

Memo



Date: February 10, 2011
File: 0710-40
To: City Manager
From: F. Schaad , Utility Technologist, Infrastructure Planning
Subject: Okanagan Basin Water Board Water Conservation and Quality Improvement Grants

Recommendation:

THAT Council endorse the following grant applications to the Okanagan Basin Water Board (OBWB) Water Conservation and Quality Improvement Grant Initiative.

- Mill Creek Riparian Management Plan
- Sensitive Habitat Inventory & Mapping (SHIM)
- Goose Management Committee Outreach and Education Program
- Best Practices Manual for Irrigation in Municipal Parks and Green Spaces

Purpose:

To seek Council's support to apply to the Okanagan Basin Water Board for five grants with requests totaling \$85,000.00.

Background:

The purpose of the Okanagan Basin Water Board's Water Conservation and Quality Improvement Grant Initiative is to assist local government in addressing issues that enhance the valley-wide sustainable use of water. The projects also support The Okanagan Sustainable Water Strategy Action Plan (OBWB-Water Stewardship Council, 2008) and the 2011 Water Stewardship Council priorities. The 2011 priorities are 1) Source Water Protection (includes Storm Water), 2) Okanagan Groundwater and 3) Agriculture Water Reserve. Potential Projects will also be evaluated for their transferability Valley Wide.

As part of the application process, all applications must be accompanied by a Board or Council resolution from the respective Regional District Board and/or Municipal Council. This includes applications from local governments and all non-profit/community groups or improvement districts. The Central Okanagan is eligible for up to \$175,000 of the \$300,000 available.

Submission of the following applications to the OBWB for the February 21st, 2011 deadline is proposed.

A handwritten signature in blue ink, located in the bottom right corner of the page.

Mill Creek Riparian Management Plan - Request \$30,000.00

Mill Creek is considered one of the major fish bearing streams in the Okanagan basin and is regulated under the Federal Fisheries Act. The City of Kelowna is currently reviewing its Official Community Plan, Urban Land Use Plan, and 20-year Servicing Plan and Financing Strategy. As a result of this planning process, a number of essential infrastructure projects are anticipated over the next 20 years, many of which could have significant impact to the creek channel and associated riparian values. Future projects identified are:

- Clement Extension (formerly COMC)
- Hollywood Road North Extension
- Sexsmith Road Widening
- Houghton Multi-modal Extension
- Hwy 33 Extension
- Airport Gravity Sewer Trunk

Environmental Approvals and stream compensation measures are required as a condition of the approval by external authorities having jurisdiction for these important infrastructure projects, many of which could result in habitat, alteration, disturbance, or disruption (HADD). This project will provide an environmental management framework to support anticipated infrastructure projects. Mill Creek is a Regional and City watershed area.

Best Practices Manual for Irrigation in Municipal Parks and Green Spaces - Request \$25,000.00

The City of Kelowna Water Utility has undertaken a number of projects over the past several years to help reduce water consumption in Municipal Parks and Green Spaces such as Compost Tea, drought tolerant grass, landscape & irrigation standards, and irrigation system assessments.

Some smaller projects will be completed in 2011 such as the Landscape and Irrigation standards documents and process, along with completion of metering, data collection, and irrigation assessment in city parks. This year's project is a culmination of these prior projects with that creation of a single "Best Practices Manual."

Sensitive Habitat Inventory and Mapping (SHIM) - Request \$20,000.00

Beginning in 2005, the City of Kelowna began the first of a series of mapping projects in an effort to gather information about the watercourses within the City boundaries. To date, a significant majority of the watercourses have been mapped and their characteristics described. Previous SHIM work however did not include identified springs in the City or many watercourses in the ALR. The information gathered from SHIM work is critical to the City's environmental conservation efforts. The data was used to form Natural Environment Development Permit Areas and provides a foundation for conservation and restoration planning efforts throughout the City. Additionally, learning about the state of watercourses will assist staff, consultants, and property owners in balancing the needs of development with those of conservation. Many of Kelowna's watercourses drain to the groundwater aquifer and to Okanagan Lake and therefore have a regional and valley-wide context.

Goose Management Committee Outreach and Education Program - Request \$10,000.00

Local governments along Lake Okanagan combined resources in 2007 implementing the "Canada Goose Management Strategy and Action Plan." The Action Plan is the direct result of extensive study and consultation into the issue of water quality and its correlation to water fowl. The Plan includes a number of activities such as education, non-lethal scare tactics, egg addling, gosling transfer, adult and sub-adult roundup, and increased hunting pressure to discourage migrants from staying.

The purpose of this project is to create public awareness brochures about Water Quality issues in public parks, beaches, golf course, reservoirs, and streams in the Central Okanagan Regional District. These brochures would be distributed at various locations during the summer of 2011 by Kelowna Parks' beach ambassadors as well as by the Okanagan Goose Management Coordinator and committee members during public presentations.

Internal Circulation:

Director, Financial Services
Manager, Strategic Projects
Manager, Parks and Public Places
Manager, Environment & Land Use
Manager, Utility Services
Manager, Parks Services

Existing Policy:

Official Community Plan - Chapter's 7, 13, and 14

Financial/Budgetary Considerations:

The City of Kelowna's contribution of \$70,000 for the Mill Creek Riparian Management Plan is already accounted for within existing budgets.

With Council Approval funds are available in the Drainage Reserve sufficient to; at least, match the \$30K contribution to the Drainage Utility Feasibility Study.

In reference to the Sensitive habitat Inventory and Mapping (SHIM) application, it is anticipated that the SHIM work will be conducted by a consultant, with limited staff supervision. If the funding requested is received, there will be no direct financial impact on

the city.

Goose Management Committee Outreach and Education Program. The City of Kelowna's contribution of \$48,000 for the Okanagan Goose Management Committee for 2011 is already accounted for within existing budgets. Therefore sufficient funds are available in the existing budget for the matching \$10,000 contribution required. If the funding requested is received, there will be no direct financial impact on the city.

Considerations not applicable to this report:

Legal/Statutory Authority:

External Agency/Public Comments:

Legal/statutory Procedural Requirements:

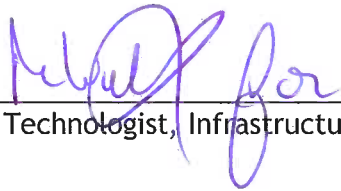
Personnel Implications:

Technical Requirements:

Communications Considerations:

Alternate Recommendation:

Submitted by:



F. Schaad, Utility Technologist, Infrastructure Planning

Approved for inclusion:



J. Paterson, General Manager, Community Sustainability

cc: General Manager, Community Sustainability
General Manager, Community Services
Director, Infrastructure Planning
Director, Community & Media Relations
Director, Financial Services

January 11, 2011

Okanagan Basin Water Board
Water Conservation and Quality Initiatives Grant Program
1450 KLO Road
Kelowna, BC
V1W 3Z4

Mill Creek Riparian Management Plan - Grant Application

Dear Ms. Dunbar:

The City of Kelowna - Infrastructure Planning respectfully submits a request for a \$30,000 grant to assist in the preparation of a "Mill Creek Riparian Management Plan."

Mill Creek is considered one of the major fish bearing streams in the Okanagan basin and is regulated under the Federal Fisheries Act. A substantial reach of the creek corridor is contained within the city and extends from the City boundary to the mouth of the creek at Okanagan Lake (approximately 21 km). Land uses along the creek are varied and include recreational, agricultural, industrial, residential and urban development.

The City of Kelowna is currently reviewing its *Official Community Plan, Urban Land Use Plan* and *20-year Servicing Plan*. As a result of these planning processes, a number of essential infrastructure projects are anticipated over the next 20 years, many of which could have significant impact to the creek channel and associated riparian values.

Environmental mitigation and stream compensation measures are required as a condition of provincial approvals for any *works in and about a stream* that could result in habitat, alteration, disturbance or disruption (HADD). A carefully coordinated approach is necessary to ensure that environmental values and productive capacity for fish habitat are protected, projects are able to proceed on schedule, and an appropriate commitment of financial resources is made available.

The goals of the "Mill Creek Riparian Management Plan" are to: evaluate and describe existing conditions along the Mill Creek corridor within city limits; identify areas in need of protection and restoration; identify areas of possible mitigation or compensation; and identify the location(s) of any necessary land acquisitions.

This planning study will propose mitigation and compensation strategies to ensure water quality is maintained (or enhanced) and there is "no net loss" to riparian habitat values resulting from any of the proposed civic infrastructure projects.

The Mill Creek Riparian Management Plan will be conducted in several distinct phases:

- a) Preparation and issue of a Request for Proposal to qualified consultant teams.
- b) Proposal Receipt and Evaluation, Project Award and Startup
- c) Information Review and Gap Analysis: many planning and environmental studies have been conducted along parts of Mill Creek, but one comprehensive riparian management plan for the entire corridor within city limits has not been undertaken.

The successful consultant team will review previous studies to determine where information gaps exist and address those gaps.

- d) Field Reconnaissance and Data Collection - conducted by a team comprised of professional biologist(s), archaeologist(s) and hydrologist(s) to identify potential habitat restoration opportunities; and to identify and map areas of high environmental and cultural sensitivity. Data will be collected using GPS and where applicable will conform to the guidelines provided by the *Resource Information Standards Committee* (RISC).
- e) Identify and map areas of the creek channel and associated riparian habitat that could potentially be affected by the proposed civic infrastructure projects.
- f) Preparation/Presentation of Draft Riparian Management Plan including:
 - preparation of a baseline of current environmental and water quality conditions
 - identification of priority restoration and acquisition areas,
 - restoration planting strategies including typical cross sections, planting plans and plant lists,
 - identification of areas where erosion protection is necessary and recommended bioengineering solutions,
 - outlining of specific measures to protect and increase upland wildlife habitat and in stream capacity for fish habitat,
 - development of a Habitat Balance Worksheet that quantifies proposed areas to be restored or projects to be used as compensation for encroachment by development, and can be used to record actual areas of improvement,
 - assessment of archaeological potential along the creek,
 - identification of measures to increase hydraulic capacity of the creek and to reduce risk of flooding,
 - recommended methods to mitigate and compensate for future municipal infrastructure projects, and
 - identification of areas requiring further study.
- g) Review and comment period for Draft Riparian Management Plan.
- h) Preparation/Presentation of Final Riparian Management Plan - revisions to the plan based on comments received on the draft plan.

In order to maintain or improve existing stream water quality, the plan will identify sustainable strategies to minimize storm water runoff (i.e., exercising conservation hydrology to slow it, spread it, and / or sink it). The plan will identify strategies to mitigate construction activities, and provide solutions that include stream bank stabilization and riparian & wetland restoration. Preserving and replacing vegetation to minimize soil erosion and control sediment transport will also be key issues.

The Mill Creek Riparian Management Plan will meet Okanagan Basin Water Board objectives by:

- Serving as a template for other creek corridor management plans within the City of Kelowna and will act as a model for stream corridors throughout the Okanagan Basin.
- Having one comprehensive document to identify science-based strategies that will increase the biodiversity of the creek and neutralize the impact of municipal infrastructure projects and private development. These strategies will be consistent for the entire length of Mill Creek within the city limits and may be applied to other creek corridors within the Okanagan Basin.

- Identifying conservation hydrology strategies to reduce storm water discharge directly into the creek which will mimic natural stream flow conditions. Conservation Hydrology advocates that human development decisions must move from a 'dehydration model' to a 're-hydration model.'
- Designing restoration plantings to help to offset the basin's carbon footprint by sequestering green house gases, reducing the urban heat island affect, increasing ground water recharge and reducing insidious impacts of storm water runoff.

The City has allocated seventy thousand dollars for this project and is looking to partner with another agency to provide the balance of funding. Funding received from the Okanagan Basin Water Board grant program will ensure the delivery of the Mill Creek Riparian Management Plan.

Thank you for considering this project as part of your grant program.

Sincerely,
Barb Davidson
Parks Planner,
Infrastructure Planning

City of Kelowna
1435 Water Street
Kelowna, B.C.
V1Y 1J4
250-469-8837
bdavidson@kelowna.ca



1450 K.L.O. Road
Kelowna, B.C.
250-469-6270
www.obwb.ca
grants@obwb.ca

Water Conservation and Quality Improvement Grant Program 2011 Application Form

Please carefully complete and review this form before submitting. If you are unclear on any of the sections, please consult the guide to the application, or contact the Office and Grants Administrator at 250-469-6270 or grants@obwb.ca.

A. PROJECT SUMMARY

Name of Organization
Project Title
Regional District ☐ RDNO ☒ RDCO ☐ RDOS
Supporting Local Gov't
Project Budget \$ Grant Requested \$

B. PROJECT CONTACT

Name
Title
Phone Fax
Email

C. PROJECT GOALS

What is the aim of the project?

The City of Kelowna has identified a number of essential infrastructure projects that are anticipated over the next 20 years. These projects have the ability to significantly impact the creek channel, water quality and its' productive capacity for fish habitat. Along the Mill Creek corridor within city limits, the Mill Creek Riparian Management Plan will: evaluate and describe the existing conditions along the creek corridor, identify areas in need of protection and restoration, identify and prioritize areas of possible mitigation or compensation, identify sustainable strategies to minimize storm water runoff, and identify the location(s) of any land acquisitions necessary for compensation areas.

D. PROJECT DELIVERABLES/MEASURABLE OUTCOMES

What are the expected deliverables of the project? How will the project's success be measured?

Deliverables will consist of a draft and final Mill Creek Riparian Management Plan identifying baseline environmental & water quality conditions, a habitat balance worksheet, priority restoration and acquisition areas, restoration planting strategies, areas requiring erosion protection and bioengineering solutions, archaeological potential, and methods to increase the hydraulic capacity of the creek. As projects are completed, success of the plan can be measured by ecosystem health, biodiversity, water quality and increased areas of riparian planting. The ultimate result of the plan will minimize and manage potential future impacts to the creek corridor and will ensure it's long term viability.



Okanagan Basin
WATER BOARD

1450 K.L.O. Road
Kelowna, B.C.
250-469-6270
www.obwb.ca
grants@obwb.ca

Water Conservation and Quality Improvement Grant Program 2011 Application Form

E. PROJECT METHODOLOGY

Briefly describe how your organization will achieve its goal.

As budget allows, the City of Kelowna will systematically implement the recommended priorities identified in the Mill Creek Riparian Management Plan to correspond with, or in advance of, anticipated infrastructure projects over the next 20 years.

F. PROJECT TIMELINE

Project Start Date (dd/mm/yy) Completion Date (dd/mm/yy)

Activity (describe components of project below) Category (select) Date(mm/yy)

a) Project award (selection of Consultant through RFP)	Other	05/2011
b) Project Start-up meeting	Other	05/2011
c) Information Review and Gap Analysis	Data Collection	06/2011
d) Field Reconnaissance and Data Collection	Data Collection	07 - 09 / 2011
e) Map potentially affected areas of Creek Channel	Habitat Inventory/Mapping	07 - 09 / 2011
f) DRAFT Watershed Restoration Plan	Planning/Policy Development	11/2011
g) review and comment period for draft plan	Planning/Policy Development	12/2011-01/12
h) FINAL Watershed Restoration Plan	Planning/Policy Development	02 / 2012
	Please Select	
	Please Select	



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G. PROJECT PARTNERS

How does this project illustrate collaboration with other agencies? With other jurisdictions?

Other stakeholders who will be consulted as part of the scope of this project include but are not limited to:
The Glenmore Ellison Improvement District
The Regional District of the Central Okanagan
Provincial Ministry of Environment
Federal Department of Fisheries and Oceans
Okanagan Basin Water Board

H. PROJECT VALLEY-WIDE BENEFIT

Recognizing that the Okanagan is one valley with one water, how does this project benefit the valley as a whole?

Mill Creek is a major fish bearing creek in our valley. Improving the health and water quality of this creek can be used as a barometer to measure the health of the greater valley-wide community. The Mill Creek Riparian Management Plan will serve as a template for other creek corridor management plans within the City of Kelowna and throughout the Okanagan Basin, and will identify conservation strategies / best management practises that can be implemented to improve habitat and water quality, and to minimize stormwater runoff in other watersheds throughout the valley.

I. PROJECT INNOVATION

What is innovative about this project?

- Development of a Habitat Balance Worksheet that will quantify and record physical improvements to riparian habitat and other areas of compensation
- Identification bioengineering solutions for areas of the creek corridor experiencing erosion
- Having one comprehensive document that identifies science-based strategies to increase the biodiversity of the creek and neutralize the impact of municipal infrastructure projects

J. GRANT TRACK RECORD

If your organization has received OBWB grants for previous projects, please comment on the success of the projects and the significance of the grants to your organization.

The City of Kelowna has not received grants for projects relating specifically to the Mill Creek Riparian Management Plan however we have received funding for 2010 initiatives such as the 2010 Landscape & Irrigation Plan, Source Water Protection Plan and the Grey Water feasibility study. Comments on success of the Landscape and Irrigation Plan will be found in the City of Kelowna Water Utility application and our other two projects are being completed.



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Water Conservation and Quality Improvement Grant Program 2011 Application Form

K. PROJECT FUNDING

Total Project Funding \$

Source	Type	Confirmed
City of Kelowna - \$ 70,000	Direct Funds	Confirmed
Okanagan Basin Water Board - \$30,000	Direct Funds	Unconfirmed
	Please Select	Please Select
	Please Select	Please Select

L. PROJECT EXPENSES

Total Project Budget \$

Project Management	<input type="text"/>
Equipment	<input type="text"/>
Supplies/Consumables	<input type="text"/>
Printing/Media	<input type="text"/>
Consultant/Contractor	90,000
Travel	<input type="text"/>
Wages	<input type="text"/>
Other	<input type="text"/>
10% contingency	10,000
	<input type="text"/>

SUBMITTING THIS APPLICATION

Please ensure you have reviewed the terms of reference and the guide to the application. Once your application is complete, please submit a copy, along with the **required supporting resolution** from local government and any other supporting documents, to:

The Okanagan Basin Water Board
re: 2011 WCQI
1450 K.L.O. Road
Kelowna, B.C.
V1W 3Z4

Applications must be recieved by **4:00 p.m., February, 21, 2011.** Late or incomplete applications will not be accepted.

January 26, 2011

Okanagan Basin Water Board
1450 KLO Road
Kelowna , BC.
V1W 3Z4

Re: Water Conservation and Quality Improvement Program Grants

Local governments along Lake Okanagan combined resources in 2007 implementing the "Canada Goose Management Strategy and Action Plan" (Action Plan). The Action Plan is the direct result of extensive study and consultation into the issue of water quality and its correlation to water fowl.

Canada geese populations in the Okanagan Valley have increased dramatically since the 1960's. These increases are widespread and not limited to the Okanagan. Goose populations have been the target of efforts to bring their growing numbers under control, and reduce their concentrations where conflict with public use takes place.

Canada geese are congregating on beaches up and down the Valley where summer water quality samples show contaminants reaching threshold levels. Geese are also a major concern for the various water utilities in the valley. A further increment will trigger Swimming Advisories as per Interior Health's new program introduced throughout the Okanagan Valley in 2006. To an economy heavily geared to tourism this is an unacceptable scenario considering the most common activity visitors engage in while in Kelowna is beaches and/or water activities.

Canada geese are resilient and adaptable birds. No one single means can be used to effectively control the goose population. A comprehensive approach needs to include both short and long term strategies, be publicly acceptable, and suitable to the nature of the area in which the control is required.

To that end the Action Plan has implemented a number of activities. The Plan includes; education, non-lethal scare tactics, egg addling, gosling transfer, adult and sub-adult roundup, and increased hunting pressure to discourage migrants from staying.

Instead of establishing a specific numerical target (tolerable population levels) for Canada goose populations in the Okanagan Valley, the Action Plan recommends reviewing the findings of the first three years of monitoring (2007-2009) and revisiting the numbers. In the short-term the Team has put forward a "zero tolerance of geese on waterfront parks."

The anticipated benefits from implementing the Action Plan include improved recreational water quality at beaches, reduced numbers of geese at beaches in summer, an eventual decline in the summer goose population Valley-wide based on egg addling, more attractive lawns within parks and playing fields, reduced complaints from the public, improved management of geese on public and private lands and ideally reduced costs directed to goose management. With the ongoing addling program benefits will

also be seen due to reduced goose populations in the local watersheds and water reservoirs.

While the Action Plan has received financial support from participating municipalities, the monetary resources to fully implement the next phase of the Plan need to be secured. At the time of this letter, we have received commitments for approximately 70% of projected costs for 2010 .

The cost to fully implement the project in 2010 is \$110,500 and includes expanding participation, and aerial surveys to ensure accurate monitoring of the goose population in the Okanagan Valley.

While we realize the maximum allowable grant is \$30,000 we are asking the Okanagan Basin Water Board to consider funding \$10,000. The Action Plan currently encompasses 3 Regional Districts. One of the strengths of this application is that the affected areas are working in collaboration which can best address the problem, and not simply move it to other areas in the Region.

The **Canada Goose Management Strategy and Action Plan for the Okanagan Valley**, is comprehensive, and is an excellent example of collaboration. The Action Plan works to address a serious issue affecting all municipalities along the corridor of Lake Okanagan. Improvement of water quality is the primary objective of the project.

Respectfully submitted

John Penrice
Urban Forestry Supervisor
City of Kelowna



Okanagan Basin
WATER BOARD

1450 K.L.O. Road
Kelowna, B.C.
250-469-6270
www.obwb.ca
grants@obwb.ca

Water Conservation and Quality Improvement Grant Program 2011 Application Form

Please carefully complete and review this form before submitting. If you are unclear on any of the sections, please consult the guide to the application, or contact the Office and Grants Administrator at 250-469-6270 or grants@obwb.ca.

A. PROJECT SUMMARY

Name of Organization
Project Title
Regional District ☐ RDNO ☒ RDCO ☐ RDOS
Supporting Local Gov't
Project Budget \$ Grant Requested \$

B. PROJECT CONTACT

Name
Title
Phone Fax
Email

C. PROJECT GOALS

What is the aim of the project?

Project Goals:

1. To create public awareness of Water Quality issues at public parks, beaches, golf courses, reservoirs and streams in the Central Okanagan Regional District.
2. To distribute public educational literature and brochures as leave behind pieces at various locations and venues during the summer of 2011.

D. PROJECT DELIVERABLES/MEASURABLE OUTCOMES

What are the expected deliverables of the project? How will the project's success be measured?

- Public awareness:
1. Printing several thousand brochures to distribute to residence and visitors.
 2. Kelowna Parks beach ambassador's will provide Kelowna residence and visitors with information on water quality by answering inquiries and by distributing existing pamphlets and brochures.
 3. Okanagan Goose Management Committee Coordinator and members of the committee will distribute literature on water quality through out their respective areas and during public presentations.

Measuring success: Distribute and collect questionnaires via beach ambassadors and online website.



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Water Conservation and Quality Improvement Grant Program 2011 Application Form

E. PROJECT METHODOLOGY

Briefly describe how your organization will achieve its goal.

Beach Ambassador Program: Kelowna Parks hires three students each year to act as ambassadors in our parks and beaches. They interact with the public as well as perform light duties. They are identified with specific clothing and as City of Kelowna Ambassadors they are trained to answer questions and provide information to the public. Their job description for 2011 will include distribution of public information and literature on Water Quality Issues. They will distribute and collect questionnaires which will measure public awareness of Water Quality Issues in the Central Okanagan. Questionnaires will be distributed at the beginning of the summer, and again at the end of the summer. The total number of negative compared to positive responses will measure responder's awareness of Water Quality Issues. If awareness has increase more positive responses should be received at the end of the summer compared to the beginning of summer. ORGMC coordinator and members will use all available opportunities to distribute literature on water quality issues during public presentations to perspective new members of the committee and to the media during the year. An increase in membership numbers will indicate that water quality issues raised were important to listeners and their comitmembership in ORGMC indicates the public education program was a success.

F. PROJECT TIMELINE

Project Start Date (dd/mm/yy) 30/05/2011

Completion Date (dd/mm/yy) 26/08/2011

Activity (describe components of project below)

Category (select) Date(mm/yy)

Training of Ambassadors	Planning/Policy Development	May/2011
First survey and results tabulated	Data Collection	June/2011
Distribute literature in High Traffic Tourist Areas	Education/Outreach	July/2011
Distribute literature in High Traffic Tourist Areas	Education/Outreach	Aug/2011
Final survey and results tabulated	Data Collection	Aug./2011
Final report to OBWB.	Other	Sept./2011
	Please Select	
	Please Select	
	Please Select	
	Please Select	



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Water Conservation and Quality Improvement Grant Program 2011 Application Form

G. PROJECT PARTNERS

How does this project illustrate collaboration with other agencies? With other jurisdictions?

Members of ORGMC include: Vernon, Lake Country, Kelowna, Peachland, Summerland, Penticton, Oliver, Osoyoos, Golf Course Superintendents Assoc., CORD, RDOS, BC Parks. These members form the Okanagan Regional Goose Management Committee and continue to support Water Quality improvement throughout the Okanagan Valley.

H. PROJECT VALLEY-WIDE BENEFIT

Recognizing that the Okanagan is one valley with one water, how does this project benefit the valley as a whole?

Water Quality is lowered throughout the valley by excessive Canada Geese populations. Reducing Geese populations to manageable levels will enhance water quality throughout the Okanagan Valley. Interior Health testing in the past has indicated high levels of ecoli bacteria from water fowl has closed beaches in some Okanagan Valley communities and threatens to close others if geese populations are not reduced to manageable levels.

I. PROJECT INNOVATION

What is innovative about this project?

The ORGMC committee itself is unique in Canada and has been used as a model by communities as far away as Ontario, and Alberta. A science based approach to improving water quality by controlling Canada Goose populations through egg addling. Ten communities, three regional districts and several golf courses have joined together to create a shared solution to a Valley wide problem.

J. GRANT TRACK RECORD

If your organization has recieved OBWB grants for previous projects, please comment on the success of the projects and the significance of the grants to your organization.

In 2010 ORGMC received a \$10,000 grant for a community partners outreach program. The grant allowed ORGMC to develop educational materials and advertising materials to educate the public and attract new membership to ORGMC. A valley wide distribution of this material is being planned for 2011.



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grants@obwb.ca

Water Conservation and Quality Improvement Grant Program 2011 Application Form

K. PROJECT FUNDING

Total Project Funding \$

Source	Type	Confirmed
City of Kelowna \$50,000	Direct Funds	Confirmed
City of Kelowna \$10,000	In-Kind Support	Confirmed
Okanagan Basin Water Board \$10,000	Direct Funds	Unconfirmed
Community Partners \$30,000	Direct Funds	Unconfirmed

L. PROJECT EXPENSES

Total Project Budget \$

Project Management	<input type="text" value="10,000"/>
Equipment	<input type="text" value="1,000.00"/>
Supplies/Consumables	<input type="text" value="500.00"/>
Printing/Media	<input type="text" value="3,500.00"/>
Consultant/Contractor	<input type="text" value="80,000"/>
Travel	<input type="text"/>
Wages	<input type="text" value="5,000.00"/>
Other	<input type="text"/>
	<input type="text"/>

SUBMITTING THIS APPLICATION

Please ensure you have reviewed the terms of reference and the guide to the application. Once your application is complete, please submit a copy, along with the **required supporting resolution** from local government and any other supporting documents, to:

The Okanagan Basin Water Board
re: 2011 WCQI
1450 K.L.O. Road
Kelowna, B.C.
V1W 3Z4

Applications must be recieved by **4:00 p.m., February, 21, 2011**. Late or incomplete applications will not be accepted.

Okanagan Basin Water Board
Attn: Genevieve Dunbar
1450 KLO Road
Kelowna BC V1W 3Z4

RE: Request for Funding: Best Practises Manual for Irrigation in Municipal Parks and Green Spaces.

Dear Genevieve

This letter is to request funding in the amount of \$25,000 from the Okanagan Basin Water Board to help complete a 2011 project by the City of Kelowna Water Utility.

As part of its Water Sustainability Action Plan, established in 2007, Kelowna City Council directed staff to reduce overall water consumption by 15% by the year 2012, over and above the 20% reduction already achieved since 1998. Reducing outdoor irrigation is an integral part of the Water Sustainability Action Plan.

Over the past several years the Water Utility has undertaken a number of projects designed to help reduce water consumption in Municipal Parks and Green Spaces. We are grateful to the Okanagan Basin Water Board for their assistance in funding many of these projects (Compost tea, drought tolerant grass, landscape and irrigation standards, and irrigation system assessments).

This year's project is a culmination of these prior projects into a single document – a Best Practises Manual for Irrigation in Municipal Parks and Green Spaces. Several small but related projects will be completed in 2011 before we can write the manual. This includes completing the Landscape and Irrigation Standards documents and process, along with completion of metering, data collection, and irrigation assessments of city parks.

We are looking to the Okanagan Basin Water Board for a grant that will help us complete the final deliverable: the best practises manual. Once complete, this manual can be a guide for other municipalities in the Okanagan Basin.

2011 is a pivotal year for the City of Kelowna Water Utility. As mentioned, this year will see the culmination of many projects initiated since 2001. A grant from the OBWB will help us to complete the work we have done over the past five years.

Don Degen
Utility Services Manager
City of Kelowna



Okanagan Basin
WATER BOARD

1450 K.L.O. Road
Kelowna, B.C.
250-469-6270
www.obwb.ca
grants@obwb.ca

Water Conservation and Quality Improvement Grant Program 2011 Application Form

Please carefully complete and review this form before submitting. If you are unclear on any of the sections, please consult the guide to the application, or contact the Office and Grants Administrator at 250-469-6270 or grants@obwb.ca.

A. PROJECT SUMMARY

Name of Organization
Project Title
Regional District ☐ RDNO ☒ RDCO ☐ RDOS
Supporting Local Gov't
Project Budget \$ Grant Requested \$

B. PROJECT CONTACT

Name
Title
Phone Fax
Email

C. PROJECT GOALS

What is the aim of the project?

To consolidate and finalize into one document the work done to achieve watering conservation in municipal parks and green spaces over the past several years. Since 2005, the City of Kelowna Water Utility has undertaken research into Compost Tea (an alternative to chemical fertilizers) and drought tolerant grass. The Utility has also installed meters and completed in-depth assessments of most municipal parks and has developed landscape and irrigation standards for watering efficiency. The aim of the 2011 project is to finish the assessments and compile into one document all the information from the past seven years.

D. PROJECT DELIVERABLES/MEASURABLE OUTCOMES

What are the expected deliverables of the project? How will the project's success be measured?

The final deliverable will be an extensive manual, tentatively titled "Water Conservation Methods for Municipal Parks and Green Spaces." The project's success will be measured by reductions in water use in Kelowna's existing municipal parks, and adherence to water conservatio



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1450 K.L.O. Road
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E. PROJECT METHODOLOGY

Briefly describe how your organization will achieve its goal.

The Water Utility has undertaken a number of projects over the past several years, many with financial assistance from the Okanagan Basin Water Board. Each of these projects were developed to reduce water used for landscape irrigation, in keeping with the City of Kelowna's Water Sustainability Action Plan, which calls for a 20% reduction in water use by 2012, over and above the reductions already achieved since 1998.

This year's project is a culmination of these other projects into a final set of standards, policies and documents for residential and municipal (parks and green spaces) water conservation. The 2011 grant requested from the OBWB will focus specifically on water conservation in parks and green spaces.

The City of Kelowna will achieve its goal by completing the Landscape and Irrigation Standards documents and process, along with completion of metering, data collection, and irrigation assessments of city parks.

F. PROJECT TIMELINE

Project Start Date (dd/mm/yy) 01/01/11

Completion Date (dd/mm/yy) 31/10/11

Activity (describe components of project below)

Category (select) Date(mm/yy)

Finalize Landscape & Irrigation Standards for Parks	Planning/Policy Développement	02/11
Workshops for Developers, Irrigation Companies, Landscapers	Education/Outreach	03/11
Complete Water Meter installations in parks	Water Monitoring/Metering	06/11
Commence meter reading and analysis	Water Monitoring/Metering	06/11
Complete Parks Irrigation System Audits	Education/Outreach	08/11
Pilot processes with Irrigation/landscape industry	Education/Outreach	08/11
Compile and print report	Please Select	10/11
	Please Select	
	Please Select	
	Please Select	



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G. PROJECT PARTNERS

How does this project illustrate collaboration with other agencies? With other jurisdictions?

This project is done in collaboration with the Irrigation Association of British Columbia and the BC Landscape and Nursery Association.

H. PROJECT VALLEY-WIDE BENEFIT

Recognizing that the Okanagan is one valley with one water, how does this project benefit the valley as a whole?

The Okanagan Valley has four major cities (Vernon, Kelowna, West Kelowna, & Penticton), many medium sized towns, and several smaller centres. Most of these areas are experiencing growth and all of them have neighborhood parks and sportsfields. A 2007 study suggested that public parks departments are the biggest single customer for most urban water suppliers. The manual produced at the end of this project could be used by any community to increase watering efficiency in existing parks, and to build parks that use less water in the future.

I. PROJECT INNOVATION

What is innovative about this project?

To our knowledge, the manual produced at the end of the project will be the only one of its kind. It will be a complete guide for water conservation in municipal parks, including information on water efficient design and maintenance, landscape and irrigation system standards, metering, rates, data collection and analysis, and parks irrigation system assessments. It will include suggestions on irrigation system maintenance and a suggested product procurement policy that will encourage watering efficiency.

J. GRANT TRACK RECORD

If your organization has received OBWB grants for previous projects, please comment on the success of the projects and the significance of the grants to your organization.

The City of Kelowna Water Utility is grateful to have received grants from the OBWB in the past. These include:

- 1) Compost Tea and drought tolerant grass research/incentive programs
- 2) Landscape and Irrigation Standards for Water Efficiency
- 3) Residential Odd/Even Watering Restrictions Study
- 4) Municipal Parks Irrigation System Audits

Each of these projects have been successful on their own, and they are also parts of the much bigger, over-arching project to be completed this year.



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K. PROJECT FUNDING

Total Project Funding \$

Source	Type	Confirmed
City of Kelowna Water Utility	Direct Funds	Confirmed
<input type="text"/>	Please Select	Please Select
<input type="text"/>	Please Select	Please Select
<input type="text"/>	Please Select	Please Select

L. PROJECT EXPENSES

Total Project Budget \$

Project Management	<input type="text" value="15,000"/>
Equipment	<input type="text" value="20,000"/>
Supplies/Consumables	<input type="text" value="10,000"/>
Printing/Media	<input type="text" value="10,000"/>
Consultant/Contractor	<input type="text" value="15,000"/>
Travel	<input type="text" value="5,000"/>
Wages	<input type="text" value="5,000"/>
Other	<input type="text"/>
	<input type="text"/>

SUBMITTING THIS APPLICATION

Please ensure you have reviewed the terms of reference and the guide to the application. Once your application is complete, please submit a copy, along with the **required supporting resolution** from local government and any other supporting documents, to:

The Okanagan Basin Water Board
re: 2011 WCQI
1450 K.L.O. Road
Kelowna, B.C.
V1W 3Z4

Applications must be received by **4:00 p.m., February, 21, 2011**. Late or incomplete applications will not be accepted.



January 26, 2011

Our File: 0710-60 (OBWB)

Okanagan Basin Water Board
Water Conservation and Quality Initiatives Grant Program
1450 KLO Road
Kelowna, BC
V1W 3Z4

Dear Ms. Dunbar:

Re: WCQI Grant Application for Sensitive Habitat Inventory and Mapping

The City of Kelowna - Land Use Management respectfully submits a request for a \$20,000 grant to conduct Sensitive Habitat Inventory and Mapping (SHIM) work on unmapped environmentally sensitive springs, streams and wetland features in the City's boundaries.

Responding to the community's vision, goals and objectives for the future of Kelowna, the 2004 City of Kelowna Strategic Plan's first objective is "to maintain, respect and enhance our natural environment". To achieve this, the Plan identifies supporting goals, such as protecting our water resources. This direction is further supported in the City's Official Community Plan (OCP).

Building on this strategic direction that clearly recognizes the fundamental links between water quality, quantity and stewardship of our riparian areas, the City of Kelowna engaged professional services to undertake an inventory and mapping exercise for the City's watercourses. Through various contracts between 2005 and 2008, most of the watercourses and wetlands have been included in the Sensitive Habitat Inventory and Mapping (SHIM) as well as the Wetland Inventory and Mapping (WIM). The City continued in this vein, working with surrounding jurisdictions and the Province of BC to undertake a Sensitive Ecosystem Inventory (SEI) to support sustainable land use and development decisions and to promote effective stewardship.

Despite this important work, there remain some critical gaps in the data available. Specifically, springs within the City's boundaries have not been mapped and there remain several wetland and stream features that have not been examined. Unchecked, activities within springsheds and riparian areas can have adverse impacts on groundwater quality and quantity and on related ecosystems.

Once completed, this important data will be incorporated into City of Kelowna mapping systems and into applicable regulatory bylaws, plans and studies, thereby forming the foundation of environmental conservation and restoration efforts in the area.

Additional funding for the project is actively being sought through the Canadian Wildlife Federation; however, this funding is as of yet unconfirmed. Without outside funding, this project will not proceed at the present time.

I trust the following submission meets your requirements. Should you require any additional information or any clarification, please contact me at (250) 469-8959. Thank you for considering this project in your grant program

Sincerely,

James Moore, MCP, MCIP
Land Use Planner
City of Kelowna
jmoore@kelowna.ca

Land Use Management
1435 Water Street
Kelowna, BC V1Y 1J4
TEL 250 469-8626
FAX 250 862-3320
kelowna.ca



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A. PROJECT SUMMARY

Name of Organization
Project Title
Regional District ☐ RDNO ☒ RDCO ☐ RDOS
Supporting Local Gov't
Project Budget \$ Grant Requested \$

B. PROJECT CONTACT

Name
Title
Phone Fax
Email

C. PROJECT GOALS

What is the aim of the project?

1. identify, describe, and locate remaining streams and wetlands in the ALR, totaling approximately 30km;
2. identify, describe and locate roughly 23 springs within City boundaries, based on Provincial data;
3. integrate resulting data with existing City data sets and update mapping and bylaws as required; and
4. disseminate project results to affected property owners, to the agriculture industry and to environmental organizations.

D. PROJECT DELIVERABLES/MEASURABLE OUTCOMES

What are the expected deliverables of the project? How will the project's success be measured?

In accordance with established SHIM methodology, the project will result in the production of a series of maps and supporting descriptive information relating to the stream, wetland and spring features being investigated. An inventory summary report will also be prepared. This resource will be made available in digital format through the City website for review by the public, consultants and other interested parties. Finally, it is expected that the information will be combined with existing SHIM data on the City's GIS mapping system to provide City staff with up-to-date environmental information.



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E. PROJECT METHODOLOGY

Briefly describe how your organization will achieve its goal.

Following previous SHIM work in the City of Kelowna, this project will be consistent with established SHIM methodology. This consistency will enable staff to integrate the updated data with existing data. The major steps in the project are anticipated to be as follows:

Pre-field work: generally entails review of pertinent background information in preparation for field work. The background information will be used to help guide the development and planning of the field work logistics.

Centreline survey: involves crews physically navigating streams and identifying and describing relevant attributes. The streams are divided into segments based on this attribute information.

Top-of-bank survey: in addition to the centerline survey, stream tops-of-banks will be mapped as a ready means to enable riparian protection buffers.

Photo log: in accordance with SHIM standards, a detailed photo log must be established showing important stream attributes, as well as general stream characteristics.

Data logging & processing: data for centerline and top-of-bank surveys is to be gathered using GPS, which will, in turn, be processed using GIS software into a format that is compatible with City of Kelowna systems to ensure optimum integration.

F. PROJECT TIMELINE

Project Start Date (dd/mm/yy) 01/05/11

Completion Date (dd/mm/yy) 28/02/12

Activity (describe components of project below)

Category (select)

Date(mm/yy)

Start-up meetings and background information review	Other	05/11
Field map preparation	Data Collection	08/11
SHIM and WIM field work	Habitat Inventory/Mapping	09/11
Data processing	Data Collection	12/11
Inventory Report and Deliverables	Other	02/11
	Please Select	
	Please Select	
	Please Select	
	Please Select	
	Please Select	



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G. PROJECT PARTNERS

How does this project illustrate collaboration with other agencies? With other jurisdictions?

Both water and environmental issues are common issues shared amongst the communities and local governments of the Okanagan Basin. Completing this important mapping project will serve as a positive example for surrounding jurisdictions in their efforts to protect water quality and quantity and to preserve and to restore environmentally sensitive features.

H. PROJECT VALLEY-WIDE BENEFIT

Recognizing that the Okanagan is one valley with one water, how does this project benefit the valley as a whole?

The protection of water quality and quantity and the preservation and enhancement of environmentally sensitive features are priorities for local governments throughout the Okanagan. However, many local jurisdictions struggle with how to protect these important resources while balancing the needs of the agriculture industry. This project may provide a model for application in their communities and rural areas, resulting over time in an overall improvement in water quality and quantity in the Okanagan Basin.

I. PROJECT INNOVATION

What is innovative about this project?

Despite previous positive efforts, significant gaps persist around spring protection and the identification of streams in the ALR. Specifically, the identification and protection of spring resources and of stream resources in the ALR has been lacking. If successful, this project could provide a very valuable template to assist other jurisdictions in protecting their water and environmentally sensitive resources.

J. GRANT TRACK RECORD

If your organization has received OBWB grants for previous projects, please comment on the success of the projects and the significance of the grants to your organization.

The City of Kelowna has received funding for some previous SHIM work in the City. The data from this work has been used as one of the key data sets in determining development permit boundaries, and is used on a daily basis by City staff in protecting and improving water quality, quantity and environmental resources.



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K. PROJECT FUNDING

Total Project Funding \$

Source	Type	Confirmed
City of Kelowna	In-Kind Support	Confirmed
Canadian Wildlife Federation - ESF	Direct Funds	Unconfirmed
Okanagan Basin Water Board	Direct Funds	Unconfirmed
<input type="text"/>	Please Select	Please Select

L. PROJECT EXPENSES

Total Project Budget \$

Project Management	<input type="text" value="\$3,000"/>
Equipment	<input type="text" value="\$0"/>
Supplies/Consumables	<input type="text" value="\$0"/>
Printing/Media	<input type="text" value="\$0"/>
Consultant/Contractor	<input type="text" value="\$20,000.00"/>
Travel	<input type="text" value="\$0"/>
Wages	<input type="text" value="\$0"/>
Other	<input type="text"/>
	<input type="text"/>

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