Introduction

For the past several decades, the Lake Whatcom Reservoir's water quality has been deteriorating as a result of phosphorus entering the lake from residential development, forest practices, natural processes and other sources. This phosphorus loading has resulted in widespread algal blooms and dissolved oxygen deficits causing problems for the City's water supply system, fish and recreational users of the lake. In 1998, Lake Whatcom water quality failed to meet state dissolved oxygen standards and was placed on Washington's list of polluted waters. In response to this listing, a Total Maximum Daily Load (TMDL) study was completed by the Washington Department of Ecology (DOE) to determine the amount of phosphorus reduction needed to return the lake to acceptable water quality standards. The City of Bellingham and Whatcom County will submit this work plan to the Department of Ecology to fulfill the requirement for a Summary Implementation Strategy, the initial phase of the TMDL response strategy.

The Lake Whatcom Cooperative Management Program was established by an Interlocal Agreement in 1998 between the City of Bellingham, Whatcom County and the Lake Whatcom Water and Sewer District (formerly Water District 10). The goal of the program is to jointly manage and implement programs affecting the Lake Whatcom watershed.

Since 2003, staff from the three jurisdictions have worked to improve the functional components of the management program. The Interjurisdictional Coordinating Team (ICT) was created in 2000 to help coordinate activities and programs between the three jurisdictions. The ICT, composed of staff from each of the three jurisdictions, meets regularly to coordinate Work Plan implementation, evaluate program effectiveness and analyze data collection and monitoring results. Findings from those efforts as well as information from the TMDL study and other reports, were used to develop tasks for this work plan, tasks that will improve the water quality of the lake.

The Lake Whatcom Reservoir Management Program 2010-2014 Work Plan is the third five-year work plan. Over the next five years, this work plan will guide management activities focused on the water quality issues that result from excess phosphorus loading into the lake. Similar to preceding work plans this five-year work plan is organized around twelve Program Areas with tasks and actions for each. However the format of this plan is much different. It is a modified version of the format used in the Lake Whatcom Reservoir Technical Review Task Force report, *Recommended Management Actions for the Protection and Restoration of the Lake Whatcom Reservoir,* that was presented to the Mayor and City Council of Bellingham in May, 2009. This format was adopted in order to:

- Present the tasks in a clearer and more detailed format
- Improve the accountability by tracking the progress and resource-use of each task
- Provide flexibility to allow for changes and improvements during the five-year timeframe

Each Program Area's tasks have been color-coded for easy identification throughout the work plan. A header table at the top of each task sheet provides a quick overview of the task and includes:

- the time period in which the task will be implemented,
- the party or parties responsible for implementing the task,

- an estimate of the costs associated with the task,
- the status of the task, and
- the phosphorus reduction pathway.

Each task sheet also includes a section of one or more performance measures, indicators of effectiveness for each of the actions of each task. Also included are more detailed cost estimate tables.

We highly recommend reading the detailed explanation of the new format and the header table that can be found on pages 6 and 7.

The *Silver Beach Creek Pilot Project* (SBCP) continues to be an important focus for the Lake Whatcom Management Program under this current work plan. The project involves implementing a comprehensive strategy of Capital Improvement Projects (CIP), public outreach and education, stewardship efforts, and enforcement in the Silver Beach Creek watershed. Silver Beach Creek has some of the highest development/residential related phosphorus loading of all the Lake Whatcom tributaries and is shared by both the City and County jurisdictions making it an ideal setting for the pilot study. Implementation of the tasks in the SBCP will reduce pollution entering the lake and will also serve to test the stewardship focus of many of the tasks. The successes from this pilot project will then be applied to the entire Lake Whatcom watershed. Tasks that are being implemented as part of the Silver Beach Creek Pilot can be found in the Task Summary Table under a separate sub-section entitled *Silver Beach Creek Pilot* in addition to their standard location under the appropriate Program Area.

Successful implementation of this work plan is predicated on continued or increased funding and staffing. Obviously if funding in a Program Area is less than projected then the tasks will need to be reduced either in scope, number or timing to adjust to the funding constraint. Recently awarded and expected 2010 grant funding will be an integral part of the work plan implementation strategy. ICT staff will continue to seek additional grant funding as described in Task 11.2. Appendix B provides additional information on funding.

An annual report on work plan progress will be prepared by January 31st of the following year.

Reading the Header Table

Program Area: 1. Land Preservation

Task: 1.3 Manage Acquisition Program properties

Quick Reference: Program Area and Task Number

Period	Responsible Party	Cost Estimate	Status	P Reduction
2010 2010-2014 2011-2012	City County SVCA District WSU Extension Education Team Data Team	$20,000	Active Hold	Indirect Direct

Quick Reference: Key information for each task is found in the **Header Table** (left) and can also be found in the **Task Summary Table on pages 8-11**

Header Table Descriptions:

Period: This column refers to the time period in which the task was/is being implemented. This entry includes the year the task started and the expected duration. For example, the period **2010-2014** indicates that the task is first being implemented in 2010 and is expected to continue until 2014. **2010** or any other single year indicates the task will be completed in one year.

Responsible Party: This column refers to the party or parties responsible for implementing the task.

Cost Estimate: This column gives an estimated cost for the implementation of the task during the period indicated. When applicable this estimate will be a combined amount for staff, capital and other costs for all participating parties. Details are broken out in the Cost Estimates Table.

Status: This column refers to the status of the task which is indicated by the following:

- **Active** indicates the task is funded and will be implemented.
- **Hold** indicates the task is on hold due to staff and/or funding constraints .

P Reduction: This column is used to indicate 1) whether this task is expected to result in a reduction in phosphorus loading, and 2) if there is an expected reduction, will it be a) **Indirect**, meaning that the phosphorus reduction will occur as a result of the impact this task will have on other actions, e.g. education program influence on stewardship activities, or b) **Direct**, meaning that this task is expected to directly result in a reduction in phosphorus loading, e.g. retrofitting a stormwater facility.

Quick Reference: Detailed descriptions of all **Header Table** entries can be found here

Reading the Task Sheet

The reference task number and name can be found here

Here is an example of the **Header Table** from the previous page

Program Area: 1. Land Preservation
Task: 1.3 Manage Acquisition Program properties

Period	Responsible Party	Cost Estimate	Status	P Reduction
2010 - 2014	City ER/County Parks	$2.77 million	Active	Direct

Task Objective: Protect the watershed by managing Acquisition Program properties

A detailed **Task Objective** can be found in this section

Actions:

- Inventory and create management plans for new acquisitions
- Implement management plans for all properties
- Conduct periodic inspections, invasives control, planting, trail construction, encroachment [illegible] other tasks as needed

A list of **Actions** that will be taken to meet the Task Objective . This list will be updated as needed.

Intended Lake Benefits: Phosphorus Reduction ☒ Fecal Coliform Reduction ☐ Sediment Reduction ☒ Other ☐

If other, please describe:

Performance Measures: 1) Acres restored, encroachment responses, special projects
2) Summary of projects completed on properties

Boxes in this section are checked to indicate specific benefits the lake may receive as a result of this task. If **Other** is checked, a description will follow below.

Cost Estimates:

Year	Party	FTEs ($)	Capital Costs	Other	
2010	City	1.0 ($100,000)		$30,000	
	County	1.0 ($100,000)	$225,000	$50,000	
	District/Other				
2011	City	1.0 ($100,000)		$35,000	$135,000
	County	1.0 ($100,000)	$75,000	$55,000	$230,000
	District/Other				
2012	City	1.0 ($100,000)		$40	
	County	1.0 ($100,000)		$55	
	District/Other				
2013	City	1.0 ($100,000)		$45	
	County	3.0 ($300,000)	$150,000	$205	
	District/Other				
2014	City	1.0 ($100,000)		$50,000	$150,000
	County	3.0 ($300,000)	$150,000	$205,000	$655,000
	District/Other				
Total		**14.0 ($1.4 million)**	**$600,000**	**$770,000**	**$2.77 million**

Performance Measures indicate how progress toward completing the task objective is being measured

The **Cost Estimates** section gives an estimate of the resources and funding to be used to implement the task for the designated period. Cost estimates are divided into Full Time Equivalents (1.0 FTE = $100k), Capital Costs ($), Other Costs ($), and Total Costs ($) for the respective jurisdictions. Undetermined is used to indicate when no resource/funding information is currently available.