

WATER RESOURCES WATERSHED PLAN IMPLEMENTATION AND FLOW ACHIEVEMENT

Organization: Birch Bay Water and Sewer District

WRPIFA-1517-BiBWSD-00048

General Information

Project Title	WRIA 1 - North Whatcom Regional Source (Feasibility Study)
Project Short Description	<p>The North Whatcom Regional Source Project will enhance flows in the Nooksack basin by delivering potable groundwater from the Blaine Groundwater Management Area to the Nooksack basin and potable and/or reclaimed water to the Cherry Point Industrial Area. These supplies will support water banking, address health risks, promote system consolidation and enhance drought protection. Requesting grant funding of \$1.4 million for monitoring wells and water banking study.</p>
Project Long Description	<p>The Nooksack basin in WRIA 1 faces several critical water supply problems: (1) Water Supply - instream flows are often insufficient to meet minimum instream flow rules; (2) Water Rights - about 50% of agricultural appropriations are unpermitted or noncompliant. Lynden's water rights are also in question; (3) Water Quality - a number of water associations served by wells in the agricultural area have high nitrate and/or EDB levels. Additional water quality issues include high temperature and bacteria, with low dissolved oxygen levels and impacts to near-shore shell-fish areas.</p> <p>In 2010, the City of Blaine ("City") and Birch Bay Water and Sewer District ("District") received a significant increase in water rights based on supply from the Blaine Groundwater Management Area when DOE issued four new water right permits through the Cost Reimbursement Program. The aquifer providing supply for these new water rights is situated approximately 300 feet below mean sea level. This water-bearing formation is overlain by two significant aquitards, thereby minimizing interaction with surface waters outside the tidally influenced zone. Pump tests and other hydrogeological information developed in the course of acquiring these new water rights indicate this resource has the potential to serve as a regional supply.</p> <p>Based on that data, the City and District are jointly investigating a project to enhance flows in the Nooksack basin by: (1) delivery of potable groundwater from the Blaine Groundwater Management Area to the Nooksack basin and the Cherry Point Industrial Area; (2) delivery of reclaimed water from the Blaine water reclamation and BBWSD wastewater treatment facilities to the Cherry Point Industrial Area. These new supply efforts would bring the following regional benefits:</p> <ul style="list-style-type: none">• Support development of water banks and/or mitigation exchanges.• Augment existing flows in the lower Nooksack basin and alleviate diversions from the lower Nooksack around Ferndale• Provide new supply to municipalities with water rights problems or public health risks.• Promote system consolidation.• Enhance drought protection through delivery from deep groundwater sources relatively unaffected by fluctuations in snow pack conditions . <p>FEASIBILITY STUDY. The feasibility study phase of this project implements the</p>

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“Deep Aquifer Supply and/or Storage” element of the 2005 WRIA 1 Watershed Management Plan. WRIA 1 Watershed Management Plan, Appendix F, page 4. Funding is requested for the following facets of the feasibility study:

1. Monitoring Wells/Water Acquisition. Construction of five monitoring wells in the Blaine Groundwater Management Area: \$1,500,000. The City and District are currently constructing one of these wells at a local cost of approximately \$300,000. Grant funds requested for the other four monitoring wells total \$1,200,000. This work will provide information to support acquisition of new water rights to support the regional system and enable development of preliminary cost estimates for regional delivery facilities.

2. Water Banking and Mitigation Exchange. Water Banking/Mitigation Exchange Study: \$200,000. The study will review models for establishing and administering a water bank/mitigation exchange in the lower Nooksack region. Administration of water bank/mitigation exchange activities will be an element of the eventual governance structure established to manage the regional system. It is anticipated that the City and District will coordinate with a working group of affected parties to oversee this work.

Total Cost	\$1,700,000.00*	Total Eligible Cost \$1,700,000.00*
Effective Date	7/1/2015	Expiration Date 12/30/2016
Ecology Program	Water Resources	
Project Category*	Infrastructure and Water Management Construction (Efficiency Improvements) ✓ Surface and Sub Surface Storage Feasibility Study and Construction Water Acquisition or Water Bank/Exchange Development Water Measuring Devices Other	
Will Environmental Monitoring Data be collected?	No	
Overall Goal	The overall goal of the proposed work is to determine the feasibility of developing the deep aquifer within the Blaine Groundwater Management Area as a new regional water supply, thereby setting the stage for acquisition of new water rights, enhancing flow within the Nooksack basin and implementation of water banking.	

Recipient Contacts

Project Manager

Dan Eisses

Dan Eisses

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Authorized Signatory

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Billing Contact

Dan Eisses

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Other recipient signatures on printed agreement

To Add a Row

Enter a name and title

When done, click the **SAVE** button

After SAVE, a new row will appear

To Delete a Row

In the row you want to delete, remove the information in the Name and Title textboxes

When done, click the **SAVE** button

After SAVE, the row will be deleted

Recipient Contacts

Name

Title

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Location Information

Statewide * Yes No

Ecology Region * Northwest 100%
Click here to view map:

County * WHATCOM 100%
Click here to view map:

Congressional District * District 01 100%
Click here to view map:

Legislative District * District 42 100%
Click here to view map:

WRIA * 01 - Nooksack 100%
Click here to view map:

Ecology Region Statewide 100%

County Statewide 100%

Congressional District Statewide 100%

Legislative District Statewide 100%

WRIA Statewide 100%

Latitude (expressed in decimals)

Longitude (expressed in decimals)

Facility Site ID

Facility Site Link

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Scope of Work - Task 1 Project Admin: 1

Task Number	1		
Task Title	Project Administration/Management	Task Cost	\$20,000.00
Task Description	<p>A. The RECIPIENT will administer the project. Responsibilities will include, but not be limited to: maintenance of project records; submittal of requests for reimbursement and corresponding backup documentation, progress reports and recipient closeout report (including photos); compliance with applicable procurement, contracting, and interlocal agreement requirements; application for, receipt of, and compliance with all required permits, licenses, easements, or property rights necessary for the project; and submittal of required performance items.</p> <p>B. The RECIPIENT must manage the project. Efforts will include: conducting, coordinating, and scheduling project activities and assuring quality control. Every effort will be made to maintain effective communication with the RECIPIENT's designees; the DEPARTMENT; all affected local, state, or federal jurisdictions; and any interested individuals or groups. The RECIPIENT must carry out this project in accordance with any completion dates outlined in this agreement.</p>		
Task Goal Statement	Properly managed project that meets agreement and Ecology administrative requirements.		
Task Expected Outcomes	<p>* Timely and complete submittal of requests for reimbursement, quarterly progress reports and recipient closeout report.</p> <p>* Properly maintained project documentation</p>		
Recipient Task Coordinator	Dan Eisses		

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Enter a deliverable
 When done, click the SAVE button
 After SAVE a new row will appear
 Repeat these steps for each deliverable

To Delete a Row

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 When done, click the SAVE button

Deliverable #	Description	Due Date	Received?	EIM Study ID	EIM System Link	Latitude	Longitude	Location Address
			(ECY Use					

Scope of Work - Task 1 Project Admin: 1

			Only)
1.1	Progress Reports	2/1/2016	
1.2	Recipient Closeout Report	9/30/2016	

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Scope of Work - Additional Tasks: 2 - Drill 5 new monitoring/ exploratory wells

Task Number 2

Task Title Drill 5 new monitoring/ exploratory wells Task Cost \$1,480,000.00*

Task Description The City of Blaine (City) and the Birch Bay Water & Sewer District (District) provide municipal water to a population of over 15,000 located in northwestern Whatcom County. The source of the City/ District's water is several high-capacity production wells that are completed within a deep highly confined aquifer that is located beneath the City's designated Groundwater Management Area. The extent and production capabilities of this important deep aquifer along with the aquifer's susceptibility to surface sources of contamination are not well known. The purpose of this project will be further explore and protect the City/Districts deep groundwater supply by installing and testing five new exploration/monitoring wells within the deep aquifer.

Task Goal Statement Goal of this project is to further establish a critical groundwater quality monitoring network for a major municipal water supplier and to develop the additional geologic and hydrogeologic information needed to reasonably evaluate the regional extent of the deep aquifer, its long-term production capabilities, its degree of hydraulic connection with surface water resources, and its susceptibility to surface sources of contamination.

Task Expected Outcomes

1. The development of critical geologic and hydrogeologic information that can be used to further define the regional extent of the deep aquifer, long-term production capabilities, hydraulic connection to surface water and susceptibility to surface sources of contamination.
2. Five additional groundwater monitoring points that can be used to define the extents and capacity of this regional source.
3. Information that can be used to support permitting efforts for the withdrawal of additional groundwater resources from the deep aquifer that could be used in lieu of current/future withdrawals of shallow groundwater and/or surface water sources that would have a much greater impact on critical instream flow conditions in northwestern Whatcom County.
4. Information that can be used to support permitting efforts for use of groundwater resources from the deep aquifer as direct augmentation and/or mitigation water to nearby streams that suffer from instream flow issues.

Recipient Task Coordinator Dan Eisses
12/30/16

Scope of Work - Additional Tasks: 2 - Drill 5 new monitoring/ exploratory wells

Deliverables

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Enter a deliverable
 When done, click the SAVE button
 After SAVE a new row will appear
 Repeat these steps for each deliverable

To Delete a Row

Delete data entered in a row
 When done, click the SAVE button

Deliverable #	Description	Due Date	Received? (ECY Use Only)	EIM Study ID	EIM System Link	Latitude	Longitude	Location Address
2.1	5 new monitoring/explorat ory wells	12/31/2015						

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Scope of Work Summary

Task Title	Task Cost
Project Administration/Management	\$20,000.00
Drill 5 new monitoring/ exploratory wells	\$1,480,000.00
WRIA 1 - Water Banking and Mitigation Exchange Stu	\$200,000.00
	\$1,700,000.00
Total Eligible Costs (from the General Information Form)	\$1,700,000.00

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Budget Proposal

Estimate your proposal's total budget needs by task and by element for FY 16, FY17 and beyond.

FY 16 - July 1, 2015 to June 30, 2016

FY 17 - July 1, 2016 to June 30, 2017

Total Eligible Costs (from General Information form)
\$1,700,000.00

By Task

Task Title	Task Cost	*FY 16	*FY 17	Additional Fiscal Years	Total
Project Administration/Management	\$20,000.00	\$10,000.00	\$10,000.00		\$20,000.00
Drill 5 new monitoring/exploratory wells	\$1,480,000.00	\$740,000.00	\$740,000.00		\$1,480,000.00
WRIA 1 - Water Banking and Mitigation Exchange Station	\$200,000.00	\$100,000.00	\$100,000.00		\$200,000.00
Total	\$1,700,000.00	\$850,000.00	\$850,000.00	\$0	\$1,700,000.00

By Element

Element	*FY 16	FY 17	Additional Fiscal Years	Total
Salaries - 1				\$0
Benefits - 1				\$0
Salaries and Benefits Combined - 1	\$50,000.00	\$50,000.00		\$100,000.00
Contracts	\$800,000.00	\$800,000.00		\$1,600,000.00
Travel				\$0
Equipment - 2				\$0
Goods/services - 3				\$0
Overhead - 4				\$0
Total	\$850,000.00	\$850,000.00	\$0	\$1,700,000.00

If you receive a grant, you are responsible for procuring professional, personal, or other services using sound business judgment and good administrative procedures consistent with applicable state, and local laws, orders, regulations, and permits. This includes issuance of invitation of bids, requests for proposals, selection of contractors, award of sub-agreements, and other related procurement matters.

- 1 Fill in either the "Salaries" field and the "Benefits" field or fill in the "Salaries and Benefits Combined" field
- 2 Upload an itemized list of all equipment and explain why the equipment is needed. Equipment is

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Budget Proposal

defined as tangible property other than land, buildings, improvements other than buildings, or infrastructure, which is used in operations and with a useful life of more than one year. Examples are furnishings, equipment, and software.

- 3 Upload an itemized list of all Goods and Services
- 4 Overhead cannot exceed 25% of salaries/benefits

Upload Documents

Click the Browse button

Select your file

Click Save, your file will appear in the List of uploaded documents

Repeat for each file

To Delete a file, select the Delete checkbox next to the file and click SAVE

Additional Comments

The City of Blaine/Birch Bay Water and Sewer District have a on-call hydrogeological consultant and the costs associated with this work is shown in contracts. The well driller(s) will be selected by competitive bid and these costs are also included in the contracts item. The city/district will have some administrative costs.

SURFACE AND SUB SURFACE STORAGE FEASIBILITY STUDY

Instructions:

Please fill in the appropriate fields.
Required fields are marked with an *.
When done, click the **SAVE** button.

Project Location

* Stream reach mile or location

Funding Source Information

* Estimated or potential funding as part of total project amount expected to be provided by sources other than this program

Amount
Percentage of project budget %

* Identify sources and type of funding other than through this program grant. Include expected dates of participation. Upload letters of commitment, offer letters, application approvals etc.

Source and type of Funding

Amount	Percentage	Status	Dates of participation
<input type="text" value="\$300,000.0"/>	<input type="text" value="18"/> %	<input type="text" value="underway"/>	<input type="text" value="3/2015 thru 9/2015"/>
<input type="text"/>	<input type="text"/> %	<input type="text"/>	<input type="text"/>

Upload Documents

Click the Browse button
Select your file
Click Save, your file will appear in the List of uploaded documents
Repeat for each file
To Delete a file, select the Delete checkbox next to the file and click SAVE

Readiness to Proceed

* Briefly describe the status of existing and relevant feasibility reports, engineering designs, or associated permits. At the time of award you will need to provide documentation of all relevant information.

The City of Blaine has gone out to bid for one new monitoring/exploratory well. The low bidder has been selected and construction is anticipated to begin in May, 2015.
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* Does the project proponent own the land where the project would occur if funded? If not, will the proponent be able to get permission to enter the project site?

The project proponent does not own the land for the additional 4 well sites. There is latitude in the required locations of these wells and it is expected that permission for acceptable locations can be secured. The City and District will work with the Dakota Creek Watershed Improvement District for these locations.
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Design/Engineering Status (if relevant):

<input checked="" type="checkbox"/> Pre-planning (pre-permitting)	Status:	Underway	Underway
<input checked="" type="checkbox"/> Pre-design (design reports) (10%)	Status:	Underway	Underway
<input checked="" type="checkbox"/> Schematic design (30%)	Status:	Underway	Underway
<input checked="" type="checkbox"/> Design development (75%)	Status:	Not Started	Not Started
<input checked="" type="checkbox"/> Construction documents (95%)	Status:	Not Started	Not Started
<input checked="" type="checkbox"/> Bid documents (ready for bid)	Status:	Not Started	Not Started

Comments relevant to Design/Engineering Status:

As mentioned, one of these monitoring wells is anticipated to be under construction in May. The engineering documents for the remaining 4 monitoring/exploratory wells will be very similar to this first effort.
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Permit Status (if relevant):

<input checked="" type="checkbox"/> SEPA	Status:	Not Started	Not Started
<input type="checkbox"/> '401	Status:	Not Started	Not Started
<input type="checkbox"/> Dept of Fish and Wildlife consultation	Status:	Not Started	Not Started
<input type="checkbox"/> Storage and/or Secondary Use Permit	Status:	Not Started	Not Started
<input type="checkbox"/> Other: <input type="text"/>	Status:		
<input type="checkbox"/> Other: <input type="text"/>	Status:		
<input type="checkbox"/> Other: <input type="text"/>	Status:		