the collective economic impacts of drought to all Okanagan communities by protecting water levels in the main lakes.

The process for basin-wide water use planning could proceed as follows:

1. Define the overall water balance for the Basin.
2. Establish the required flow regime for the Okanagan River, incorporating a 3-year drought scenario in the analysis.
3. Determine required contributions from each sub-basin for a range of drought conditions.
4. Complete water use plans for each sub-basin.
5. Revisit and refine the Okanagan River water use plan.

The Water Supply & Demand Project will form the basis for a basin-wide water use plan, and provide hydrologic modeling and drought scenarios. The greatest project costs will be in the development of water use plans for individual sub-basins, expanding on existing drought plans, and the consultation process to develop drought response agreements among all water utilities. All together, these costs will likely be \$450,000 – shared between many partners.

Budget Implications: The costs of developing water use plans for individual sub-basins could be shared between water utilities, the OBWB and the Province, and the OBWB should budget \$40,000/yr for 3 years for matching funds and seed grants and to support the public consultation process to develop the overall agreement.

Box 5. Strategic Directions for Drought Planning

Okanagan Sustainable Water Strategy Recommendation

- *Ensure water purveyors prepare and implement drought plans based on the Provincial template, with triggers corresponding to mainstem lake conditions as well as upper reservoirs.*
- *Prepare Water Use Plans for all major fish-bearing watercourses in the Basin in coordination with a Basin-scale Water Use Agreement that specifies responses of all communities to lake-level trigger points.*

Living Water Smart: The BC Water Strategy's Commitment

- *Government will require all users to cut back their water use in time of drought or where stream health is threatened*

6. Sustainable Water Strategy Public Outreach Workshops

The Okanagan Sustainable Water Strategy was created through a 2-year research effort by the Water Stewardship Council. It surveys the biggest issues facing water management in the Okanagan and makes a series of recommendations for actions by the OBWB, water purveyors, local governments, and provincial agencies. Developed by technical experts and water stakeholders, it sets the stage for a meaningful public conversation about how we use and value water and how to make water sustainability choices that work for all sectors of the community. This consultation process will involve the Water Stewardship Council and bring to bear the full value of the Sustainable Water Strategy.

Budget Implications: The total cost of a public consultation process would be approximately \$47,000.

7. Sustainable Water Strategy Implementation

The Okanagan Sustainable Water Strategy lays out the gaps and priorities for adapting to change in the coming decades. The projects listed above are the furthest developed. However, there are many other high-priority Water Management activities recommended by the Strategy to protect Okanagan water resources and benefit Okanagan local government including those listed below. All require adequate resourcing and staff support. For this reason, it is essential to provide matching grants and seed monies to initiate these projects and partnerships.

- Strategy Recommendation: Create a streamlined online data reporting system for water purveyors. **Partners:** Ministry of Community Development, Ministry of Environment
- Strategy Recommendation: Develop a Basin-wide community engagement strategy highlighting water conservation and pollution prevention. **Partners:** Okanagan water utilities, Ministry of Environment, Ministry of Healthy Living and Sport.
- Strategy Recommendation: Develop reporting tools that incorporate benchmarking and result-oriented focus to support the measuring, tracking, management, and accountability of water resources. **Partners:** Ministry of Community Development, Ministry of Environment
- Strategy Recommendation: Undertake an economic analysis of appropriate funding mechanisms to support Okanagan water governance base funding. **Partners:** UBC-Okanagan Sustainability Institute, Ministry of Community Development

Budget Implications: The OBWB should budget \$90,000/yr for three years to match external funds and implement actions from the Sustainable Water Strategy.

8. Regional Water Conservation Strategy

There is a need to coordinate water conservation in the Okanagan. Many communities with conservation programs are working independently. Water conservation professionals in the Okanagan have voiced a strong desire to collaborate, reduce redundancy among jurisdictions, and establish a mechanism to form and apply best practices that are informed by science.

Having sufficient supplies of clean water is essential for our quality of life and economy; and taking less water from streams benefits fish, wildlife, and the health of riparian corridors. Water-wealthy communities who divert less water from upper watersheds free up water downstream. For economic reasons, water providers want effective delivery of a public service when they use public funds. Saving water saves on per-capita costs of infrastructure.

A Regional Water Conservation Strategy would provide principles and policies on water conservation for Okanagan jurisdictions. The Strategy would guide best practices for the socio-political (e.g., education, restrictions, bylaws, regulations), economic (e.g., rebates, tax credits, fines), and operational (e.g., water efficient fixtures, metering, water audits) components of a conservation program. Water utilities and local governments could use the Strategy to design programs suited to their communities and consistent with the overall strategy for the Basin.

To build a Regional Water Conservation Strategy, local governments and ordinary citizens must recognize the importance of conservation, and take individual and collective responsibility, and its development must include public consultation. The OBWB has begun a program to convene the water conservation staff throughout the Basin, hosting workshops with invited speakers to share tools and resources. The OBWB is working with them to develop recommendations for

harmonized water conservation bylaws. The philosophy of this approach is that local water conservation professionals have the best knowledge of what will work in their communities.

Budget Implications: The OBWB budget should allocate \$2,500/yr for the Water Conservation Professionals group, the forum for developing a Regional Water Conservation Strategy, and for matching funds to collect and evaluate best practices.

Box 6. Strategic Directions for Water Conservation

Okanagan Sustainable Water Strategy Recommendation

- *Develop a Regional Water Conservation Strategy that contains principles, policies, and practices for adoption and implementation by local governments.*
- *Conduct a basin-wide domestic water pricing assessment to determine an appropriate water rate for basic “lifeline” volumes and appropriate block rates for increasing metered use.*

Living Water Smart: The BC Water Strategy’s Commitment

- *By 2020, water use in BC will be 33 percent more efficient.*
- *Fifty percent of new municipal water needs will be acquired through conservation by 2020*
- *Government will require more efficient water use in the agricultural sector.*

9. First Nations Capacity Building

The bands of the Okanagan Nation are key partners for Okanagan water management. In part, because of their cultural and spiritual values for water, and in part because they have extensive reserve lands that have not yet been developed, and potentially substantial water claims to irrigate these lands. The Okanagan Nation Alliance Fisheries Department is actively involved in restoring kokanee and sockeye salmon runs to the Okanagan lake system, and all bands are concerned about the quality and sustainability of water supplies.

Water resources are a central component of negotiations with the Province and the Government of Canada, for bands within and outside of the treaty process. The water claims of Okanagan bands – for irrigation and for protection of fisheries and the environment – will strongly impact the amount of water available for other Okanagan communities, potentially requiring buy-back of water license capacity and/or stringent conservation measures. These water needs are a large unknown in the Water Supply & Demand Project. It is in the best interest of Okanagan governments to have these claims resolved as swiftly as possible, to rationalize future license allocations to water utilities and drought response planning.

One of the primary obstacles to resolving claims is the lack of capacity – staff and resources – within Okanagan bands. This year, UBCM launched a pilot grant program for First Nations’ capacity building, matched by local governments. Whether or not this program is renewed, it would be valuable to help secure capacity-building funds for First Nations’ participation in water planning and data collection to move forward with their claims process.

Budget Implications: The OBWB should allocate up to \$10,000/yr of in-kind resources to support First Nations’ participation in water resource planning and collection of water quantity and quality data.

Appendix IV. Financial Review Schedules

Schedule A. 2009-10 Budget

Schedule B. 2009-10 Budget with Contribution Break-down

Schedule C. Three Year Budget Estimates 2010-12

Schedule D. 2006-09 Regional Projects Portfolio – Income & Expense Summary

Schedule A.

2009-10 Budget (DRAFT)

OBWB Water Management Program

	Budget 2009-10	Budget 2008-09	Actual 2007-08
REVENUE			
Okanagan Regional District Requisition			
RDOS	203,500	205,059	161,176
RDCO	545,750	548,836	429,320
NORD	175,750	180,998	138,218
<i>Requisition subtotal</i>	<i>925,000</i>	<i>934,893</i>	<i>728,714</i>
External grants	795,000	811,400	1,027,890
SWS - Strategy Implementation Reserve (2006-2008)	95,000	98,238	12,314
TOTAL REVENUE	1,815,000	1,844,531	1,768,918
EXPENDITURES:			
Program Operating Costs			
Administration			
Board of Directors	15,000	15,000	11,887
Employee Salaries and Benefits	260,000	236,700	231,252
Office overhead	40,000	24,500	15,338
Water Stewardship Council	20,000	20,000	8,945
Guest Speakers / Consulting Fees	15,000	15,000	13,085
Communication	18,000	18,000	11,163
<i>Operating Costs Subtotal</i>	<i>368,000</i>	<i>329,200</i>	<i>291,670</i>
Projects and Activities			
Supply & Demand Initiative: Phase II	50,000	723,400	990,890
Supply & Demand Initiative: Phase III	125,000	-	-
Lake Evaporation Study	150,000	-	-
Hydrometric Review	-	-	40,000
Groundwater Assessment of Okanagan Basin	-	75,000	5,000
Data management	50,000	-	-
Okanagan Groundwater Management Plan	315,000	-	-
Okanagan Drought Plan	150,000	-	-
Sustainable Water Strategy			
Public Outreach (workshops)	47,000	-	-
Strategy Implementation	200,000	103,000	108,093
Water Conservation Professionals program	10,000	10,000	-
Groundwater Bylaw Toolkit	-	97,000	-
Water Conservation & Quality Improvement Grant Initiative	300,000	500,000	300,000
First Nation Capacity Building - Support	50,000	-	-
<i>Okanagan Water Management Program subtotal</i>	<i>1,447,000</i>	<i>1,508,400</i>	<i>1,443,983</i>
TOTAL EXPENDITURES	1,815,000	1,837,600	1,735,653
Surplus (Loss)	-	6,931	33,265

Note 1. The 2008-09 Budget reflects the increased revenue realized/anticipated from external grants and their associated activity expenses.

Note 2. 2008-09 external grants on 07/25/08 are \$611,400 with \$200,000 anticipated.

Note 3. Endocrine Disrupter Project \$30k, CWRA conference \$5k, Domestic Irrigation Demand Project \$25k, Sustainable Water Strategy Development \$43k

Schedule B.

2009-10 Budget - Contribution Break-down (DRAFT)

OBWB Water Management Program

	Okanagan Contribution	External Contribution	Total
REVENUE			
Okanagan Regional District Requisition Note 1.			
RDOS	203,500		203,500
RDCO	545,750		545,750
NORD	175,750		175,750
<i>Requisition subtotal</i> Note 2.	<i>925,000</i>		<i>925,000</i>
External grants (estimate)		795,000	795,000
SWS - Strategy Implementation Reserve (2006-2008)	95,000		95,000
TOTAL REVENUE	1,020,000	795,000	1,815,000
EXPENDITURES:			
Program Operating Costs			
Administration			
Board of Directors	15,000	-	15,000
Employee Salaries and Benefits	260,000	-	260,000
Office overhead	40,000	-	40,000
Water Stewardship Council	20,000	-	20,000
Guest Speakers / Consulting Fees	15,000	-	15,000
Communication	18,000	-	18,000
<i>Operating Costs Subtotal</i>	<i>368,000</i>	<i>-</i>	<i>368,000</i>
Projects and Activities			
Supply & Demand Initiative: Phase II	30,000	20,000	50,000
Supply & Demand Initiative: Phase III	42,000	83,000	125,000
Lake Evaporation Study	30,000	120,000	150,000
Data Management	20,000	30,000	50,000
Okanagan Groundwater Management Plan	70,000	245,000	315,000
Okanagan Drought Plan	40,000	110,000	150,000
Sustainable Water Strategy			
Public Outreach (workshops)	27,500	19,500	47,000
Strategy Implementation	90,000	110,000	200,000
Water Conservation Professionals Program	2,500	7,500	10,000
Water Conservation & Quality Improvement Grant Initiative	300,000	-	300,000
First Nation Capacity Building - Support Note 3	-	50,000	50,000
<i>Okanagan Water Management Program Subtotal</i>	<i>652,000</i>	<i>795,000</i>	<i>1,447,000</i>
TOTAL EXPENDITURES	1,020,000	795,000	1,815,000
<u>Surplus (Loss)</u>	<u>-</u>	<u>-</u>	<u>-</u>

Note 1. Each Okanagan tax payer (based on annual authenticated assessments) contributes an equal rate throughout the Basin and receives over \$2 of water management services for each \$1 assessed contribution.

Note 2. The contribution percentages for regional requisition are based on population and when compared with total revenue are: RDOS 11%, RDCO 30%, NORD 10% and External Funds contribute 49% of the Budget total.

Note 3. OBWB will provide up to \$10,000 of in-kind staff and office support.

Schedule C.

Three (3) Year Budget (DRAFT)

OBWB Water Management Program

	2009-10	2010-11	2011-12
REVENUE			
Okanagan Regional District Requisition			
RDOS	203,500	203,500	203,500
RDCO	545,750	545,750	545,750
NORD	175,750	175,750	175,750
<i>Requisition subtotal</i>	<i>925,000</i>	<i>925,000</i>	<i>925,000</i>
External grants (estimate)	795,000	790,000	543,000
SWS - Strategy Implementation Reserve (2006-2008)	95,000	-	-
TOTAL REVENUE ^{Note 1}	<u>1,815,000</u>	<u>1,715,000</u>	<u>1,468,000</u>
EXPENDITURES:			
Program Operating Costs			
Administration			
Board of Directors	15,000	15,000	15,000
Employee Salaries and Benefits	260,000	267,000	275,000
Office overhead	40,000	40,000	40,000
Water Stewardship Council	20,000	20,000	20,000
Guest Speakers / Consulting Fees	15,000	15,000	15,000
Communication	18,000	18,000	18,000
<i>Operating Costs Subtotal</i>	<i>368,000</i>	<i>375,000</i>	<i>383,000</i>
Projects and Activities ^{Note 2}			
Supply & Demand Initiative: Phase II	50,000	-	-
Supply & Demand Initiative: Phase III	125,000	190,000	-
Lake Evaporation Study	150,000	150,000	-
Data management	50,000	40,000	75,000
Okanagan Groundwater Management Plan	315,000	225,000	225,000
Okanagan Drought Plan	150,000	150,000	150,000
Sustainable Water Strategy			
Public Outreach (workshops)	47,000	25,000	25,000
Strategy Implementation	200,000	200,000	200,000
Water Conservation Professionals program	10,000	10,000	10,000
Water Conservation & Quality Improvement Grant Initiative	300,000	300,000	300,000
First Nation Capacity Building - Support	50,000	50,000	100,000
<i>Okanagan Water Management Program subtotal</i>	<i>1,447,000</i>	<i>1,340,000</i>	<i>1,085,000</i>
TOTAL EXPENDITURES	<u>1,815,000</u>	<u>1,715,000</u>	<u>1,468,000</u>
Surplus (Loss)	<u>-</u>	<u>-</u>	<u>-</u>

Note 1. Transition occurs in 2011 from focus on water supply and demand initiative to implementing water management projects.

Note 2. Projects and Activity budget expenses include both OBWB contribution and external grants.

Schedule D.

Sustainable Water Strategy - Project Implementation

2006 - 2009 Income & Expense Summary

OBWB Water Management Program

	REVENUE	PROJECT COMMITMENTS	RETAINED PROJECT REVENUES
<u>2008-09</u>			
Project Budget (Revenue)	196,931		
TOTAL REVENUE	196,931		
Fixed Existing Commitments			
Water Supply and Demand Project		60,000	
Domestic Irrigation Demand Project		25,000	
Sustainable Water Strategy		40,000	
Endocrine Disruptor Project		30,000	
Groundwater Toolkit		20,000	
Water Conservation Professionals workshops		10,000	
CWRA / OBWB Conference		5,000	
TOTAL 08-09 EXPENDITURES		190,000	
<u>SURPLUS (LOSS)</u>		<u>6,931</u>	<u>97,252</u> NOTE 1
<u>2007-08</u>			
Project Budget (Revenue)	116,093		
TOTAL REVENUE	116,093		
Fixed Existing Commitments			
Hydrometric Monitoring Network Review		8,000	
Osoyoos Lake Water Science Forum		5,000	
Strategic Planning		7,672	
Staff Training		3,290	
Computer costs and Meeting Materials		1,810	
TOTAL 07-08 EXPENDITURES		\$25,772	
<u>SURPLUS (LOSS)</u>		<u>90,321</u>	
<u>2006-07</u>			
Project Budget (Revenue)	109,561		
TOTAL REVENUE	109,561		
Fixed Existing Commitments			
Websites and Logos		18,783	
Sponsorships and Conferences		4,950	
Computer costs and Meeting Materials		2,590	
TOTAL 06-07 EXPENDITURES		\$26,323	
<u>SURPLUS (LOSS)</u>		<u>83,238</u>	
<u>THREE (3) YEAR TOTALS</u>	<u>339,347</u>	<u>242,095</u>	<u>97,252</u>

NOTE 1

The SWS - Strategy Implementation Reserve was designed to provide the Board with funds to implement high-priority projects as they were identified by the Water Stewardship Council. Early in the first year, the Council determined that the most effective approach would be to carry over a majority of these funds into the final year so that they would be available to implement recommendations of the Sustainable Water Strategy.

Appendix V. Water Conservation and Quality Improvement Grants Terms of Reference

WATER CONSERVATION AND QUALITY IMPROVEMENT GRANTS PROGRAM TERMS OF REFERENCE:

1. Purpose

The Okanagan Basin Water Board (OBWB) recognizes the importance of fostering and enabling tangible, on the ground, water quality and conservation improvements. In addition to delivering successful projects put forward by local government and other water purveyors, this program will build a collaborative approach to water management and promote more uniform standards and best practices throughout the valley. The Water Board hopes that this program will increase knowledge sharing about effective programs, and lead to the development of innovative solutions.

Each community has its own goals for reducing consumption and ensuring and improving quality. The purpose of this Water Board grant program is to assist local government in addressing issues that enhance valley wide sustainable use of water. The Water Board wishes to foster innovative and collaborative projects that contribute to these goals that might otherwise lack funds to be implemented in a timely manner.

2. Program Funding

Up to \$300,000 per year will be made available by the Okanagan Basin Water Board for this assistance program.

Individual grants will be \$3000 minimum and \$30,000 maximum.

Total grant amounts available for each region are determined by the percentage share paid by that region in the annual Water Board requisition. Of the \$300,000 allocated, the 2007/08 funding eligibility by region would be:

Regional District of North Okanagan	\$57,900	(\$300,000 x 19.3%)
Regional District of Central Okanagan	\$176,100	(\$300,000 x 58.7%)
Regional District of Okanagan–Similkameen	\$66,000	(\$300,000 x 22%)

3. Eligible applicants

Eligible applicants are local governments. Projects from improvement districts that are water suppliers and recognized under the Local Government Act and Community Charter and projects from non government organizations will be considered if submitted by a local government (municipality or regional district) as being a valuable part of their water management strategy. Private companies or consulting firms are not eligible applicants.

4. Project criteria

Projects should demonstrate water savings or improvements to water quality. Projects put forward by improvement districts or non government groups must be supported by local government and should be consistent with water management planning objectives in respective jurisdictions.

Priority will be given to projects that have a measurable outcome and that demonstrate how goals will be met, have matching funding in place or applied for, and/or demonstrate a collaborative approach with other jurisdictions. Projects that address issues of basin wide significance and/or can be used as a model for other organizations will also be given priority.

Multi year programs are eligible for grants but will be re-submitted annually. Such programs are not ensured of continuing funding but will be assessed as part of the current applications.

5. Application Process

A grant application form is available from the Okanagan Basin Water Board office, and from the OBWB website. Regional District or local government applications should be forwarded to the Water Board with a council or board resolution. Applications from improvement districts or non-government organizations should be screened by the appropriate local government and those that best fit the water management plan of the region may be submitted by the sponsoring regional district or municipality with an accompanying endorsement (council or board resolution). There is no limit to the number of applications put forward – keeping in mind the budget allotted.

Guide to the Application:

- I. **Application Summary** ~ There are 3 types of entities that are eligible for this grant program: 1.) a regional district, 2.) a municipality and 3.) a not for profit organization (example: NGO or irrigation district) whose application is sponsored by either a regional district or a municipality
 - o Please indicate which regional district you are applying from
 - o Provide the full name of your organization
 - o If your organization is not a municipality or regional district, please indicate which local jurisdiction is sponsoring your application and will provide a formal letter with a council/board resolution accompanying the application.
 - o The project contact will be the main contact for all correspondence with the Okanagan Basin Water Board
 - o Provide an appropriate title for the project that describes the main activities. Examples are: “Water Metering and Outreach in Penticton”, “Water Quality Monitoring on Crazy Creek 2007”
 - o Indicate both the total amount you are requesting from the OBWB (to a maximum of \$30,000) and the total project budget including all funding sources.
- II. **Program Category** ~ The categories are NOT listed in order of priority, nor is this a comprehensive list of possible program categories. Indicate program activities that fall under each category, making sure to distinguish program activities in different categories.
 - A. **Hydrological data gathering:** Projects that collect stream or hydrological data. Examples are: streamflow monitoring, water quality data collection.
 - B. **Water Conservation Devices:** Installation of water conservation devices for domestic, industrial, institutional or agricultural users and/or offering incentives (such as rebates) for purchase and installation of such devices.
 - C. **Landscaping and Irrigation:** Landscaping or irrigation activities that demonstrate water conservation or quality improvements. Examples are: top soil amendments,

irrigation scheduling or Xeriscaping (including strategies such as lawn removal or other alternatives)

- D. **Education and Outreach:** Development and implementation of new educational programs directed at water conservation or quality improvement. Creation and promotion of outreach materials related to water conservation or quality improvements.
- E. **Water Use Monitoring/Metering:** Installation of water meters for domestic, industrial, institutional or agricultural users. This also includes other water monitoring/metering of licensed withdrawals and water audits or leak detection programs.
- F. **Habitat Inventory Mapping:** Projects that inventory and map riparian, stream, wetland or foreshore areas in order to protect ecosystems or are necessary prior to ecosystem restoration.
- G. **Source Protection Planning:** Projects that undertake planning initiatives for protecting source water, either surface or ground. This includes risk assessment for source areas, to identify potential and current impacts to water quality.
- H. **Restoration Projects:** Projects that will improve water quality through the restoration of riparian, stream, wetland or foreshore areas
- I. **Other:** projects that do not fit the above described categories.

III. Project Timeline Information ~ Indicate both the expected start and end date of your project and the timeline you expect for all activities necessary to complete your project. This is essential for progress reporting and grant recipient follow up.

IV. Funding Information ~ List all other sources of funding for this project, including government agencies, foundations or other grant agencies. Please include all in-kind contributions as well.

- o In the table: List each of the project expenditures, the amount of requested OBWB funding to be allocated to that project expenditure and the amount to be covered by other sources, including funds coming from the applicant's agency or organization itself. Indicate whether the "other sources" funding is an in-kind or direct contribution for that project expenditure.

V. Measurable Outcomes ~ Please be specific in listing the measurable outcomes of the project – using numerical references where possible. Example: percent consumption reduced, number of meters installed. Capacity building outcomes are also of interest, where the project enables the public and/or organization to continue aspects of the project on their own.

VI. Collaboration ~

- o Please indicate collaboration with other agencies and/or organizations in the upper box. Example: Friends of Crazy Creek Society, BC Ministry of Environment
- o Please indicate collaboration with other jurisdictions outside of your own in the lower box. The OBWB is interested in collaboration efforts that cross geographic lines whether among or within regional districts.

Please include a covering letter that will accompany the application form to outline the steps (methodology) to be taken to achieve the project goals and explain project objectives.

The application form and information is available from the Okanagan Basin Water Board office and website:

Attn: Genevieve Dunbar
Okanagan Basin Water Board

9848 Aberdeen Road
Coldstream, B.C.
V1B 2K9
Phone (250) 550-3779
Email: genevieve.dunbar@obwb.ca
OBWB website: www.obwb.ca

6. Application Deadlines

The application deadline for 2007/08 funding is **February 1, 2008**. Notifications of successful proposals will be made in mid-April 2008. Successful applicants in each Regional District will be awarded funds totaling up to the annual maximum indicated above. If all of the funds available to a Regional District are not allocated, the unused portion will be made available to the other regional districts.

7. Ineligible Programs

Despite the broad scope of the water conservation and quality initiative program, there are several types of projects that the Water Board does not intend to support:

- Previously undertaken work;
- Project costs should consist of items incremental to existing resources. Staff currently employed can not form part of the project cost.
- Compliance and enforcement of bylaws;
- Ongoing operational expenses;
- Capital projects that are growth driven and should be funded through DCCs; and,
- Work for private utilities.

8. Payment Process

There are two options for payment of grant monies awarded.

1.) The organization may submit invoices as follows:

- 25% of total grant amount upon award of grant
- 25% payment upon submission of a mid point progress report, completed using the “*Progress Report Template*” provided by the Okanagan Basin Water Board
- 50% upon project completion, and submission of the “*Project Accounting/Final Grant Invoice Form*” which includes a final progress report – provided by the Okanagan Basin Water Board

2.) The organization receiving the grant may invoice for the full grant sum at the end of the project with the submission of the “*Project Accounting/Final Grant Invoice Form*”, provided by the Okanagan Basin Water Board.

The grant recipient must inform the Okanagan Basin Water Board of the preferred method of grant payment/dispersal before commencing project. It is the responsibility of the grant recipient to manage all contracts resulting from or relating to this funding.

9. Progress Reporting

All grant recipients will be required to submit a progress report at approximately the half way point of project completion. The template is available from the OBWB and is also provided at the end of this document.

The OBWB will also conduct project reviews, typically consisting of a staff member meeting with the grant recipient as a follow up to the application and grant award process, and to gather additional information that may not have been provided in the grant application.

Irregardless of grant payment method chosen by the grant recipient, submission of the progress report is required.

10. Data Standards/Sharing Protocol

Those grant recipients completing projects that include a data gathering component will use the data standards provided by the Resource Information Standards Committee (RISC) (<http://ilmbwww.gov.bc.ca/risc/standards.htm>), a multi-agency committee responsible for establishing standards for natural resource inventories.

In addition, grant recipients that collect hydrometric or other data in the course of the funded project are required to make data publicly available upon project completion, and submit a copy to the OBWB for our files. Your acceptance of the WCQI grant is understood to be in compliance with these terms.

11. Media

All grant recipients will be required to submit a press release to local news media outlining the details of the grant. Please contact the OBWB if you would like additional background information in preparing your press release.

Appendix VI. Detailed Review of Water Conservation and Quality Improvement Grants

Water Conservation and Quality Improvement Grant Program: 2006-08.

Grant Summary – Amounts Awarded per year in each Regional District

	RDNO	RDCO	RDOS	Total
2006	\$56,400 3 recipients (6 applicants)	\$177,900 8 recipients (19 applicants)	\$65,700 4 recipients (6 applicants)	\$300,000 15 recipients (31 applicants)
2007	\$57,000 3 recipients (5 applicants)	\$176,700 9 recipients (16 applicants)	\$66,300 5 recipients (9 applicants)	\$300,000 17 recipients (30 applicants)
2008	\$96,500 5 recipients (7 applicants)	\$293,500 14 recipients (19 applicants)	\$110,000 8 recipients (11 applicants)	\$500,000 27 recipients (37 applicants)
Total	\$209,900 11 recipients (18 applicants)	\$648,100 31 recipients (49 applicants)	\$242,000 17 recipients (26 applicants)	\$1,100,00 59 recipients (98 applicants)

Regional District Okanagan Similkameen

2006 RDOS Grant Recipients

➤ Dole Valve Installation Project	Osoyoos Irrigation District
Project Budget: \$27,800 (includes cash and inkind from organization)	Grant Awarded: \$23,000

The District replaced flow control valves for all agricultural connections as the previous ones were worn through, and some connections were drawing up to 2 times their allotted amounts. The old valves were located underground making any maintenance inconvenient and expensive. This project saw the flow control valves changed to a more reliable type of valve, locating them above ground and leaving room for future installation of meters.

Outcomes of note:

- Large electricity and water savings with new valves, over \$12,000 saved with installation of first 6 valves in one year.
- Reduced flow to allocated amounts at each connection

Project Status:

- Complete (Fall 2007)

➤ Water Metering and Public Education Project	West Bench Irrigation District
Project Budget: \$25,000 (includes cash and inkind from organization)	Grant Awarded: \$22,000

West Bench Irrigation District (WBID) is located above Penticton in the South Okanagan. The West Bench Irrigation District has 145 acres of irrigated land. West Bench Irrigation District installed water meters at all parks, commercial and agricultural locations. The other portion of the project was a public education component including hand delivered newsletters and radio advertising.

Project Status:

- Complete (Winter 2007)

➤ Penticton Creek Flow Measurement	City of Penticton
Project Budget: \$12,077 (includes cash and inkind from organization)	Grant Awarded: \$10,000

The City of Penticton holds water licenses on both Penticton and Ellis Creeks for irrigation and domestic water supply. Both creeks are fish producing streams and require adequate flows to be maintained. Flow measurement is also important for evaluating watershed storage capacity and water conservation measures. The City of Penticton installed an ultrasonic sensor on Penticton Creek. The sensor emits a radio frequency to the top of the water in the creek, which is then translated into distance – determining water levels. Flow is then calculated using standard engineering formulas.

Outcomes of note:

- This project contributes to the hydrometric monitoring network in the Okanagan Basin, for future basin-wide hydrologic and water budget analyses.

Project Status:

- Complete (Winter 2006)

➤ Low Flow Toilet Rebate Program	Regional District Okanagan Similkameen
Project Budget: \$35,000 (includes cash and inkind from organization)	Grant Awarded: \$10,700

RDOS initiated a pilot toilet rebate program for the Okanagan Falls Sewer area as a domestic water conservation measure, with individual rebates of \$50 per newly installed low flow toilet. This program also included public education on water conservation during the summer months.

Project Status:

- Complete (Fall 2006) for public education program and establishment of Toilet Rebate program. Rebates made available until available funds used up

2007 RDOS Grant Recipients

➤ Sensitive Habitat Inventory Mapping Project	Regional District Okanagan Similkameen
Project Budget: \$66,600	Grant Awarded: \$16,350
In Kind Support: \$12,750	Other direct funders: \$30,000
Other funders and project partners: Real Estate Foundation of BC, Regional District Central Okanagan, DFO staff, RDOS	

Sensitive Habitat Inventory Mapping was initiated in the South Okanagan over Spring/Summer 2007 with mapping efforts concentrated in areas of high development, such as the east side of Skaha Lake. Environmental activities in this respect are new for RDOS. Projects that contribute data to large regional projects are given high priority for this grant program; SHIM has been completed extensively in the Central Okanagan Regional District thus efforts in RDOS will complement this information.

Outcomes of note:

- This project discovered numerous streams on older maps that do not, in fact, exist so that mapping in the Skaha Lake area is now much more accurate, in addition other areas with high

fisheries values, unrecorded watercourses and inaccurate stream locations have also been accurately mapped

- RDOS used own staff to do most of the mapping work trained by staff at RDCO.

Project Status:

- Complete (Winter 2007 – Spring 2008);

➤ Low Flow Toilet Rebate Program	Regional District Okanagan Similkameen
Project Budget: \$37,000 (includes cash and inkind from organization)	Grant Awarded: \$21,450

This project compliments the education program undertaken by RDOS with 2006 WCQI grant funds. This project will contribute to reductions in water demand. RDOS has budgeted for 200 rebates for this program at \$50 each with \$11,450 being spent on education.

Project Status:

- Complete (Fall 2007) for public education program and advertising of Toilet Rebate program. Rebates made available until available funds used up

➤ Web Based Irrigation Management Software	District of Summerland
Project Budget: \$88,000	Grant Awarded: \$12,500
In Kind Support: \$10,000 (District of Summerland & Greater Vernon Services)	BC/Canada Water Supply Expansion Program: \$45,000 (direct)
Other funders and project partners: Greater Vernon Services – Water, District of Summerland, Ministry of Agriculture	

This project has created a web based tool for farmers to access real time information about their water usage. Farmers will be able to compare this information to the water demand based on climate, soil, crop type, etc... to better assess their water use efficiency. This is a joint project between the District of Summerland and Greater Vernon Services and the product will be used by agricultural customers in both areas.

Outcomes of note:

- This project is integrated with the Water Supply and Demand Project, using the Agricultural Water Demand Model developed for the Basin.
- Other water purveyors are easily integrated into this web tool and only need to provide utility billing/irrigation information for each connection in order to assess water efficiency.

Project Status:

- In-progress (Spring 2008); tool has been implemented for 2008 irrigation season as trial run

➤ Agricultural Metering Project	Town of Osoyoos
Project Budget: \$26,597 (includes cash and inkind from organization)	Grant Awarded: \$11,000

This project is providing information about agricultural water use for different crop types and supports the Water Supply and Demand Project. Agricultural metering is given a high priority for this grant program.

Outcomes of note:

- In total 16 meters have been installed to monitor quantity differences between tree fruit varieties and vineyards.

Project Status:

- In-progress (Spring 2008); final installations to be completed by August 2008

➤ Ellis Creek Flow Monitoring Project	City of Penticton
Project Budget: \$35,000 (includes in-kind and cash from organization)	Grant Awarded: \$5,000

The City of Penticton installed flow monitoring equipment for Ellis Creek. Hydrometric monitoring is a high priority for the OBWB and vital for future water budgeting in the Basin, in addition to contributing to the hydrometric network of BC. This is an extension of a 2006 WCQI grant project where similar flow monitoring was completed for Penticton Creek.

Outcomes of note:

- This project contributes to the hydrometric monitoring network in the Okanagan Basin, for future basin-wide hydrologic and water budget analyses.

Project Status:

- Complete (Fall 2007)

2008 RDOS Grant Recipients

As of early July 2008, all 2008 Regional District Okanagan Similkameen recipient projects are either in progress or will be initiated shortly. Recipients have been notified that projects must be complete by March 2009.

➤ Osoyoos Lake Sediment Core Project	University of British Columbia - Okanagan
Project Budget: \$25,500	Grant Awarded: \$14,000
In-kind Donations: \$11,500	Other Direct Funders: \$2,000
Other funders and project partners: Ministry of Environment, Queens University, Okanagan Nation Alliance, Osoyoos Lake Water Quality Society	

UBC-O researchers are establishing historic water quality information for Osoyoos Lake; using nutrient characteristic information from pre-settlement time will provide for more accurate and achievable nutrient targets to be established for the lake today. This project is in response to the outcomes of the Osoyoos Lake Water Science Forum, where Action #2 in the Summary report specifically asks for historic water quality reconstruction.

Outcomes of note:

- Core samples taken in Spring 2008 have been analyzed for nutrient content and to reconstruct historic water quality; these samples have also been reserved for future analysis of pesticide and chemical residues when funding permits (estimate 2009).

Project Status:

- In-progress

➤ Irrigation Scheduling Naramata Water System	Regional District Okanagan Similkameen
Project Budget: \$45,000 (includes cash and inkind from the organization)	Grant Awarded: \$25,000
	Other Direct Funders: \$5,000
Other project partners: Naramata Water System	

The regional district provided a pilot group of irrigators with equipment and information to schedule irrigation and then compared against a control group without access to equipment as a way of showing how much water can be saved with irrigation scheduling practices. The goal is to help all irrigators to become more efficient. A portion of this project also involves installing water meters on properties who participated in the study – helping to overcome resistance to metering.

Project Status:

- Soon to be initiated

➤ Park Rill Restoration and Stewardship Project	Regional District Okanagan Similkameen
Project Budget: \$12,800 (includes cash and inkind from the organization)	Grant Awarded: \$6,000
Inkind Donations: \$6,500	
Other funders and project partners: Ducks Unlimited Canada, TD Great Canadian Shoreline Cleanup, Friends of Park Rill, South Okanagan-Similkameen Stewardship Program	

RDOS in partnership with Ducks Unlimited Canada, the South Okanagan Similkameen Stewardship Program and the Friends of Park Rill are undertaking stream restoration work in order to begin rehabilitation of this area. Education and outreach complements this program in order that restoration efforts can be maintained and enhanced.

Project Status:

- In-progress or soon to be initiated

➤ Skaha Lake Shoreline Study	Regional District Okanagan Similkameen
Project Budget: \$37,346 (includes cash and inkind from the organization)	Grant Awarded: \$16,000
Inkind Donations: \$8,000	Other Direct Funders: \$13,346
Other funders and project partners: Department of Fisheries and Oceans, City of Kelowna, Okanagan Nation Alliance, Regional District Central Okanagan	

RDOS is completing foreshore inventory mapping for Skaha Lake, using the Foreshore Inventory Mapping methodology and tools previously developed throughout the province. This is also the same technique used for the North Okanagan foreshore mapping project. This project contributes data to a large regional initiative and enhances foreshore planning and development to incorporate ecologically sensitive areas. This project is an excellent partnership as it utilizes resources in the valley already developed.

Project Status:

- In-progress or soon to be initiated

➤ Sensitive Habitat Inventory Mapping (SHIM)	District of Summerland
Project Budget: \$21,000 (includes cash and inkind from the organization)	Grant Awarded: \$12,000
Inkind Donations: \$7,500	
Other project partners: Department of Fisheries and Oceans, Summerland Environmental Science Group, RDOS, South Okanagan Similkameen Conservation Program	

District of Summerland is completing SHIM on priority watercourses in the municipality, in order to better assist planning staff with guidance on environmental management decisions. This is the first SHIM project for Summerland. Projects that contribute data to large regional projects are given high priority for this grant program. SHIM has been completed extensively in the Central Okanagan Regional District, in addition to areas in RDOS and the North Okanagan, thus efforts in Summerland will complement and build upon this information.

Project Status:

- In-progress or soon to be initiated

➤ Fencing at Thirsk Lake Reservoir to Improve Water Quality	District of Summerland
Project Budget: \$45,000 (includes inkind from the organization)	Grant Awarded: \$15,000
Inkind Donations: \$10,000	Other Direct Funders: \$20,000
Other funders and project partners: Ministry of Forests and Range, Gorman Bros. Lumber Ltd., Ministry of Sports, Tourism and the Arts, Ministry of Environment	

Thirsk Lake is a primary reservoir for the District of Summerland water supply where cattle access and recreation activities are threatening water quality and increasing the potential for nutrient loading and introduction of bacterial contamination. This fencing project creates a barrier for both cattle and recreational users with a maintenance plan to be carried out by the Ministry of Forest and Range.

Project Status:

- In-progress or soon to be initiated

➤ Ellis Creek Irrigation System Flow Measurement	City of Penticton
Project Budget: \$32,000 (includes cash and inkind from the organization)	Grant Awarded: \$8,000

This project complements the work completed in the summer of 2007 which installed hydrometric monitoring equipment on the lower reaches of Ellis Creek and the 2006 installation of flow monitoring on Penticton Creek.

Outcomes of note:

- This project contributes to the hydrometric monitoring network in the Okanagan Basin, for future basin-wide hydrologic and water budget analyses.

Project Status:

- In-progress or soon to be initiated

➤ Rewatering of Quintal and Winters Oxbows	Osoyoos Oxbows Restoration Society
Project Budget: \$70,000 (includes cash/inkind from previous fundrasing of the organization)	Grant Awarded: \$14,000
Inkind Donations: \$6,000	Other Direct Funders: \$9,500
Other funders and project partners: Ducks Unlimited Canada, Ministry of Environment, Fisheries and Oceans Canada, Town of Osoyoos, Osoyoos Indian Band, Osoyoos Lake Water Quality Society, Georgia Laine Development and Okanagan River Restoration Initiative	

This project is re-watering Winters and Quintal Oxbows through the Summer of 2008 in order to assess the impacts to water quality for water entering Osoyoos Lake. By incorporating the oxbows in the current flow pattern, the Osoyoos Oxbow Restoration Society believes that water quality will improve, so the Oxbows Restoration Society is providing updates on water quality parameters to interested agencies with continuous data collection occurring throughout the trial period.

Project Status:

- In-progress

Regional District Central Okanagan

2006 RDCO Grant Recipients

➤ Reservoir Storage Review and Limestone Nutrient Study	Lakeview Irrigation District
Project Budget: \$21,395.02 (includes cash and inkind from organization)	Grant Awarded: \$17,050

There were two aspects to the this project at Lakeview Irrigation District; the first one to determine potential additional water storage sites and the second to field test a method for improving water quality by reducing nutrient levels. Opportunities for additional storage sites exist at a few locations in the watershed, so a feasibility analysis was completed for each. It has been noted that water diverted from Lambly Creek to the Rose Valley Reservoir accounts for approximately 50% of nutrient loading in the reservoir, which encourages algae growth. LID field tested slow filtration through limestone as a means to improve the water quality at the point of diversion, attempting to reduce the dissolved nutrients in the reservoir overall.

Outcomes of note:

- The nutrient experiment was successful in showing that limestone removes phosphorus from the water, so that the experiment has been 'scaled up' to placing a limestone filled pipe at the bottom of the reservoir and flowing nutrient rich water through it in-situ.
- Lakeview Irrigation District has contributed \$5000 a year for three years in extra funding to keep this project running.

Project Status:

- Storage review complete (Winter 2006); Nutrient Study continuing for three years (Spring 2008)

➤ Wonder of Water Exhibit at Environmental Education Centre for Okanagan (EECO)	Regional District Central Okanagan
Project Budget: \$36,720 (includes cash and inkind from organization)	Grant Awarded: \$20,000

The EECO centre designed and hosted a feature exhibit on water conservation and history of water use in the Okanagan Valley from April to August 2007. Components of the exhibit focused on water conservation and personal responsibility for the use of water, in addition to highlighting the history of water in the Okanagan. Inspiration for exhibit design was drawn from the Okanagan Waterscape Poster, where portions of the poster became their own 3-dimensional display unit or station in the exhibit.

Outcomes of note:

- The exhibit was well received within the community with over 12,700 visitors between April 28 and August 16 of 2006.
- Some display pieces were kept for future use and/or to loan out to other education centres in the Okanagan
- Over \$16,000 worth of in-kind donation of staff time for construction and staffing of exhibit.

Project Status:

- Complete (Winter 2006)

➤ The Waterscape Poster – Teacher’s Guide to the Poster	Central Okanagan Science Opportunities for Kids Society (SOKS)
Project Budget: \$36,720 (mostly in-kind from project partners)	Grant Awarded: \$20,000
Other funders and project partners: Greater Vernon Services, City of Penticton, Wild BC	

This project is based on the Okanagan Waterscape Poster produced by Natural Resources Canada and many other agencies. Science Opportunities for Kids Society (SOKS) developed a teacher resource package to accompany the Waterscape Poster so that teachers may use the information more effectively in the classroom – at all levels of elementary classes, and some high school grades. The teacher guide follows BC curriculum using the model built by the Bow Valley River Basin (Alberta) waterscape initiative and their related teacher resource package. The Teacher’s Guide is available online and has been publicized throughout the Okanagan. The resources developed from this project are great learning tools for children and provide a framework for teachers to bring the concepts to life.

Outcomes of note:

- Many in-kind contributions from teachers and other environmental educators in the Okanagan to enhance the resource
- Resource guide posted to SOKS website, linked to OBWB

Project Status:

- Complete (early Spring 2007)

➤ Sensitive Habitat Inventory Mapping (SHIM) Project	City of Kelowna – Environment Division
Project Budget: \$50,000 (includes cash and in-kind from organization)	Grant Awarded: \$25,000

The City of Kelowna used a WCQI grant to extend the Sensitive Habitat Inventory Mapping (SHIM) to several City creeks – adding to the information gathered for Mill Creek and Bellevue Creek in 2005. SHIM is a Geographic Information System (GIS) based technique, used to determine the accurate location of creeks, and to identify and inventory their riparian habitats and associated fisheries attributes. The information is used by local governments for land use planning. This project mapped a number of creeks in the city of Kelowna – Fascieux, Brandts, Priest, Lebanon, Thompson and Rumohr Creeks.

Outcomes of note:

- This project was the first SHIM project funded with the Water Conservation and Quality Improvement Grant Program; in successive years more SHIM projects were funded by this grant program in an effort to improve data for land use decisions and increase cohesive valley wide data.
- A total of 52.23 km of stream bed was mapped, exceeding the City of Kelowna's expectations for the project

Project Status:

- Complete (Winter 2006)

➤ Real Time Hydrometric Monitoring of Mission Creek	Black Mountain Irrigation District
Project Budget: \$30,000	Grant Awarded: \$30,000

Hydrometric monitoring is a high priority for the OBWB and vital for future water budgeting in the Basin, in addition to contributing to the hydrometric network of BC. This hydrometric monitoring project will better manage flow in Mission Creek for resource values and also allow BMID to better manage water for their customers. In order to achieve this, the BMID is installed a real time data monitor at the Mission Creek intake that ties into BMID's SCADA system. In addition, BMID is accessing data from a downstream real time monitoring station operated by the Water Survey of Canada (WSC).

Project Status:

- In-progress, nearing completion

➤ Universal Water Metering - Peachland	District of Peachland
Project Budget: \$994,682 (including cash and in-kind from organization)	Grant Awarded: \$27,242.50
Other funders and project partners: Westside Joint Water Committee	

The District of Peachland was awarded a WCQI grant as partial funding for a universal metering program. This was a joint project with all five water suppliers in the Westside Joint Water Commission (WJWC), as all water purveyors utilized the same company to take advantage of economies of scale. In conjunction with this metering project, the District of Peachland has determined a volume based pricing scale for water and created a bylaw around this. A public education program for water conservation was also implemented as part of the metering initiative.

Outcomes of note:

- Many cost efficiencies and economies of scale were used in this project by partnering with the Westside Joint Water Committee
- The District of Peachland has continued toward sustainable water management in developing a Master Water Plan, including demand management strategies.

Project Status:

- Complete (Spring 2007)

➤ Universal Water Metering - Westbank	Westbank Irrigation District
Project Budget: \$1,800,000 (includes cash and in-kind from organization)	Grant Awarded: \$27,242.50
Other funders and project partners: Westside Joint Water Committee	

The Westbank Irrigation District used a WCQI grant to help support their universal metering program. Commercial and residential customers received meters between 2006 and 2007, and agricultural customers were metered in 2007. The Westbank Irrigation District used the same company as other members of the Westside Joint Water Commission, to take advantage of economies of scale.

Project Status:

- Complete (early Spring 2007)

➤ Okanagan Lake Best Management Practices – Illustrations	Regional District Central Okanagan
Project Budget: \$15,000 (includes cash and inkind from organization)	Grant Awarded: \$5,000

With a WCQI grant, the Central Okanagan Regional District commissioned a graphic artist to sketch representations of best management practices highlighted by the Okanagan Lake Foreshore Plan in order to enhance public understanding. The graphics portray a range of practices applicable to rural and urban developments, tourist, residential, transportation and agricultural uses.

Project Status:

- Complete (Fall 2006)

2007 RDCO Grant Recipients

➤ Mission Creek Water Use Plan	Black Mountain Irrigation District
Project Budget: \$117,500	Grant Awarded: \$30,000
In Kind Support: \$22,000	Other Direct Funders: \$87,500
Other funders and project partners: Ministry of Environment, RDCO, South East Kelowna Irrigation District, Habitat Conservation Trust Fund	

A Water Use Plan for Mission Creek was developed to address large scale water use challenges such as competition for water between fish, farmers and domestic users. The Water Use Plan involves a cooperative decision making process to agree on tradeoffs during water shortages. A portion of this project will improve understanding of instream supply and demand. A number of agencies have contributed financial and in-kind resources for this project.

Outcomes of note:

- This project demonstrates great partnership between agencies and good linkage between other basin scale projects, such as the Water Supply and Demand Project.
- Water Use Plans are valuable planning tools that assist water managers in decision making during low water or drought conditions.

Project Status:

- In-progress (Spring 2008)

➤ Wetland Inventory Mapping	City of Kelowna, Environment Division
Project Budget: \$50,000 (includes cash and inkind from the organization)	Grant Awarded: \$20,000
	Other Direct Funders: \$5,000
Other funders and project partners: City of Kelowna, Ducks Unlimited Canada	

The City of Kelowna Environment Division has completed substantial amounts of habitat mapping using the SHIM (Sensitive Habitat Inventory Mapping) method for watercourses. This mapping is useful for planning purposes and aids in conservation and protection of sensitive habitat areas. The Wetland Inventory Mapping project extended this manner of mapping to wetland habitats in the City of Kelowna.

Outcomes of note:

- Over the course of the project, a total of 145 wetlands including 75 previously unknown and unmapped wetlands were inventoried and mapped.

Project Status:

- Complete (Winter 2007)

➤ Sensitive Habitat Inventory Mapping (SHIM) – Lambly Creek Watershed	Lakeview Irrigation District
Project Budget: \$35,00 (includes cash and inkind from the organization)	Grant Awarded: \$30,000
Other project partners: Regional District Central Okanagan	

SHIM in Lakeview Irrigation District targeted data collection in areas where water quality has been impacted through erosion; indicated where restoration is appropriate, and will form a component of the Source Protection Plan for the watershed. This project will contribute data for the Central Okanagan area and complement efforts by RDCO to accurately map the region.

Outcomes:

- Data on erosion and human impacts to stream banks has assisted the Source Protection Plan that Lakeview Irrigation District is completing with a WCQI grant in 2008.

Project Status:

- Mostly complete (Fall 2007), last of stream GPS mapping to be completed by August 2008

➤ Outreach for the Waterscape Teachers Guide	Central Okanagan Science Opportunities for Kids Society
Project Budget: \$85,000 (includes cash and inkind from the organization)	Grant Awarded: \$20,000
	Other Direct Funders: \$65,000
Other funders and project partners: Central Okanagan Foundation, Vancouver Foundation, Honda Foundation, Direct Access Gaming Grants – Province of BC	

As a follow up to funding the development of a teacher's guide to the Waterscape Poster, SOKS was awarded a grant to develop an outreach program. This phase facilitated outreach and instruction to teachers on how to implement the Teacher's Guide to the Waterscape Poster with their students by demonstrating use of the Teacher's Guide, through hands on activities, in various classrooms.

Outcomes of note:

- The OBWB funding component to this project is what enabled it to come to fruition
- This teaching resource is a relevant local information document for educators in the Okanagan into the future.

Project Status:

- Complete (early Spring 2008)

➤ Joe Rich Creek Channel Restoration	Regional District Central Okanagan
Project Budget: \$83,000 (includes cash and inkind from the organization)	Grant Awarded: \$15,000
Inkind Donations: \$13,586	Other Direct Funders: \$46,000
Other funders and project partners: City of Kelowna, Black Mountain Irrigation District, Ministry of Environment, Cattlemens Association (Environmental Farm Plan)	

This project restored and enhanced a 1.7 km section of stream by establishing riparian planting, erecting livestock exclusion fencing, and installing 12 rock riffle structures to reduce stream energy and improve channel stability, stream shading and long term water quality. This project was a collaborative effort incorporating multiple levels of government and stakeholders with both direct and in kind contributions.

Outcomes of note:

- The grant awarded was instrumental in leveraging funding from the Environmental Farm Plan Funding (Cattleman's Association).
- This project received much media attention and was able to highlight the value in building partnerships among many agencies.
- Before and after photos of this project show the riparian area restored is growing rapidly and much healthier.

Project Status:

- Complete (Fall 2007), ongoing monitoring of project to continue

➤ Farm Drought Risk Management	UBC – Okanagan
Project Budget: \$22,857 (includes cash and inkind from the organization)	Grant Awarded: \$17,857
Other project partners: BC Ministry of Agriculture and Lands, Pacific Agricultural Research Centre	

This study has surveyed farmers throughout the entire Okanagan Valley to determine the strategies they use to prepare for water shortage, how they cooperate for water conservation and manage drought risk. Understanding how farmers maximize water resources is important for developing policy for agricultural water use efficiency throughout the valley.

Project Status:

- In-progress (Spring 2008)

➤ Hydrometric Monitoring – Powers Creek	Westbank Irrigation District
Project Budget: \$17,000 (includes cash and inkind from the organization)	Grant Awarded: \$11,843
Other project partners: Regional District Central Okanagan	

Hydrometric monitoring stations on Upper Powers Creek were installed to determine how ground water extraction by proposed development affects surface water supply to the district.

Outcomes of note:

- The findings of this study expand our base of knowledge about groundwater supply and complement the Groundwater Assessment of the Okanagan Basin.

Project Status:

- In-progress (Spring 2008)

➤ Groundwater Protection Planning – Phase 2	Kelowna Joint Water Committee
Project Budget: \$28,000 (includes inkind from the organization)	Grant Awarded: \$10,000
	Other Direct Funders: \$14,000
Other funders and project partners: all five water purveyors of the Kelowna Joint Water Committee (BMID, SEKID, GEID, Rutland Waterworks, City of Kelowna)	

The Kelowna Joint Water Committee (KJWC) has accurately delineated well capture zones in addition to completing an inventory of contaminant sources within these zones in order to provide risk management recommendations for water supply.

Outcomes of note:

- This Groundwater Protection Planning has contributed data to ongoing research work being conducted by the Groundwater Assessment of the Okanagan Basin and the Canadian Water Network.

Project Status:

- Complete (Winter 2007)

➤ Management Plan for Water Levels on Ellison (Duck) Lake	Oceola Fish and Game Club
Project Budget: \$40,000 (includes inkind from the organization)	Grant Awarded: \$22,000
Inkind Donations: \$18,000	
Other funders and project partners: District of Lake Country, Okanagan Indian Band, BC Ministry of Environment, City of Kelowna	

This project involved monitoring water levels on Ellison Lake and Middle Vernon Creek by re-installing two water level recorders. The Oceola Fish and Game Club also undertook a planning process for lake and stream management to develop a voluntary water level management plan. This project supports coordinated water management planning and is a collaborative effort with support from Ministry of Environment, First Nations and many other partners bridging fisheries and agriculture interests.

Outcomes of note:

- A voluntary plan for managing lake levels has been produced and all work currently completed is contributing to creation of a Water Use Plan in 2009.

Project Status:

- Complete (Spring 2008)

2008 RDCO Grant Recipients

As of early July 2008, all 2008 Regional District Central Okanagan recipient projects are either in progress or will be initiated shortly. Recipients have been notified that projects must be complete by March 2009.

➤ Okanagan Deep Lake Biology Study	District of Lake Country
Project Budget: \$49,000	Grant Awarded: \$30,000
Inkind Donations: \$9,000	Other Direct Funders: \$10,000
Other funders and project partners: Ministry of Environment, all Water Purveyors with intakes on Okanagan Lake, Interior Health Authority, City of Kelowna, City of Penticton	

This project has taken water samples from 10 Okanagan Lake water intakes in addition to deep lake water samples to analyze for algae and *E.coli* bacterial amounts. This project is a partnership among water purveyors with intakes on Okanagan Lake and has in-kind contributions from water professionals in the community.

Outcomes of note:

- Improved planning for deep lake intakes and water treatment options of Okanagan Lake water

Project Status:

- In-progress or soon to be initiated

➤ Preliminary Hydrogeological Assessment of Joe Rich	Regional District Central Okanagan
Project Budget: \$5,000 (includes cash and inkind from the organization)	Grant Awarded: \$2,500

This project conducted a preliminary investigation into groundwater aquifers in the Joe Rich area to determine locations where further detailed investigation may be warranted. RDCO may incorporate other resources into this study, including the new "State of the Basin, Groundwater Report" from the Water Supply and Demand Project and additional information on groundwater development compiled by a local consultant on the Joe Rich area.

Project Status:

- Completed (Spring 2008)

➤ Water Master Plan – Phase 1 Implementation	District of Peachland
Project Budget: \$50,000 (includes cash and inkind from the organization)	Grant Awarded: \$20,000
Other project partners: Westside Joint Water Committee, Regional District Central Okanagan	

As part of Peachland's new domestic water meter installation and as a result of the Master Water Plan, the District will establish a new water conservation bylaw including rate structure to promote equitable billing and cost recovery. This project will also examine suitable sites for future water treatment plant (water quality improvements) and expansion of reservoirs (hydrologic assessment).

Outcomes of note:

- Water consumption reduced by 25% for domestic connections in Peachland.

Project Status:

- In-progress

➤ Landscape and Irrigation Standards for Water Efficiency	City of Kelowna
Project Budget: \$77,500 (includes cash and inkind from the organization)	Grant Awarded: \$25,000
Other funders and project partners: Westside Joint Water Committee, Kelowna Joint Water Committee, Irrigation Association of BC, Professional Landscape Association of BC	

The City of Kelowna has created a draft Landscape and Irrigation Standards bylaw to be implemented after final stakeholder review, development of public education materials and a pilot program to measure impact of the standards on peak demand. This project has been developed in conjunction with the landscape industry and other collaborative efforts.

Outcomes of note:

- This project can be used as a model for other communities to undertake similar initiatives.

Project Status:

- In-progress

➤ Delineating Kelowna/Wood Lake Buried Valley Using Seismic Reflection	Regional District Central Okanagan
Project Budget: \$193,000 (includes cash and inkind from the organization)	Grant Awarded: \$25,000
Inkind Donations: \$100,000	Other Direct Funders: \$68,000
Other funders and project partners: Geological Survey of Canada, BC Ministry of Environment, Simon Fraser University, UBC - Okanagan	

This project is a component of the Groundwater Assessment of the Okanagan Basin (GAOB); completed by researchers from the Geologic Survey of Canada. Results of the seismic data collection include bedrock layer identification and 3D mapping to create a hydrogeological model of the major aquifer systems in the central Okanagan. The model will be used for groundwater resource management and to assess aquifer vulnerability.

Outcomes of note:

- As a result of this grant, RDCO was able to ensure this project will go ahead with large in-kind support from the Geologic Survey of Canada.
- This project is a large water science initiative within the Okanagan, contributing to the OBWB's goals of becoming a centre for water science and research in western Canada.

Project Status:

- To be initiated September 2008

➤ RDCO and City of Kelowna – SHIM Completion Project	City of Kelowna
Project Budget: \$65,000 (includes cash and inkind from the organization)	Grant Awarded: \$25,000
Other project partners: Regional District Central Okanagan, Community Mapping Network	

This project is the final phase in 6 years of stream mapping to ensure all streams within City and Regional District limits are accurately mapped and inventoried. Information will be shared on the Community Mapping Network so it is available to the public, consultants and other levels of government.

Outcomes of note:

- This project demonstrates solid partnerships and will add to basin wide data, two aspects that are given a high priority for this grant program.

Project Status:

- In-progress

➤ Phase III – Groundwater Protection Planning	Kelowna Joint Water Committee
Project Budget: \$62,000 (includes cash and inkind from the organization)	Grant Awarded: \$25,000
Other funders and project partners: Black Mountain Irrigation District, City of Kelowna, Glenmore Ellison Improvement District, South East Kelowna Irrigation District, Rutland Waterworks (five water purveyors of KJWC)	

This is a continuation of groundwater protection efforts, undertaken by the Kelowna Joint Water Committee, to develop groundwater protection measures, implement these measures and establish contingency and emergency response planning processes.

Outcomes of note:

- Groundwater Protection Planning is a component of Source Protection Planning, which is a high priority for the Okanagan Basin Water Board

Project Status:

- In-progress or soon to be initiated

➤ Upper Mill Creek – Off Channel Watering Study	Glenmore Ellison Improvement District
Project Budget: \$20,000 (includes cash and inkind from the organization)	Grant Awarded: \$15,000
Other project partners: Regional District Central Okanagan, Ministry of Forests and Range, Coldstream Ranch Ltd.	

This project is installing cattle exclusion fencing and establishing off channel watering structures in suitable areas in the upper watershed area of Mill Creek. Staff at GEID has committed to work with Coldstream Ranch and Ministry of Forests and Range to maintain any structures that are constructed over the course of this project.

Project Status:

- In-progress or soon to be initiated

➤ Surface/Groundwater Interaction Study – Middle Vernon Creek	Oceola Fish and Game Club
Project Budget: \$70,000 (includes cash and inkind from the organization)	Grant Awarded: \$24,000
Inkind Donations: \$26,000	Other Direct Funders: \$20,000
Other funders and project partners: University of BC – Okanagan, District of Lake Country, BC Ministry of Environment	

Movement and interaction of shallow groundwater flow between Ellison and Wood Lake is being clarified through this study, results of which have impacts on water users, fisheries and ecological flows for Middle Vernon Creek.

Outcomes of note:

- This project is considered a lead up to a Water Use Plan, to be undertaken in 2009.

Project Status:

- In-progress or soon to be initiated

➤ Sediment Mitigation Strategies for Lower Mission Creek	Mission Creek Working Group
Project Budget: \$555,000 (includes cash and inkind from the organization)	Grant Awarded: \$10,000
	Other Direct Funders: \$545,000
Other funders and project partners: BC Ministry of Environment, City of Kelowna, Okanagan Nation Alliance, Westbank First Nation, Regional District Central Okanagan, Friends of Mission Creek Society, Central Okanagan Land Trust, Ministry of Transportation	

The Mission Creek Working Group is a multi agency group working to restore large portions of Mission Creek through large projects such as dyke set backs, re-meandering of the river channel and installation of sediment control measures. This sediment mitigation project reduces the need for flood control maintenance and improves kokanee habitat for lower Mission Creek.

Project Status:

- In-progress

➤ Source Water Protection Planning - Westbank	Westbank Irrigation District
Project Budget: \$36,000 (includes cash and inkind from the organization)	Grant Awarded: \$27,000
Other project partners: Interior Health Authority, Westside District Municipality, RDCO	

➤ Source Water Protection Planning - Lakeview	Lakeview Irrigation District
Project Budget: \$25,000 (includes cash and inkind from the organization)	Grant Awarded: \$20,000
Other project partners: Interior Health Authority, Westside District Municipality, RDCO, Ministry of Environment	

➤ Source Water Protection Planning – Mill Creek	Glenmore Ellison Improvement District
Project Budget: \$30,000 (includes cash and inkind from the organization)	Grant Awarded: \$22,000
Other project partners: Interior Health Authority, RDCO	

➤ Source Water Protection Planning – Hydraulic Creek	South East Kelowna Irrigation District
Project Budget: \$26,400 (includes cash and inkind from the organization)	Grant Awarded: \$23,000
Other project partners: Interior Health Authority, RDCO	

Four central Okanagan Irrigation/Improvement Districts are undertaking source water protection plans for their respective watershed by completing Modules 1, 2, 7 and 8 of the Drinking Water Source to Tap Assessment Guidelines. Source Protection Planning efforts are being given a high priority by the Okanagan Basin Water Board as the first step for watershed protection.

Outcomes of note:

- Purveyors are working collectively to develop uniform approaches to source protection planning that can be applied throughout the valley.

Project Status:

- In-progress

Regional District North Okanagan

2006 RDNO Grant Recipients

➤ Groundwater Metering - Grandview	Grandview Waterworks District
Project Budget: \$88,500 (includes cash and in-kind from organization)	Grant Awarded: \$16,400
Other funders and project partners: GAOB project	

The District used WQCI grant money to assist in the purchase and installation of water meters. With the help of these funds, all connections will be metered by the year's end 2006. The metering data gathered in this program has assisted the district in better managing the water resource for their customers.

Outcomes of note:

- Information gathered from meters has also provided information on ground water use in the North Okanagan to the Ground Water Assessment of the Okanagan Basin (GAOB) project.

Project Status:

- Complete (Spring 2007)

➤ Water Conservation and Xeriscape Project	City of Armstrong
Project Budget: \$12,350 (includes cash and in-kind from organization)	Grant Awarded: \$10,000

City of Armstrong's Water Conservation Communication and Outreach addressed a number of water conservation and public education activities – from developing a rebate program for rain barrels to xeriscaping at City Hall and creating brochures and other outreach materials. Monies from this program were also used to sponsor a xeriscape workshop, so that residents could learn how to use these water-conservation techniques at home.

Outcomes of note:

- The demonstration garden at City Hall in Armstrong was very well done and is a good example to residents of attractive low water use planting.

Project Status:

- Complete (Fall 2006)

➤ Source Water Review	Greater Vernon Services – Water
Project Budget: \$30,000	Grant Awarded: \$30,000

As the population of the North Okanagan grows, Greater Vernon Water is keen to define areas where water management efficiency can be increased, both through increased storage and reduced water consumption. The Water Source Review study consisted of two parts. The first component was to analyze the potential to increase storage at the headwaters of Duteau Creek, in the current reservoir lakes. The second part of the study determined what improvements are needed at the outlet of Kalamalka Lake.

Project Status:

- Complete (Spring 2007)

2007 RDNO Grant Recipients

➤ Hydrometric Monitoring on Duteau Creek	Greater Vernon Water Utility
Project Budget: \$31,400 (includes cash and inkind from the organization)	Grant Awarded: \$18,000
Other funders and project partners: BC Ministry of Environment	

Greater Vernon Services installed, operates and maintains hydrometric new stations for three tributaries into the Duteau Creek system as a result of this project. The data will allow GVS to establish best management practices for the Duteau source. Hydrometric monitoring is a high priority for the OBWB.

Outcomes of note:

- This project contributes to the Water Supply and Demand Study, in addition to contributing to the hydrometric network of BC.

Project Status:

- Complete (Spring 2008)

➤ Sensitive Habitat Inventory Mapping – B.X. Creek	Regional District North Okanagan
Project Budget: \$31,400 (includes cash and inkind from the organization)	Grant Awarded: \$18,000
Other project partners: City of Vernon	

In conjunction with the City of Vernon, Regional District North Okanagan completed Sensitive Habitat Inventory Mapping (SHIM) on BX Creek. Projects that contribute data to large regional efforts are given high priority for this grant program and this project complements and extends work already done in the North and Central Okanagan. The data is used by planners at the Regional District of North Okanagan and the City of Vernon.

Project Status:

- Complete (Winter 2007)

➤ Leak Detection and Water Conservation	City of Armstrong
Project Budget: \$40,000 (includes cash and inkind from the organization)	Grant Awarded: \$20,000

The City of Armstrong is undertaking a leak detection program on its own distribution system as a way to reach its water conservation goals and in preparation for universal metering. Leak detection and repair is one of the most cost effective water conservation activities.

Outcomes of note:

- This project has expanded into a second year with the addition of the City of Armstrong's goals for universal water metering by 2010.

Project Status:

- In-progress

2008 RDNO Grant Recipients

As of early July 2008, all 2008 Regional District North Okanagan recipient projects are either in progress or will be initiated shortly. Recipients have been notified that projects must be complete by March 2009.

➤ Groundwater Protection Measures: Well Casing and Raising	Larkin Waterworks District
Project Budget: \$31,500 (includes cash and inkind from the organization)	Grant Awarded: \$15,000
Other funders and project partners: Eagle Rock Waterworks, Ministry of Environment	

Two wells in the Larkin Waterworks District are undergoing improvements for better well protection as per Interior Health Authority and recommendations from Golder Associates Inc. One well is an observation well with routine water level recording with the other undergoing raising and casing with above ground installations to comply with wellhead protection requirements.

Outcomes of note:

- This is a solid first step in Groundwater Protection Planning for this waterworks district and contributes information to the Groundwater Assessment of the Okanagan Basin.

Project Status:

- In-progress or soon to be initiated

➤ Sensitive Habitat Inventory Mapping – Rural Vernon Creeks	Regional District North Okanagan
Project Budget: \$62,657 (includes cash and inkind from the organization)	Grant Awarded: \$20,000
	Other Direct Funders: \$32,657
Other project partners: Community Mapping Network, RDCO, Alllan Brooks Nature Centre	

This SHIM project collects data on the health of riparian areas, fisheries values, human modifications, water intakes, storm water outfalls, erosion and other water quality concerns for creeks in the rural Vernon OCP area. Projects that contribute data to large regional efforts are a priority for this grant program and this project complements and extends work already done in the North Okanagan. The data is used by planners at the Regional District; especially as existing stream maps are not highly accurate.

Project Status:

- In-progress

➤ Low Flow Toilet Rebate Program	City of Vernon
Project Budget: \$40,000 (includes cash and inkind from the organization)	Grant Awarded: \$11,910

This project is furthering the City of Vernon's ongoing toilet rebate program in order to reduce domestic water consumption and load on the wastewater treatment facility. Toilet rebate programs are a tangible water conservation measure that can increase awareness of other measures for water conservation.

Project Status:

- In-progress or soon to be initiated

➤ Foreshore Inventory Mapping – Okanagan Lake North	Okanagan Collaborative Conservation Program (OCCP)
Project Budget: \$47,390	Grant Awarded: \$29,590
Inkind Donations: \$15,800	Other Direct Funders: \$5,000
Other funders and project partners: Real Estate Foundation of BC, BC Ministry of Environment, Regional District Central Okanagan, Department of Fisheries and Oceans, Okanagan Indian Band, Community Mapping Network	

The OCCP is GPS mapping shoreline to inventory the ecosystem characteristics, and filming fly-over video footage. This project is a very strong partnership as the participants in the cooperative are able to use resources and methodology previously developed by other agencies in addition to receiving in-kind resources to carry out this project.

Outcomes of note:

- This project adds to information already collected and picks up where other efforts left off, thus completing more basin wide data. Results are very useful for local government planners.

Project Status:

- In-progress

➤ Duteau Watershed Cattle Impact Reduction Plan	Greater Vernon Water Utility
Project Budget: \$30,000 (includes cash and inkind from the organization)	Grant Awarded: \$20,000
Other funders and project partners: Ministry of Forests and Range, Tolko Industries Ltd., Interior Health Authority, Range permit holders	

This project is a portion of the larger Source Water Protection Planning initiatives for Duteau Creek and is GPS mapping fencing, cattle access points to streams, gates and cattle guards. Once the inventory of structures is complete, a monitoring, maintenance and work plan is formed to reduce contamination risks to the water supply. GVS has full cooperation with the ranchers in the area who will be involved in creating the maintenance plan for the structures.

Project Status:

- In-progress

Appendix VII. – Detailed Review of Water Stewardship Council Program

Water Stewardship Council Review: 2006-08

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Quotes from Water Stewardship Council members.

“ – the benefit of the Council is that it brings together a group of people working within water management in some capacity from a wide spectrum of backgrounds and organizations – multiple levels of government, private sector, water utilities and major water users. There is tremendous value in having such a group convene and be able to look at issues, potential projects and overall water management from all perspectives – integration of these perspectives is vital for sound resource management.” **Anna Page** Sustainability Coordinator, Regional District of North Okanagan

“I always enjoy the WSC meetings, as I learn a lot about how people are thinking about water related issues in the valley, and what is going on.” **John Janmaat**, Professor Resource Economics, UBC Okanagan

“I feel that the Council represents all walks of life and their interests in preserving the great assets of the Valley that has attracted people to the Valley. The Development Industry is always faced with growth issues and the sustainability of water in the Valley. The OBWB needs to be given the authority to manage the Basins Water supply and make decisions that will insure a sustainable water supply for all! I feel the Council provides the Eyes and Ears for the Board and through the collaborative efforts of all the council member we can help the Board make the difficult decisions needed to manage our Precious Resource, Water!” **Grant Maddock**, Urban Development Institute

“I have only been a part of the Council for a short time (1yr) but I think it is a very functional, effective, well organized undertaking. It is accomplishing quite a bit, and there is significant buy-in and fidelity from its membership - that says volumes. Having access to the information, issues and stakeholders helps the conservation communities understand the water management elements that are important to our objectives, and outlines how we may be able to assist with water management and conservation objectives.” **Bryn White**, Program Administrator, South Okanagan Similkameen Conservation Program

“I do find these meeting valuable. The meetings are well run and are a great source of information on what the OBWB is working on, and what is of interest or concern to the numerous stakeholders who participate. **Ken Cunningham**, Regional manager, Southern Interior Ministry of Environment, Water Stewardship Division

“I think the council has been a great success in the amount of shared information and perspectives from all the stakeholders. I have personally learned a lot from the members and guest speakers. As a die-hard agriculturist / food supply advocate, I have been so impressed with the attitude around the table, for the need of farm land and water. Gone are the days when we can simply take the attitude that we can rely on other parts of the world for our food supply.” **Gord Shandler**, Water Commission, BC Fruit Growers Association.

“The OBWB Stewardship Council has been a very successful venue for allowing representatives of all water stakeholders/groups to express their opinion and for the exchanging of information. Our successes are speaking as one voice for the Okanagan basin for important issues such as governance, groundwater protection and development around reservoir lakes.” **Lorne Davies**, OCEOLA Fish and Game Club

The information that I have received through the council has been very beneficial to me and my students. The information provided is both relevant and timely. **Allison MacMillan**, Water Quality Technology Professor, Okanagan College

This review evaluates the effectiveness and efficiency of key aspects of Council operations. It includes assessing Council's overall strategic direction, comments on costs and benefits and identifies core successes that have been accomplished over the past two-and-a-half years. The review will include what is working well at Council as well as areas for improvement.

Background

In the spring of 2006, the three regional districts in the Okanagan valley jointly took a major step toward coordinated regional water management by empowering the OBWB to form the Water Stewardship Council as part of a broader initiative to increase the role of the OBWB in water management.

It is not a new idea to form a Council to provide advice to the OBWB. The 1974 Okanagan Basin Study recommends creation of an advisory committee to support ongoing activities of the Board, and the Board's SLPs require the OBWB to establish a Liaison Committee *"consisting of persons appointed by such municipalities, regional districts, improvement districts and Government agencies as the Water Board may determine, and the Liaison Committee shall advise on such matters as may from time to time be referred to it by the Water Board."*

Form and Function of the Water Stewardship Council

The Water Stewardship Council acts in an advisory role to the Board and the Council Chair is a voting member on the Board (excluding financial decisions). The goal of forming the Council is to capitalize on local water management expertise and to support communication among water stakeholder communities throughout the Okanagan. The Council meets regularly to improve long term decision making – in light of current trends of rapid growth, climate change and the uncertain water supplies.

The Council provides independent advice supporting sustainable water management in the Okanagan, using its collective expertise to identify basin-wide water issues and develop workable solutions that reflect the best available science and innovative policy. The Council recommends actions that can be undertaken within the bounds of the OBWB mandate. In addition, the Council develops projects and stewardship tools that promote basin-wide water management.

The Council members represent a range of water stakeholder groups and local sources of technical expertise. Council members (Appendix VII.A) are nominated for 18 month terms by their respective organizations, and these nominations are ratified by the OBWB.

Council membership is by organization rather than by individual. For example, the South Okanagan-Similkameen Conservation Partnership selects their own representative to the Council. The composition of the Council was designed to provide a breadth of knowledge for advising the OBWB. Member organizations were chosen from the following: (1) organizations or agencies with expertise in water issues – such as the BC Groundwater Association, (2) government agencies with operational responsibilities – such as the Ministry of Environment water licensing division and regional district planners, and (3) water stakeholder groups – such as the Urban Development Institute. The idea was to have a mix of knowledge, responsibility and interests to deliberate issues and find common solutions. Council composition also seeks to balance representation from the North, Central and South Okanagan. To keep the Council at a workable size, more emphasis was placed on maintaining a spectrum of interests and voices than on comprehensive representation.

The Council is supported through the OBWB's Water Management Program. OBWB staff organizes Council meetings, manage projects, produce agendas and record minutes, provide information requested by the Council, and participate in special meetings, events and projects organized by the Council.

Vision

The Vision of the Okanagan Water Stewardship Council is that the Basin will have clean and healthy water in sufficient abundance to support the Okanagan's natural ecosystems, agricultural lands and high quality of life for perpetuity. Accurate, up-to-date water information and scientific knowledge will support community and regional planning. Water will be managed in a spirit of cooperation, and a valley-wide ethic of conservation will create a lasting legacy of sustainable water resources for future generations.

Mission

Council's mission is to be a trusted source of expertise and knowledge for sustainable water management in the Okanagan, providing balanced and considered advice to the Okanagan Basin Water Board – and through them to the community at large. The Council will draw upon its member's diverse range of knowledge and experience to develop the recommendations and implement the actions needed to achieve the Vision.

Council

The goals of the Okanagan Water Stewardship Council are:

1. To adopt an ecosystem-based approach for water resource management planning;
2. To increase understanding among all stakeholder of the value of water and knowledge about the state of the Basin's water resources;
3. To promote changes in human behavior related to water resources, leading to greater water conservation and protection of water quality;
4. To advance effective and innovative water policy, promote good governance, and build support for wise management of water resources in the Basin; and
5. To engage the public and all stakeholders in shaping water policy for the Basin.

Goals

Council

The Council will achieve these goals by taking the following actions:

1. Advising the Water Board on basin-wide water issues that require timely action to address current needs or ensure future sustainability.
2. Consolidating information and expertise – compiling a strategy for sustainable water management that will:
 - i identify critical information gaps and strategies to fill them;
 - ii advise on existing or proposed water legislation and policies;
 - iii propose changes to existing legislation, and identify needs for new legislation or policies;
 - iv develop priorities for OBWB projects and grant programs based on valley-wide water resource objectives;
 - v recommend stewardship practices to protect water quality and quantity;
 - vi alleviate allocation disputes during times of drought;
 - vii address the needs of fisheries, wildlife and other environmental resources;
 - viii advise on integrating water, land use and recreation planning;
 - ix provide standards for demand-side management;
 - x evaluate changes in the value and economics of water in the Okanagan;
 - xi advise on costs, benefits and timetables for water management projects;
 - xii identify, track and increase coordination between all water-related projects in the Okanagan.

Objectives

3. Integrating research into water management recommendations including:
 - i the Groundwater Assessment of the Okanagan Basin;
 - ii the Okanagan Water Supply and Demand Study;
 - iii emerging research on Global Climate Change impacts;
 - iv new technologies and approaches.
4. Submitting position papers or verbal presentations on water related matters to the Okanagan Basin Water Board – to be used at the Board’s discretion to support their response to these issues.
5. Increasing public communication and awareness about water resource issues by:
 - i assisting in the development of a report on the state of water in the Okanagan Basin;
 - ii developing strategies to educate the public and engage stewardship groups;
 - iii supporting water conservation education programs.
6. Developing programs and other implementation tools that conserve or enhance water quality and supply.
7. Building and strengthening partnerships between water stakeholders in the Okanagan – among these: all levels of government including First Nations; agricultural and industrial user groups; environmental organizations; community groups and water supply districts.

Table 1. Assessment of Objectives

Objective	Description	Measurement	Objectives Met
Advise Board on water issues that require timely action	Reservoir Lots	No sales of public reservoir frontage have been announced to date.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Consolidate information and expertise	Sustainable Water Strategy	Strategy is under development. Final document will be launched on October 23 rd , 2008.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Integrate research into water management	Groundwater Bylaws Toolkit	Development of Groundwater Bylaws Toolkit (underway).	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Develop and present to Board position papers	<ol style="list-style-type: none"> 1. Policy on Metering and Monitoring 2. Groundwater policy (3) 3. Groundwater Action Plan 4. Privatization of Reservoir Lease Lots – threat to future strategic water storage. 	<p>Hydrometric monitoring letter resulted in new provincial initiative to support local governance of monitoring network.</p> <p>New groundwater policies/tools have been developed by the WSC.</p> <p>Collection of over 100 letters from local government and water purveyors opposing privatization of Reservoir Lease Lots.</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Increase public communication and awareness	<ol style="list-style-type: none"> 1. Develop Okanagan Water website on Waterbucket with timely and useful information. 2. Encourage media participation at Council meetings. 3. Support and development of CWRA/OBWB One Watershed – One Water Conference. 4. Strengthen communication between Okanagan post-secondary institutions and OBWB. 	<p>Okanagan Water website is a community of interest on Waterbucket.ca and provides important and timely water information.</p> <p>Media participation and print articles have been significant over the past 2 years.</p> <p>The conference will be held on October 21-23 in Kelowna.</p> <p>Tours with faculty at UBC O and OC were organized and well attended.</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Develop programs to support water conservation	<ol style="list-style-type: none"> 1 Okanagan Water Conservation Professional roundtable 2. Water Conservation Tools (website info) 	<p>Creation of water conservation round table.</p> <p>Toolkit developed and launched on obwb.ca website.</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Build and strengthen partnership between stakeholders	<ol style="list-style-type: none"> 1. Water Stewardship Council (WSC) 2. CWRA/OBWB One Watershed – One Water Conference 	The WSC meets monthly, sharing water related information between partners.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

The Okanagan Sustainable Water Strategy

The Water Stewardship Council recently culminated a 2-year research process with the development of an Okanagan Sustainable Water Strategy. The Sustainable Water Strategy provides a comprehensive plan for the sustainable use of water resources in the Okanagan Basin. Sustainable use means accommodating the needs of the present without compromising the needs of the future. The Strategy seeks to ensure water resources are managed in a broader sustainability framework – working towards a future for the Okanagan where water quality or quantity does not limit human health and well-being, the environment, or the economy. The Sustainable Water Strategy builds on the 1974 Okanagan Basin Study, a joint Federal/Provincial initiative to develop a comprehensive plan for the development and management of water resources in the Basin.

Value considerations

The Council provides significant value to the Board in the form of sober second thought, informed perspectives, a forum for information sharing, collaboration and recommended actions and policy development for Board consideration.

In determining the value generated by the Council to taxpayers, the following simplified calculation exemplifies the recommendations to have the three regional districts continue to support Council activities:

Council Members average attendance:	18
Number of meetings (per annum):	10
Meeting duration (hours):	4.5
Volunteer Council hours contributed (per annum):	810
Estimated cost (consultant/water professional):	\$75/hr
Value (per annum):	\$60,750
Council Volunteer Time – Value Estimate (3 years):	\$182,250

The annual program cost is approximately \$35,000 per year.

The Leveraged Value received by the three Okanagan Regional Districts, local government and Okanagan taxpayers from the volunteer contribution provided by the Council is:

$$LV = \frac{\text{Direct Value} + \text{Program Cost}}{\text{Program Cost}} = \frac{\$60,750 + \$35,000}{\$35,000} = 2.7$$

The tangible benefits received by the Board and in extension the Okanagan valley are significant. Intangible benefits include increased communication between members of the Council, increased leveraged funding opportunities from senior levels of government, collaboration on important water policy issues (i.e. Sustainable Water Strategy, Groundwater Policy, Groundwater Bylaws Toolkit, etc.), among many others (see Council member quotes). Okanagan tax payers receive 2.65 times the return for every dollar invested in direct benefit.

Leveraged Partnerships

The Council supports the development of relationships between local water partners, First Nations bands and senior levels of government. The opportunity to share information about current and developing programs at various levels of government are important and support the strategic resourcing

of limited staff time to leverage local tax dollars with Provincial and Federal support that otherwise would be allocated to other jurisdictions.

Examples of leveraged partnerships that occur as a result of the monthly meetings of the Council that benefit the OBWB and Okanagan residents include collaboration between the OBWB and: post secondary institutions to develop research and training programs that enhance our understanding of water quality and supply questions, Okanagan Nation Alliance staff to support open communication and the development of new policies, provincial government fisheries staff to support the rehabilitation of fish habitat in Okanagan river, provincial government groundwater staff to support the development of the Groundwater assessment of Okanagan Aquifers and a Local Government Groundwater Toolkit, federal government staff to enhance and support the ongoing supply and demand study, and water conservation professionals to enhance and coordinate Okanagan water conservation policies and bylaws.

Value of continuing program

The Water Stewardship Council has provided Okanagan residents, tax payers, elected leaders and the business community with a valuable forum to become informed of multi-stakeholder perspectives, ground new water policies in informed grassroots knowledge, and provide as the “ears and eyes” to encourage new information and projects are proposed and actioned by the Board.

Members of the Council have voiced their strong support to continue on as active participants with the Council. The strong level of participation year round is a strong indicator of the commitment that Council members have to the Organization and our common objectives to support water management in the Okanagan.

The Okanagan Water Stewardship Council is a valuable, grass roots committee providing important and timely advice to the Board – at a very low cost (approximately \$35,000 per year or \$0.17/year per property owner¹) to the Okanagan tax payer. The Council strongly encourages the three Okanagan regional districts to continue supporting the Council and their activities.

Areas for Improvement:

- Focus on action. Now that the Sustainable Water Strategy has established the course, ensure more projects are developed and delivered: develop implementation fund to support recommendations in Sustainable Water Strategy
- Strengthen ties to municipal government planning, environment and utilities departments.
- Strengthen First Nation relationships – strengthen relationships with Okanagan Bands, Okanagan Nation Alliance, Westbank First Nation, and find ways to increase capacity of partners to participate.

Guest Speakers

The Okanagan Water Stewardship Council has a mandate to investigate current basin-wide issues in water management and provide recommendations to the Okanagan Basin Water Board. As part of the communication and information sharing process, the Council has hosted a number of technical and policy experts to make presentations on a range of water management topics. An example of speakers who presented to the Council are listed in Figure 1.

¹ According to Stats BC there are 200,000 residential tax payers in the Okanagan.

Table 2. Examples of Council invited speakers

TOPIC	INVITED SPEAKER(S)
<ul style="list-style-type: none"> o Water Governance and First Nations o First Nation Panel (March 2007) 	<p>Marlowe Sam, UBC student (Masters Program) Grand Chief Stewart Phillip, Penticton Indian Band Chief Fabian Alexis, Okanagan Indian Band Richard Armstrong, Traditional Knowledge Specialist, En'owkin Centre Deana Machin, Fisheries Program Manager, Okanagan Nation Alliance Doug Bennett, Southern Nevada Water Authority</p>
<ul style="list-style-type: none"> o Regional Collaboration for Water Efficiency o Water Sustainability o Okanagan Reservoir Lakes Project o Agriculture in the Okanagan - Technological Improvements 	<p>Don Degen, City of Kelowna Kevin Dickenson, Integrated Land Management Bureau Gord Shandler, BC Fruit Growers Association</p>
<ul style="list-style-type: none"> o Global Warming – Modeling Effects on Agriculture in the Okanagan o Agriculture and Water in the Okanagan Basin o Measuring the Water Footprint in the Okanagan using the Virtual Water Concept o Source Water Protection in BC: Challenges and Opportunities 	<p>Denise Neilsen, Pacific Agri-Food Research Centre</p> <p>Ted van der Gulik, BC Ministry of Agriculture</p> <p>Hans Schreier, Professor, UBC</p> <p>Valerie Z. Cameron, P. Geo., Water Stewardship Division</p>
<ul style="list-style-type: none"> o Source Protection o Farmland Riparian Interface - Stewardship Program o Using the Water Use Plan process as a framework for drought management planning o Dealing with Drought o Improving Water Temperature for Kokanee Salmon of Mission Creek: Toward Ecosystem Sensitive Water Management 	<p>Elizabeth Sigalet, Peng, Assistant Director (Drinking Water), Interior Health Lee Hesketh</p> <p>C. David Sellars, P. Eng.</p> <p>Wenda Mason, Water Stewardship Division, MoE</p> <p>Peter Dill, Okanagan College</p>
<ul style="list-style-type: none"> o Habitat, Species, Water - Keys to Quality Living and Prosperity in the Okanagan o The Okanagan Lake Action Plan: A Ten-Year Review o BC Water Legislation & Governance and the Role of the Ministry of Environment o Canada's Fish Habitat Law o Drinking Water Protection Act & Interior Health Water Program 4-3-2-1-0 Drinking Water Objectives 	<p>Paul Kluckner, Regional Director, Environment Canada</p> <p>Andrew Wilson, Senior Fish Biologist</p> <p>Brian Symonds, Water Stewardship Division, BC Ministry of Environment</p> <p>Dean Watts, Fisheries and Oceans Canada</p> <p>Mike Adams, IHA</p>

Appendix VII.A. Water Stewardship Members

- **Allison MacMillan**
Professor, Water Quality Technology
Okanagan College
- **Bernie Bauer**
Dean of Arts and Sciences
UBC Okanagan
- **Bob Hrasko**
Director
Water Supply Association
- **Brian Guy**
Director, BC Branch
Canadian Water Resource Association
- **Bryn White**
Program Administrator
South Okanagan Similkameen Conservation Program
- **Denise Neilsen**
Research Scientist
Agriculture Canada
- **Doug Geller**
Senior Hydrologist, Summit Environmental Consultants
Ltd.
BC Groundwater Association
- **Drew Kaiser**
Member, Environmental Advisory Committee
Regional District Central Okanagan
- **Gord Shandler**
Water Commission
BC Fruit Growers Association
- **Grant Maddock**
Protech Engineering
Urban Development Institute
- **Hans Buchler**
Chair, Water Committee
BC Agriculture Council
- **Hillary Hettinga**
Director of Engineering Services
Regional District Central Okanagan
- **Jillian Tamblyn**
Environmental Coordinator
Regional District Okanagan-Similkameen
- **Ken Cunningham**
Regional Manager, Southern Interior
Ministry of Environment, Water Stewardship Division
- **Kerry Rouck**
Operations Forester, Gorman Brothers
Shuswap Okanagan Forestry Association
- **Lee Hesketh**
Program Coordinator
BC Cattlemen's Association
- **Lorne Davies**
Principal, Geostream Environmental Consulting
Oceola Fish and Game Club
- **Mike Adams**
Senior Drinking Water Protection Officer
Interior Health Agency
- **Neal Klassen**
Contractor/Operator
City of Kelowna Water Conservation Program
- **Kendall Woo**
Acting Director, Strategic Integration
Environment Canada - Pacific and Yukon Region
- **Rob Smailes**
Director of Development Services
Regional District North Okanagan
- **Stu Wells**
Chair
Community Futures Development Corporation - Okanagan
Similkameen
- **Howie Wright**
Senior Fisheries Biologist
Okanagan Nation Alliance
- **Ted van der Gulik**
Senior Engineer
Ministry of Agriculture and Lands
- **Tom Siddon**
Co-Chair of Water Flagship Group
Okanagan Partnership Society
- **Tricia Brett**
Water Quality Technologist
Greater Vernon Water Stewardship Committee

Appendix VII.B. Water Stewardship Council Terms of Reference

Council Membership Criteria and Mandate

The Okanagan Basin Water Board supports membership to the Council under the following basis:

- VII. 1.** The Okanagan Water Stewardship Council has a three-year mandate ending March 31, 2009. The term may be extended with the agreement of the three Okanagan Regional Districts.
- VII. 2.** The Okanagan Basin Water Board will invite selected organizations and jurisdictions to designate a representative to the Council – subject to Board ratification.
- VII. 3.** The total number of members is by decision of the Board and the willingness of invitees to participate.
- VII. 4.** Council members shall be appointed for eighteen-month terms. Members having to resign may nominate a successor appointee to complete their term, subject to Board ratification.
- VII. 5.** Council members may designate alternates. Alternates do not need to be ratified by the Board.
- VII. 6.** The Board may remove a member if it considers that this action would be in the best interest of the Council.
- VII. 7.** A Council Chair and Vice Chair will be elected by a simple majority of the Council. The vote requires the presence of no less than two thirds of the members.
- VII. 8.** The Chair and Vice Chair will serve for an eighteen month period. After that time elections will be held for both positions.
- VII. 9.** The Council Chair will be a full voting member of the Okanagan Basin Water Board with the exception of financial matters. The Vice Chair will represent the Council in the absence of the Chair.

Council Procedures

The Okanagan Water Stewardship Council will operate under the following procedures:

- VIII. 1.** Two-thirds of current Council members or alternates must be present to constitute a quorum.
- VIII. 2.** The Council will operate on a consensus basis. The Council is a group with common values respecting the importance of water in the Okanagan. The Council has a responsibility to ensure that everyone is heard and that decisions are based on the best possible alternative.
- VIII. 3.** The Chair will ensure that proposals being considered are well understood by everyone; that all objections or reservations have been heard before affirming that agreement has been reached.
- VIII. 4.** Objections may be registered in the minutes through:
 - 1. *Reservations or Non Support* – the Council Member disagrees with the decision but he or she will not stop the group from supporting it
 - 2. *Request for Postponement* – if a Council member strongly objects to a decision, they may request the Chair to postpone action on the item until the next scheduled meeting, to allow for a period of negotiation and sober second thought. Following the postponement period and additional Council discussion, the group may move forward with a decision based on majority opinion.
- VIII. 5.** The Okanagan Basin Water Board will provide staff to prepare agendas and minutes, and to research matters directed by the Council. Staff will also act as liaison between the Council and the Board.
- VIII. 6.** Council members can request items to be included in the agenda; however the final draft agenda will be developed by the Chair and approved at the beginning of each meeting.
- VIII. 7.** The Council may invite resource people or other members of the public to make presentations or otherwise participate in the meetings.

VIII. 8. The Council may form sub-committees or task groups to assess and report on specific issues as established by the Council.

VIII. 9. The Council will meet at the call of the Chair.

VIII. 10. Council Members who are not reimbursed by their employers or organizations may claim vehicle mileage at the current rate set by the North Okanagan Regional District.

VIII. 11. Council meetings will be open to the public.

VIII. 12. The Council sessions may be held *in camera* if the discussions involve personnel, land or legal matters.

Communications Protocol

Communications between the Council and the Board will follow the following protocol:

IX. 1. The Council may submit position papers, written letters or recommendations, or verbal presentations to the Board for consideration during regular Board meetings.

IX. 2. The Board may then take the recommendation under advisement or pursue further action as permitted under the Board's mandate.

IX. 3. If an issue requires timely action, the Council may submit written materials to the Board via staff or the Board Chair. The Board Chair may then choose to convene a special meeting to address the issue if deemed necessary.

IX. 4. The Board may request the Council, as a body, to submit recommendations on particular water stewardship concerns.

IX. 5. The Board or individual Board directors may request *ad hoc* technical advice from individual Council members on particular water stewardship concerns. The request may be made through staff, the Council Chair, or directly to Council members.

IX. 6. Individual Council members wishing to address the Board on their own behalf should request in advance to be added to the agenda of a regular Board meeting.

IX. 7. The Council will communicate with the public in the following way:

1. the Council will provide recommendations directly to the Board. These recommendations then become public documents unless they regard personnel, land or legal matters;
2. the Chair of the Council and Council staff may speak to the public on the Council's behalf;
3. the Board Chair may designate another member of the Council to act as spokesperson on a particular issue;
4. individual Council members may not communicate with the public on behalf of the Council, except as given, above;
5. Council members must clarify that they are not speaking for the Council when they speak for themselves or their organization on a Council-related issue.

IX. 8. Media releases, web-postings and other outreach materials produced by the Council must be approved in advance by staff or the Board Chair.

Conflict of Interest Policy

The Okanagan Basin Water Board does not wish to discourage Council members from bringing forward worthy project proposals for funding consideration by the Council and the Board. However, as an advisory body to the Okanagan Basin Water Board, the Conflict of Interest provisions of the community charter apply.

Appendix VIII. OBWB Structure and Voting Procedures

OBWB Structure and Voting Procedures

The following are the current (2008) structure and voting procedures of the OBWB.

Background

The Okanagan Basin Water Board (OBWB) is a unique form of local governance, established in 1970 under the BC Municipalities Enabling and Validating Act. The Board's jurisdiction is defined by the borders of the Okanagan watershed rather than political boundaries. This includes the six main lakes – Okanagan, Kalamalka, Wood, Skaha, Vaseux and Osoyoos – and surrounding mountains from the City of Armstrong to the US border. The OBWB's programs are supported through property tax assessments on all parcels within the watershed, and initiatives are focused on activities that have valley-wide benefits.

The Board was formed as a collaboration of the three Okanagan regional districts to provide leadership on water issues that span the entire valley. The Board does not have regulatory power, but seeks to improve water management by providing a basin-wide perspective, improving communications to reduce fragmentation in policy and planning, improving links between local and senior governments, and participating as a partner in Okanagan water research and infrastructure funding. Directors come to the table to represent the interests of the Okanagan commons.

Legal Authority

The Board's authority is established through supplementary letters patent of the Okanagan regional districts, which specify the basic operating requirements and mandate of the OBWB. The Consolidated Supplementary Letters Patent (SLPs) of the OBWB are available on the OBWB website at http://www.obwb.ca/structure_governance/. OBWB governance procedures are based both on the provisions of the SLPs and on policies approved through resolution by the Regional Boards.

SLP Article 9. (1969) The Water Board may regulate its procedures provided such regulations are in a form agreed to by all the Regional Boards of the participating regional districts.

Board Structure: The OBWB has twelve directors, with designated alternates.

SLP Article 7 (a). (1972) The representation of [each regional district] on the Water Board shall be three Directors of the Regional Board, who shall be appointed for a one-year term at the first meeting of the Regional Board in each year.

SLP Article 7 (b). (2006) In addition to the three Directors from each of the three participating Regional Districts there shall be three Directors on the Water Board as follows:

- 1. One Director who shall be a representative from the Okanagan Nation Alliance;*
- 2. One Director who shall be a representative of the Okanagan Water Stewardship Council; and*
- 3. One Director who shall be a representative of the Water Supply Association of BC.*

The additional director positions were established through resolution by the three Okanagan regional districts in 2005, on approval of the Proposal to Enhance the Effectiveness of the OBWB. The SLPs were amended in 2006 to make these positions official. The approved Proposal includes the following clause that limits the authority of the new directors:

(2005) These representatives will vote on all matters except financial decisions.

Directors hold one-year terms, but many are reappointed for successive terms to provide continuity and experience. The OBWB Chair is elected at the first meeting of the year following the official appointments by the regional districts.

SLP Article 8. (1969). *At the first meeting in each year a Chairman of the Water Board shall be elected from amongst and by the members thereof.*

Voting: Board decisions are made through a simple-majority voting process in which each director has one equal vote. This voting structure was established in the original OBWB terms of reference, adopted by RDCO and RDOS in 1969, and by RDNO in 1970.

(1969) [The representatives who are appointed to the OBWB] shall have one vote each, and all decisions of the Board shall be by a simple majority.

The Board seeks to arrive at consensus whenever possible. Approval by all three regional districts is required for any changes to procedures (see SLP Article 9, above), for capital expenditures and for approval of the annual budget (see below).

For non-financial matters, approvals of OBWB items by the regional districts are done through a weighted stakeholder vote in RDNO, and through a non-weighted vote by representatives of jurisdictions within the watershed boundaries at RDCO and RDOS.

Financial Approvals: The OBWB's fiscal year begins on April 1st. The OBWB Budget is approved through a weighted vote of the entire Regional Board during the regional districts budgeting process.

SLP Article 11. (1969) *The annual operating budget of the Water Board for the next succeeding year shall be presented to the Regional Boards of all the participating member regional districts for approval on or before the 15th day of December each year.*

For financial matters outside of the annual budget, approvals are done through a weighted vote by representatives of jurisdictions within the watershed boundaries.

SLP Article 10. (1969) *No capital expenditures shall be undertaken by the Water Board without prior approval in the form of resolution by the Regional Boards of the participating regional districts.*

Meetings: OBWB meetings are held regularly – generally once a month – at the call of the Board Chair. The location of the meeting is usually rotated between Vernon, Kelowna and Penticton at the regional district offices. Meetings are open to the public.