



# City Council Agenda Bill

# 20368

Bill Number

**Subject:** Lake Whatcom Cooperative Management Program Joint Councils and Commission Annual Meeting

**Summary Statement:** This is the annual joint legislative meeting of the Lake Whatcom Cooperative Management Program and will include the Bellingham City Council, the Whatcom County Council, and the Lake Whatcom Water and Sewer District Board of Commissioners. At the meeting staff will review activities completed in 2013 and underway in 2014 to reduce pollution and other threats to Lake Whatcom. Members of the three legislative bodies will consider a joint resolution setting milestones for the 2014-16 period and will review the process for the creation of the 2015-19 Work Plan that will result in a complete plan for long-term phosphorus reduction. An opportunity for public comment will be provided at the meeting.

**Previous Council Action:**

**Fiscal Impact:** None.

**Funding Source:**

**Attachments:** Lake Whatcom Management Program 2013 Annual Progress Report.  
Joint Resolution setting milestones for 2014-16 to improve lake water quality  
Joint Resolution inviting the Sudden Valley Community Assn. to send a representative to the Lake Whatcom Policy Group

Meeting Activity	Meeting Date	Staff Recommendation	Presented By	Time
Special Meeting/Worksession Full Council	26-Mar-2014	Vote to Approve	City and County Staff	2:00

**Council Committee:**

**Agenda Bill Contact:**

Mark Gardner, 778-8204

**Reviewed By**  
Cathy Lehman, Council Pres

**Initials**  
CL

**Date**  
3/24/14

**Committee Actions:**

Legal  
Mayor or CAO

MS 3-24-14

**Council Action:**



# **Lake Whatcom Management Program 2013 Annual Progress Report**

Prepared by the Lake Whatcom  
Interjurisdictional Coordinating Team

March, 2014

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## Introduction

In 2010, the Whatcom County Council, Bellingham City Council and the Lake Whatcom Water and Sewer District Commission approved the *Lake Whatcom Management Program 2010-2014 Work Plan*. As with the previous work plans, tasks included in this five-year plan continue to be guided by the original Lake Whatcom Management Program strategies and goals that were formulated in 1992 by the City of Bellingham (City), Whatcom County (County) and the Lake Whatcom Water and Sewer District (formerly Water District 10) (District) and formally adopted by the Lake Whatcom Management Program in 1998.

Each year the Interjurisdictional Coordinating Team (ICT) compiles a Lake Whatcom Annual Progress Report highlighting Lake Whatcom Management Program accomplishments and providing recommendations for moving forward. This current report provides a summary of Lake Whatcom Management Program activities that were implemented in 2013 by the County, City, and LWWSD, as well as WSU Extension and the Sudden Valley Community Association.

As with the *Lake Whatcom Management Program 2010-2014 Work Plan*, the *Lake Whatcom 2013 Annual Progress Report* is organized around the 12 program areas that have provided structure to previous management program documents. Unlike previous progress reports, this year's Annual Progress Report also includes a thirteenth program area for aquatic invasive species prevention and response efforts. This report focuses on accomplishments made at the program area level. Each program area includes an update on performance measures (many of which have been re-visited since 2010), a summary of program area activities, cost estimates for 2013, and program area recommendations for 2014. Some program areas include additional reference materials to better illustrate annual performance or to provide links to additional information.

### Notable 2013 achievements include:

- Whatcom Public Works received the 2012 Local Outstanding Civil Engineering Achievement Honor Award by the American Society of Civil Engineers (ASCE) Seattle Section for habitat and stormwater improvements made to the West Tributary of the Silver Beach Creek sub-basin of the Lake Whatcom watershed.
- Whatcom County adopted new land use and stormwater management standards aimed at reducing phosphorus runoff in the watershed.
- The City completed 41 infiltration, filtration, dispersion, and/or re-vegetation projects on private properties in the watershed as part of the Homeowner Incentive Program (HIP). This Program was also expanded in 2013 to open up participation to properties located in the County portion of the Silver Beach Creek sub-watershed.
- A highlight of the Community Outreach Program Area was the joint coordination of a Watershed Friendly Project Expo at Bloedel Donovan Park that was attended by 75 residents and 20 local business representatives.

In addition to phosphorus reduction projects, the Lake Whatcom Management Program completed the second season of its Aquatic Invasive Species Prevention Program. The City of Bellingham and Whatcom County also adopted aquatic invasive species ordinances requiring watercraft to be inspected for aquatic invasive species and to display a valid aquatic invasive species permit sticker prior to launching or operating on Lake Whatcom or Lake Samish. Aquatic invasive species staff completed over 3,000 watercraft inspections at Lake Whatcom and Lake Samish. The majority of the inspections were conducted at Bloedel Donovan with some additional inspections being conducted at Sudden Valley, South Bay, the Lake Samish WDFW Launch, and at private residences. More information can be found in the new Aquatic Invasive Species Program Area on page 36 or in the Lake Whatcom Aquatic Invasive Species Program 2013 Annual Report.



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## Program Area: 1. Land Preservation

### Goal:

Pursue public ownership and protection of the watershed whenever possible through public/private partnerships, tax exemptions, transfer of development rights, land trusts, and other means.

**Program Area Description:** This program area aims to reduce water quality impacts by preserving land within the watershed that might otherwise be made available for development. Land preservation strategies help preserve or rehabilitate natural areas for the benefit of protecting water quality. Strategies that have been used in the Lake Whatcom watershed include: acquisition, conservation easements, transfer of development rights, purchase of development rights, lot consolidation, and other incentive programs.

### Performance Measures 2013:

- **Number of development units removed from watershed:**
  - Total of 775 lots removed from development to date
- **Number of acres purchased through Acquisition Program (% of land protected in watershed):**
  - Total of 1,951.53 acres purchased to date (9% of the total watershed)
- **Number of acres protected with easements:**
  - Total of 989 acres protected with easements to date
- **Estimated percentage of remaining developable land protected in watershed:**
  - 38 % (Estimated 4,400 acres protected to date)

### Summary of Program Area Activities 2013:

- City purchased the Trillium Property in November, 2013, protecting 29 acres of forested land adjacent to other protected land in the watershed and reducing development potential by 1 unit.
- County finalized reconveyance of 8,844 acres of watershed forest from DNR for County park use (Governor's signature January 22, 2014).
- All acquisition properties were inspected at least annually, about 80% were inspected quarterly.
- Property management highlights include: dense alder thinned and 2,200 conifers planted, over 5 acres of invasive blackberry removed, one culvert installed, parking lot and restroom facilities constructed at the Lookout Mountain Preserve, abatement of ATV tracks, stewardship plans created for all watershed properties, and 40 volunteer stewards recruited.

### Cost Estimates 2013:

Year	Party	FTEs (\$)	Capital Costs	Other	Total
2013	City	1.7 (\$170,000)	\$213,728		\$383,728
	County	1.25 (\$125,000)	\$225,000	\$75,000	\$425,000
	District/Other				
<b>Total</b>		<b>2.95 (\$295,000)</b>	<b>\$438,728</b>	<b>\$75,000</b>	<b>\$808,728</b>

### Planned Activities for 2014:

- Continue to assess and identify properties for the Lake Whatcom Acquisition program.

**Reference Documents:**

Goals and policy of the Land Preservation Program Area

<http://www.lakewhatcom.whatcomcounty.org/UserFiles/File/allWatershed%20Ownership.pdf>

Lake Whatcom Property Acquisition Program

<http://www.cob.org/services/environment/lake-whatcom/lw-property-acquisition-program.aspx>

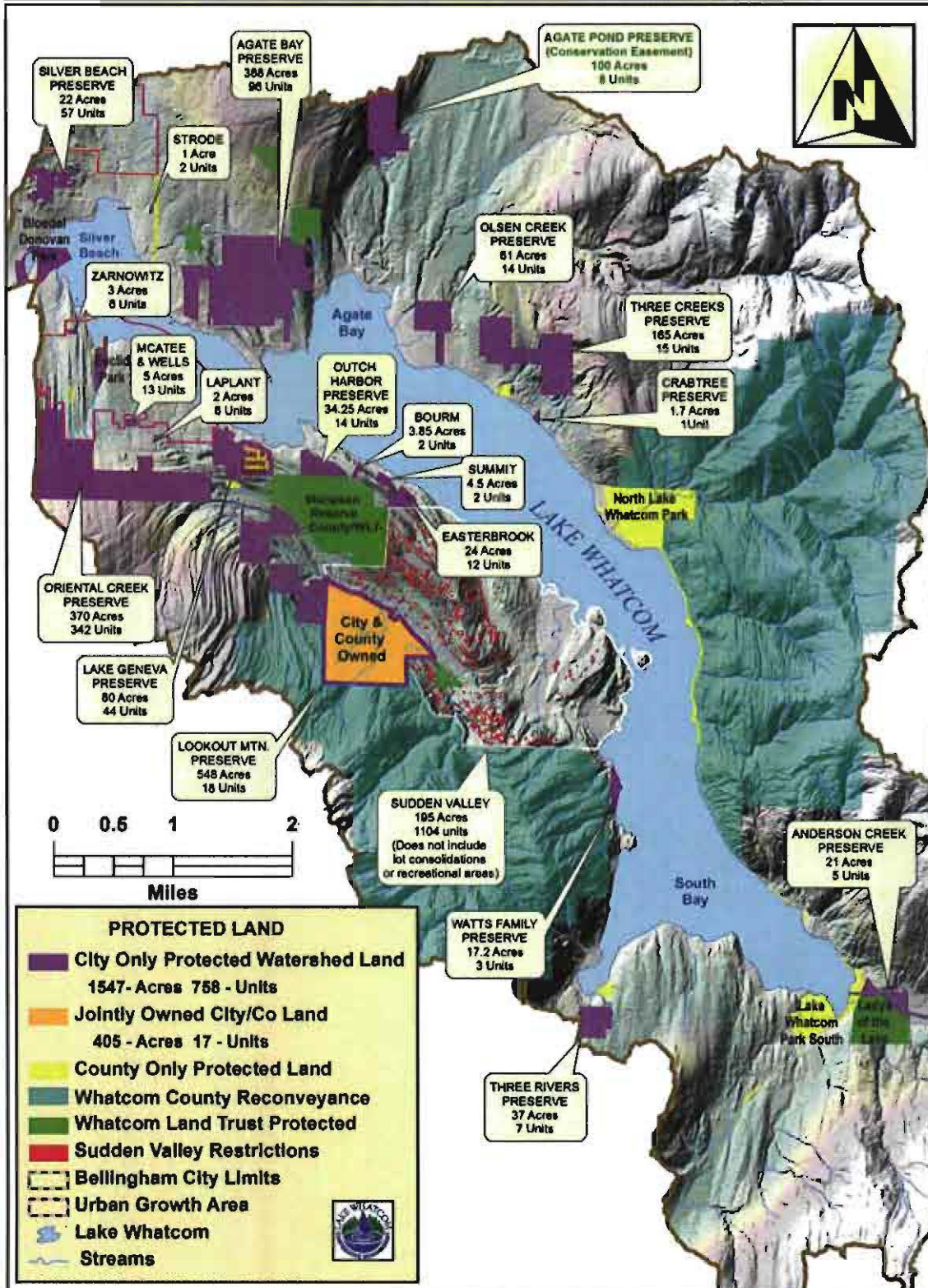
**Trillium Acquisition**

In 2013, the City purchased a 29-acre rural forestry parcel from Trillium Corporation, protecting additional forested land adjacent and in proximity to other protected lands in the Lake Whatcom watershed.





# PROTECTED PROPERTY IN THE LAKE WHATCOM WATERSHED (As of 1-25-2014)



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## Program Area: 2. Stormwater Management

### Goal:

Prevent water quality and quantity impacts due to stormwater runoff by implementation of best management standards and practices, pollutant source control, and construction, maintenance and retrofit of stormwater facilities.

**Program Area Description:** This program area aims to prevent water quality and quantity impacts associated with stormwater runoff. This program area focuses on the implementation of options for stormwater control including best management practices and standards, capital projects, pollutant source control and treatment, and the evaluation of stormwater control options that can be applied to both existing and new development in the watershed.

### Performance Measures 2013:

- **Acres of stormwater treated in watershed:**
  - The County currently has facilities treating approximately 550 acres of developed land in the watershed, 135 acres above the City of Bellingham water intake line in Geneva, and 415 acres in the Silver Beach Creek Watershed.
  - The City has facilities that provide treatment for 285 out of 469 total acres. The City treatment area for this purpose is defined as portions of the City that drain to Basin 1 plus tributary area in the County that runs to and through City facilities.
- **Amount of phosphorus removed from stormwater runoff:**
  - The City treatment facilities removal rates are based on testing conducted by the City along with modeling of similar typed facilities. The City has shown removal of 156 lbs of the 362 lbs required to be removed to meet the TMDL goal for the City portion of the Watershed.
  - County:
    - **Geneva bio-infiltration swales and treatment vaults** – removes an estimated 36 lbs of the 59 lbs of phosphorus generated from the area treated.
    - **Britton Road/Lahti Drive bio-infiltration swale** – removes an estimated 12 lbs of phosphorus generated from the area treated. A post-construction monitoring program began in the summer of 2011.
    - **Silver Beach Creek Improvements (Brownsville to E. 16<sup>th</sup> Place)** – a vegetated bioswale and stormwater treatment vault will remove an estimated 30 lbs of phosphorus per year. Additional reductions will be achieved by eliminating erosion from stabilizing stream banks and removing existing compost piles adjacent to the stream.
    - **West Reach/Silver Beach Creek** – Project elements include a bio-infiltration swale, stormwater vaults, channel restoration, and stabilizing slopes. The improvements will treat approximately 40 acres and remove approximately 15 lbs of phosphorus.
    - **Coronado/Fremont** – Elements include a bio-infiltration swale, stormwater vaults, and channel restoration. The improvements will treat approximately 170 acres and remove an estimated 40 lbs of phosphorus. First phase of the project was completed in the fall of 2013.
- **Efficiency and phosphorus removal rate for stormwater facilities:**
  - County (Geneva and Silver Beach Creek):
    - Bio-infiltration swales –60%
    - Treatment vaults – Phosphosorb media 52%, ZPG media 28%

- The City has 46 main treatment systems in the watershed with other smaller ones associated with the Homeowner Incentive Program (HIP). The average phosphorus removal efficiency for these facilities is 51%. Individual efficiencies range between 10 and 100%.
- **Efficiency and fecal coliform removal rate for stormwater facilities:**
  - City:
    - Sand filters – 80 to 99.9% removal based on quarterly sampling
    - Rain gardens – 81% removal based on quarterly sampling
  - County:
    - Bio-infiltration swales – 75%
    - Treatment vaults – It is estimated that the cartridges have an 80% removal rate
    - Brownsville to E. 16<sup>th</sup> Place – Based on published research it is estimated that the vegetated bioswale will also remove up to 80% of the fecal coliform loading above its location.
- **Number of participants in Homeowner Incentive Program (HIP):**
  - Number of projects completed in 2013: 41
  - Number of new projects permitted and ready for construction: 36
  - Phosphorus removed in 2013 as a result of HIP projects: 5.66 lbs @ \$22,899.72/lb
  - Projected phosphorus removal from HIP Grant: Based on cost approx. 19 lbs
  - Number of new properties requesting and provided site visit: 40
- **Homeowner Incentive Program (HIP) projects in 2013: (Acres treated)**
  - Infiltration projects – 4.28 acres (6.29 acres to date)
  - Filtration projects – 0.03 acres (0.50 acres to date)
  - Re-vegetation projects – 1.67 acres (3.67 acres to date)
  - Dispersion/Other – 0.18 acres (0.41 acres to date)
  - Total – 6.16 acres (10.87 acres to date)
  - Effective Acres Managed - 4.47 acres (9.18 acres to date) based on effectiveness of measure at removing phosphorus and credit given for best management practice (BMP)

### **Summary of Program Area Activities 2013:**

- Whatcom County opened up participation in the Homeowner Incentive Program (HIP) in June, 2013.
- Whatcom County Public Works was awarded the 2012 American Society of Civil Engineers (ASCE) Local Civil Engineering Achievement Honor Award for the West Reach project in the Silver Beach Creek Watershed. West Reach facility is now operational (County) – 40 acres treated
- Coronado/Fremont Phase 1 Completed (County) – 170 acres treated
- Sudden Valley continued to inspect erosion control practices for new construction projects, additions and revisions to existing properties.
- Sudden Valley ensured all maintenance and capital projects followed erosion control BMPs.
- Sudden Valley completed two large-scale capital projects, the Gate 9 culvert to bridge conversion and the Wintercross Way culvert repair/replacement, as well as a comprehensive evaluation of the stormwater drainage system for the entire development.
- All public stormwater facilities in the watershed are now utilizing phosphorus specific filtration media. Phosphorus removal efficiency improved to 50-60% as a result.



**Cost Estimates 2013:**

Year	Party	FTEs (\$)	Capital Costs	Other	Total
2013	City	2.7 (\$270,000)	\$50,000	\$100,000	\$420,000
	County	2.0 (\$200,000)	\$750,000	\$75,000	\$1,025,000
	District/Other	0.4 (SVCA) (\$40,000)	\$585,000		\$625,000
<b>Total</b>		<b>5.1 (\$510,000)</b>	<b>\$1.38 million</b>	<b>\$175,000</b>	<b>\$2.07 million</b>

**Planned Activities for 2014:**

- Coronado-Fremont Stormwater Improvements Phase 2 (County) - stormwater treatment and streambank stabilization
- Complete Homeowner Incentive Program (HIP) projects within the County portion of the Silver Beach Creek subwatershed and continue projects within the City.
- Design small right-of-way projects within the City to fully utilize HIP grant funds
- Design is proceeding for 3 projects in the City to be constructed in 2014: retrofit of Bloedel Donovan park areas (stormwater DOE grant), retrofit systems on Northshore from Britton Road to Donald Ave (City limits) (stormwater DOE grant), and retrofit of Huntington and Shepardson Streets (NEP/DOE grant).
- Design for the County/City Joint Stormwater Facility is ongoing and will continue through 2014.
- Sudden Valley plans to slip line, repair or replace several culverts identified as priorities by recent stormwater system evaluation.
- Continue evaluation of stormwater facilities to quantify and/or improve performance
- Provide a plan or plans for long range capital facility and non-capital stormwater improvements. These plans are intended to meet the requirement to provide estimations of cost and time frame for Lake Whatcom TMDL compliance.

**Reference Documents:**

Lake Whatcom Management Program Capital Improvement Projects website  
<http://www.lakewhatcom.whatcomcounty.org/our-programs/capital-projects>

City of Bellingham 2007 Comprehensive Stormwater Plan  
<http://www.cob.org/documents/pw/storm/2007-stormwater-comp-plan.pdf>

Whatcom County 2008 Lake Whatcom Comprehensive Stormwater Plan  
<http://www.whatcomcounty.us/publicworks/water/compstormwaterplan.jsp>



**Wintercress Way Culvert Project  
 Sudden Valley 2013**



**Gate 9 Culvert to Bridge Conversion Project  
 Sudden Valley 2013**





**West Reach Water Quality Improvement Project  
Whatcom County Public Works**

Left (Erosion in West Tributary creek bed prior to construction),  
Middle (Bio-infiltration swale, post-construction), Right (Creek  
bed with logs, post -construction)



**Homeowner Incentive Program Project  
City of Bellingham 2013**

## Program Area: 3. Urbanization & Land Development

### Goal:

Prevent water quality degradation associated with urban development through zoning changes, development standards and density limits.

**Program Area Description:** This program area aims to reduce water quality impacts resulting from residential and land use activities by way of code changes. As areas are developed, land cover is often converted into less pervious surfaces that result in increased stormwater runoff going into the lake. The focus of this program area is to identify and adopt code changes that will result in reduced water quality impacts from residential uses. Another focus of this program area has been the improvement of data sharing between jurisdictions and the joint review of significant projects.

### Performance Measures 2013:

- **Number of new homes and "redevelopment" (more than 300 square feet of new impervious or partially pervious surface), lot size, and total area with residential permit activity (City):**
  - 2 new homes permitted, only one built
  - Lot sizes: 6,438 square feet and 17,549 square feet
  - Total parcel area: 23,987 square feet (0.55 acres)
- **Number of new homes and remodels, lot size, total lot area, and Open Space (County):**
  - 12 new homes, 0 additions/remodels, 0 detached structures
  - Lot size range: 0.17 to 5.41 acres
- **Total area of new and redeveloped properties considered phosphorus neutral due to Lake Whatcom stormwater and development requirements (City):**
  - 23,987 square feet (0.55 acres)
  - Since 2009 BMC 6.80 changes: 4.7 acres (total acreage of properties, including NVPA)
- **Total area of Native Vegetation Protection Area (NVPA) established as a result of new/redeveloped homes (City):**
  - 9,121 square feet of NVPA
- **Total area protected through Protective Native Growth Area (PNGA) covenant (County):**
  - No PNGAs applied for in 2013

### Summary of Program Area Activities 2013:

- Whatcom County adopted new land use and stormwater management standards aimed at reducing phosphorus runoff in the watershed.
- City staff identified minor code changes to clarify and streamline process and reported on these to City Council.

### Cost Estimates 2013:

Year	Party	FTEs (\$)	Capital Costs	Other	Total
2013	City	0.08 (\$8,000)			\$8,000
	County	0.75 (\$75,000)			\$75,000
	District/Other	0.3 (SVCA) (\$30,000)			\$30,000
<b>Total</b>		<b>1.13 (\$113,000)</b>			<b>\$113,000</b>

**Recommendations for 2014:**

- Post the watershed regulations FAQ on website (City)
- Develop educational materials on the new regulations (County)
- Continue streamlining efforts for tracking of permit contents for TMDL reporting (County)
- Continue ensuring success of NVPA's through 5-year monitoring period (City)

**Reference Documents:**

Bellingham Municipal Code (BMC) 16.80 (Lake Whatcom Reservoir Regulatory Chapter), 15.42 (Stormwater Regulations), 16.55 (Critical Areas Ordinance), Title 22 (Shoreline Master Program)

Whatcom County Code (WCC) 20.51 (Lake Whatcom Watershed Overlay District & Stormwater Regulations), 16.16 (Critical Areas Ordinance), Title 23 (Shoreline Management Program)

**Lake Whatcom Native Vegetation Protection Area (NVPA) in Year 3 (City)**

This Native Vegetation Protection Area (NVPA) is located in the Silver Beach Creek watershed and is an example of a site being restored to the natural forested condition using all native vegetation. This photo shows the site in its third year.



## Program Area: 4. Community Outreach

### Goal:

Increase lake stewardship and reduce urban impacts through the provision of educational programs and materials to watershed residents, the general public and decision makers on topics related to water quality, source control, and land use and development regulations.

**Program Area Description:** This program area aims to protect water quality by encouraging watershed residents and visitors to become stewards of the lake. The focus of this program is to provide stewardship tools that each individual can use to help protect Lake Whatcom. These tools range from lake-friendly gardening practices to picking up pet waste and encouraging people to engage in lake-friendly car washing and maintenance practices.

### Performance Measures 2013:

- **Number of people contacted/educational materials distributed:**
  - Events
    - 38 attendees at Watercraft Inspection Program information sessions – 3/12/2013, 4/11/2013, 4/17/2013
    - 60 people at World Water Day; approximately 586 passive attendees (trail users seeing signage)– 3/24/2013
    - 75 residents and 20 local business representatives attended the Watershed Friendly Project Expo held at Bloedel Donovan Park on 6/1/2013 which coincided with the opening day of the work window in the watershed.
    - 24 participants in the Rain Garden Tour which had its final stop at the Watershed-Friendly Project Expo
    - 56 attendees at the Silver Beach Creek Bioswale Tour – 06/08/2013
    - 150 contacts (pet waste display) at Paws and Claws at Bloedel Donovan Park, 63 of whom received a bag dispenser after completing a survey about their pet waste pick-up practices – 7/28/2013
    - 60 attendees at a panel discussion and workshop session titled "LID Education Approaches and Results", presented at the 2013 International Low-Impact Development Symposium held in St. Paul, MN on 8/19/2013. City of Bellingham staff presented a short summary of the education strategies utilized by the Homeowner Incentive Program (HIP) and answered questions about the program.
    - 28 participants (including watershed residents) in two Sustainable Landscaping: Gardening Green 8-session classes, one held in spring and one in fall.
    - Over 100 people interacted with the Sustainable Landscaping Diorama at various events held throughout 2013: the Bioswale Tour (6/8/2013), the Whatcom Museum (6/22 and 6/23/2013), the Northwest Washington Fair (08/2013), and the Bay to Belly Water Week Event (09/2013).
  - Education - Schools program
    - 900 Bellingham students (mostly 5<sup>th</sup> grade, including 150 Geneva and Silver Beach Elementary students) participated in watershed education program, visiting Lake Whatcom and water treatment plant, learning stormwater pollution issues, and taking the "Drain Ranger" pledge.
    - 100 adults (parents and teachers) accompanied students in the above educational field trip.
    - 850 adults interviewed by program students, including watershed pledge.

- Online
  - Lake Whatcom Management Program website: >4,000 unique visits
  - City of Bellingham Lake Whatcom web page: 1,307 unique visits
  - City of Bellingham Lake Whatcom stewardship page: 63 unique visits
  - Initiated development and incorporation of Sustainable Landscaping information on WSU Extension website
- One-on-one
  - 40 HIP project site assessments (educated about Lake Whatcom issues, pollution sources and solutions that were unique to the individual property)
  - 84 HIP participants received follow up visits (educated about plans, permits and installation).
  - 41 HIP participants received final inspection visits (educated about maintenance).
  - 28 site assessments and development strategies designed as part of Sustainable Landscaping: Gardening Green classes
- Printed materials
  - 4 newsletter articles written on sustainable landscaping practices
  - Enhanced written material for interactive sustainable landscaping diorama
  - Sustainable Landscaping brochures packet distributed at classes, workshops, fair, and all events where diorama was located
  - 200 HIP booklets distributed
  - 6,000 watercraft inspection program informational postcards sent to registered boat owners in Whatcom County
  - 1,000 watercraft inspection program brochures distributed in person or via mail to inform boaters of new program requirements at Lake Whatcom and Lake Samish
- Incentives
  - 3 trips to Fourth Corner Nursery for Gardening Green class participants
  - 1 pet waste bag dispenser provided to Silver Beach Elementary School
  - 63 rolls of bags (200 bags each) provided as Silver Beach and Scudder Pond dispensers
- **Estimated response to educational materials, i.e. changes in behavior:**
  - Pledges to increase sustainable landscaping practices from 206 to 313 with the largest number focusing on stormwater management (Gardening Green class participants)
  - 100% of Gardening Green participants indicated skill level increase and increased commitment to implement best management practices.
- **Number of opportunities to coordinate with education staff:**
  - Staff from the City of Bellingham, Sudden Valley, Whatcom County, WSU Whatcom County Extension, Institute for Watershed Studies, and Veda Environmental collaborated on Lake Whatcom education activities without formal meetings of the Education Team.
- **Number of gallons of stormwater managed per year using rain barrels:**
  - Approx. 3.9 million gallons
- **Number of water conservation public outreach measures distributed/installed citywide in 2013:**
  - Distributed 500 water conservation kits
  - 41 rain barrels sold, 11 participants in rain barrel construction workshop
  - Residential fixture retrofits: 39 clothes washers, 1 cistern, 77 toilets, 1 drip irrigation system, and 2 commercial toilets
  - 24 participants in rainwater demonstration system workshops

### **Summary of Program Area Activities 2013:**

- **Engaging Residents & Stakeholders**
  - Presented and gave staff reports regarding the HIP and AIS to Bellingham City Council, Whatcom County Council, Whatcom County Planning Commission, Lake Whatcom Joint Policy Group, and Lake Whatcom Watershed Advisory Board, and the public (public attendance estimated at 50 residents).



- Sudden Valley maintained a weekly "Words from the Watershed" feature on their Community and Environmental Services webpage and published articles in the community newspaper highlighting Lake Whatcom water quality issues, watershed friendly practices and tips.
- **Landscaping Workshops**
  - Whatcom County and the City of Bellingham contracted with WSU Extension to facilitate a Gardening Green: Sustainable Landscaping workshop series offered in September - October to all Whatcom County residents to increase awareness about sustainable landscaping practices and to empower watershed residents to implement on-the-ground changes to their properties. The fall class had 18 participants, with 4 Lake Whatcom watershed residents. The City also participated in teaching a class on outdoor water conservation and rainwater harvesting.
  - Participants will contribute to community capacity building of the program via tours, talks to neighborhood groups, friends, neighbors, and gardening green parties.
  - Outreach for these workshops was done through presentations to the Geneva Neighborhood Association (3/27/2013), the Workshop for Wings Over Water Festival in Blaine (3/16/2013), and the Workshop for Master Gardener Training (4/4/2013).
  - As part of the workshop series, members went on a guided native plant walk through Stimpson Family Reserve (6/4/2013). Class members (present and past) rated the guided native plant walk as highly informative. This activity will be expanded on and incorporated into future classes.
  - Workshop participants also went on a tour of a sustainable landscape with very steep slopes (5/21/2013).
  - Participants in the Gardening Green class hosted an additional 5 outreach events.
- **Silver Beach Creek Bioswale Tour and Outreach**
  - The County hosted an outreach event and tour in June focused on residents of the Silver Beach Creek watershed whose properties drain to the Lahti Drive, West Tributary, or Silver Beach Creek Bioswales, or West Tributary Channel stream restoration site. The event was comprised of 4 educational stations located at the bioswales and the restoration site. 56 residents participated. Staff provided outreach on:
    - Bioswale functions and maintenance
    - Good housekeeping and landscaping practices that protect water quality
    - Common water quality concerns
    - The Homeowner Incentive Program (HIP)
    - An interactive watershed diorama
  - Installed an educational display at the Lahti Drive bioswale
- **Aquatic Invasive Species Outreach**
  - Aquatic invasive species inspectors conducted 3,192 watercraft inspections between 3/9/2013 and 10/30/2013. These inspections gave staff the opportunity to educate watercraft owners and operators regarding the importance of cleaning, draining, and drying their watercraft between uses to prevent the spread of aquatic invasive species to and from Whatcom County waters.
  - Over 1,000 park users stopped by the Aquatic Invasive Species Check Station at Bloedel Donovan to learn about the program, ask questions, and to collect outreach materials.
  - Aquatic invasive species inspectors had an additional 5,000 interactions with boaters when sealing/unsealing watercraft as part of our Wire Seal Program that resulted in additional opportunities to engage boaters in the program. Additional AIS outreach efforts are highlighted under Program Area 13: Aquatic Invasive Species.

**Cost Estimates 2013:**

Year	Party	FTEs (\$)	Other	Total
2013	City	1.0 (\$100,000)	DOE 2008 Centennial Grant Amendments \$11,000 DOE Grant Funding \$58,185	\$169,185
	County	0.25 (\$25,000)	Contracts \$20,850	\$45,850
	District/Other	0.2 (SVCA)/ 0.15 (WSU Extension Faculty) 0.1 ( in contract support)(\$25,000)		\$45,000
<b>Total</b>		<b>1.70 (\$170,000)</b>	<b>\$90,035</b>	<b>\$260,035</b>

**Recommendations for 2014:**

- Schedule regular Lake Whatcom Education Team meetings to encourage collaboration and coordination between staff working on Lake Whatcom education and outreach efforts.
- Host separate Gardening Green workshops specifically for Lake Whatcom Watershed residents.
- Complete Homeowner Incentive Program (HIP) projects within the County portion of the Silver Beach Creek sub-watershed.
- Provide 30 hours of education and technical support to County residents participating in the Homeowner Incentive Program (HIP) through continued contract with WSU Extension.
- WSU Extension to complete an evaluation of the knowledge change, behavioral change, and community capacity building components of the Gardening Green workshop series.
- Conduct program effectiveness survey of all HIP contacts to date.

**Reference Documents:**

Lake Whatcom Management Program website

<http://www.lakewhatcom.whatcomcounty.org>

City of Bellingham Lake Whatcom website

<http://www.cob.org/services/environment/water-quality/lake-whatcom.aspx>

Homeowner Incentive Program (HIP) Brochure

<http://www.cob.org/documents/pw/lw/hip-brochure.pdf>

Phosphorus Brochure

<http://www.cob.org/documents/pw/environment/phosphorus-brochure.pdf>

Recommended Gardening Materials and Practices

<http://www.cob.org/documents/pw/lw/materials-and-practices-guidelines.pdf>

WSU Whatcom County Extension Sustainable Landscaping website

<http://whatcom.wsu.edu/ch/sustainable.html>

### Lake Whatcom Pet Waste Signs

These signs were posted at two pet waste stations in the Lake Whatcom watershed to encourage people to be "good humans" and pick up after their pets and put pet waste in the trash.

**Pet waste is raw sewage that can spread disease.**

*You're responsible for this end too.*

*Rain carries pollutants like pet waste down ditches and storm drains directly into nearby waterways.*

**Good human.**

*Bring bags. Put the poop in the trash. Carry it home if you have to. Don't leave it on the ground.*

**It's the law. Fines up to \$250.**  
Dog walkers are required to have poop scooping equipment with them while walking dogs and to remove any poop deposited by their dogs before leaving the immediate area when on public properties or easements, such as parks, trails, sidewalks, and roadsides (BMC 7.08).

**Puget Sound Starts Here.org**

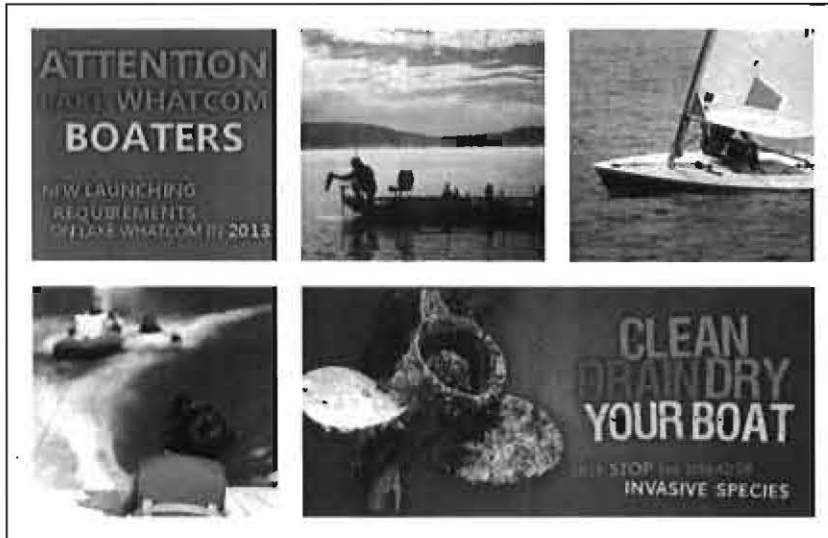
**CITY OF BELLINGHAM WASHINGTON**

[www.cob.org](http://www.cob.org) 360-778-7700



## Lake Whatcom Boat Inspection Program Postcard

An information postcard was designed and sent to all registered boat owners in Whatcom County, using funding from the Puget Sound Partnership, to inform boaters of the new inspection requirements and to invite them to attend information sessions. The postcard also invited people to get their watercraft inspected early, starting on April 1, by scheduling an appointment. As a result of this effort, 100 watercraft had already been inspected prior to the official launch of the program on April 27, 2013.



Lake Whatcom Management Program  
c/o City of Bellingham Public Works  
2221 Pacific St Bellingham WA 98229

Registered boater,

Inspections are required for all motorized or trailered watercraft prior to launching at Lake Whatcom this boating season. **The Bloedel Donovan Aquatic Invasive Species Inspection Station** opens April 27.

**Get a head start on the boating season:**

Attend an info session about the new requirements.  
6:30-7:30 p.m.

Tuesday, March 12, and Thursday, April 11  
Silver Beach Elementary  
4101 Academy St. Bellingham

Wednesday, April 17  
Geneva Elementary  
1401 Geneva St. Bellingham

**Get your watercraft inspected early.**  
Call the Boat Inspection Hotline  
360-778-7975 to schedule an appointment.

[www.lakewhatcom.whatcomcounty.org](http://www.lakewhatcom.whatcomcounty.org)

## Silver Beach Creek Bioswale Tour

Whatcom County hosted an outreach event and tour in June focused on residents of the Silver Beach Creek watershed whose properties drain to the Lahti Drive, West Tributary, or Silver Beach Creek Bioswales, or West Tributary Channel stream restoration site. The event was comprised of 4 educational stations located at the bioswales and the restoration site. The station pictured below shows kids interacting with WSU Extension's watershed diorama.



## Program Area: 5. Data Management & Information

### Goal:

Maintain and enhance databases sufficient for detection of water quality and quantity trends, assessment of problems, evaluation and selection of management actions, and monitoring of action effectiveness.

**Program Area Description:** This program area aims to collect and manage data to increase our understanding of water quality, pollution source, and land use trends over time and to guide management decisions accordingly. This Program Area is administered by a Data Management Team composed of staff from the City, County, District, WWU's Institute for Watershed Studies, and the Department of Ecology (DOE).

### Performance Measures 2013:

- **Number of Data Management Team meetings held:**
  - 11 Data Management Team meetings were held in 2013.
- **Number of monitoring contracts overseen:**
  - Lake Whatcom Monitoring Contract (WWU - Institute for Watershed Studies)
  - Brown and Caldwell Tributary Monitoring
  - Hydrologic Services

### Summary of Program Area Activities 2013:

- Data Management Team received regular updates on the Lake Whatcom Monitoring Contract with WWU's Institute for Watershed Studies (IWS).
- Lake Whatcom 2011/2012 Annual Water Quality Monitoring Report was completed and is available on the Institute for Watershed Studies website. Chlorophyll and cyanobacteria levels appear to have plateaued. Data Management Team received regular updates on the status of the *TMDL Water Quality Improvement Plan* for Lake Whatcom from the Department of Ecology.
- Brown and Caldwell Consultants released their quarterly tributary monitoring report.
- Data Management Team received regular updates on stormwater monitoring data for new stormwater facilities and BMP projects designed to remove phosphorus and fecal coliform before it enters the lake.
- Data Management Team received updates on monthly grab sampling at Silver Beach Creek. This sampling approach was chosen to inform the targeting of management activities in the Silver Beach Creek Watershed to minimize pollutant loading.
- Data Management Team received updates on Middle Fork Diversion sampling program that was initiated to assess water quality impacts from the diversion system.
- Data Management Team received update from Hydrologic Services on redefined portions of the drainage area as defined by the watershed planning process (WRIA1) for the Euclid and Mill Wheel drainage. New boundary designation will be incorporated into HFAM model and TMDL.
- Data Management Team discussed monitoring and data collection needed to improve accuracy of phosphorus loading models in order to update the TMDL set load reduction targets.
- The Whatcom County Health Department reported that only 7 parcels of the 690 known septic systems in the Lake Whatcom watershed remain without an OSS evaluation. These 7 parcels have been through the enforcement process for non-submittal of an evaluation which consisted of a civil penalty and forwarding to collections if they did not pay the penalty. These parcels will continue to be monitored with the goal of achieving compliance with County operation and maintenance requirements.

- City Water Utility announced a request for proposals for a water supply pretreatment system, recommended as an effective approach for minimizing supply impacts resulting from summer algal blooms. Contract negotiations with a selected consultant are underway.
- Data Management Team received regular updates on aquatic invasive species prevention and management efforts.

**Cost Estimates 2013:**

Year	Party	FTEs (\$)	Capital Costs	Other	Total
2013	City	0.02 (\$2,000)		\$316,031	\$318,031
	County	0.04 (\$4,000)		\$80,000	\$84,000
	District/Other			\$18,000	\$18,000
<b>Total</b>		<b>0.06 (\$6,000)</b>		<b>\$414,031</b>	<b>\$420,031</b>

**Recommendations for 2014:**

- Continue to work on new stormwater runoff modeling to improve understanding of phosphorus loading from land uses and sub-basins
- Investigate different lake response models and compare to the CE-QUAL-W2 lake model for Lake Whatcom to aid future lake modeling decision needs
- Continue tributary monitoring to improve stormwater runoff modeling. Improve data consistency with more flow paced sampling
- Evaluate the need for additional phosphorus data for groundwater and lake sediments. Explore opportunities to obtain sediment samples from multiple locations within the lake
- Conduct additional testing of street sweeping and its role in phosphorus reduction

**Reference Documents:**

Lake Whatcom Data Catalog

Copies of the documents are available at the Whatcom County Public Works Water Resources Library and the Bellingham Public Library

Lake Whatcom Monitoring Reports

<http://www.ac.wvu.edu/~iws/>

Department of Ecology: Water Quality Improvement Project (TMDL) for Lake Whatcom

<http://www.ecy.wa.gov/programs/wq/tmdl/LkWhatcom/LkWhatcomTMDL.html>

## Program Area: 6. Spill Response & Hazardous Materials

### Goal:

Prevent water quality degradation due to hazardous material spills through spill prevention and response programs, and continual improvement of communication network to handle spill response.

**Program Area Description:** This program area aims to prevent water quality impacts associated with improper storage and handling of hazardous materials within the watershed and to ensure that spill prevention and response programs adequately protect water quality. The focus of this program area has been to improve spill response time to water quality threats by coordinating spill response reporting and information sharing between jurisdictions. Aquatic Invasive Species Program response efforts are now reported in Program Area 13.

### Performance Measures 2013:

- **Number of spills/incidents:**
  - No spills/incidents reported in 2013
- **Pounds of hazardous materials collected from watershed:**
  - No hazardous materials collection events held in 2013
- **Number of Spill Response Team meetings held:**
  - No Spill Response Team meetings held in 2013

### Summary of Program Area Activities 2013:

- **Brief report on actions taken to prevent and/or manage spills or incidents:**
  - Received report of on-water fueling of moored boat utilizing kayak for fuel transport. Whatcom County Deputy Sheriff notified to patrol for activity.

### Cost Estimates 2013:

Year	Party	FTEs (\$)	Capital Costs	Other	Total
2013	City	0.0 (\$0)			\$0
	County	0.0 (\$0)			\$0
	District/Other				
<b>Total</b>		<b>0.0 (\$0)</b>			<b>\$0</b>

### Recommendations for 2014:

- Include a Lake Whatcom section in Emergency Operations Plans
- Conduct a hazardous materials collection event in the watershed in 2014

### Reference Documents:

Washington Toxics Coalition  
<http://www.watoxics.org>

City of Bellingham Emergency Operations Plan  
 Annex 6 – Hazardous Materials

Whatcom County Emergency Management  
<http://www.whatcomcounty.us/dem/prepare/hazmaterial.jsp>

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# 7. Forestry/Fish/Wildlife

## Program Area: 7. Forestry/Fish/Wildlife

### Goal:

Develop and maintain a comprehensive watershed forest management plan that minimizes impacts to water quality, and promotes actions and programs that protect and enhance fish and wildlife habitat.

**Program Area Description:** This program area aims to protect the clean water functions provided by forests and fish/wildlife habitat located in the Lake Whatcom watershed. The Lake Whatcom watershed provides habitat for a wide variety of fish and wildlife species. Most of the land in the watershed is in a forested condition and is managed by the State Department of Natural Resources, timber management companies, or private landowners.

### Performance Measures 2013:

- **Amount harvested on DNR lands in Lake Whatcom watershed:**
  - Forest practice application number 2813340 approved for timber harvest in 2013 - 0.25 acres for a total of 3,000 mbf (thousand board feet)
  - "Turkey Tail" approved for harvest in 2013 - 91.4 acres and 3,710 mbf (thousand board feet)
- **Amount harvested on private lands in Lake Whatcom watershed:**
  - 106 acres and 138,490 mbf (thousand board feet) approved from Forest Practice Applications
- **Amount treated with herbicides on private lands in Lake Whatcom watershed:**
  - 180 acres
- **Amount of road constructed on public and private lands in Lake Whatcom watershed:**
  - 21,799 feet (4,910 feet on private land; 16,869 feet on DNR land)
- **Amount of road abandoned in Lake Whatcom watershed:**
  - 8,314 feet (80 feet on private land; 8,234 feet on DNR land)
- **Summary of DNR silviculture activities:**
  - No silvicultural activities were reported in 2013.
- **Number of DNR projects reviewed by IJC in 2013: 3**
  - Turkey Tail timber sale
  - Bonneville Power Administration (BPA) right-of-way timber removal
  - Olsen road abandonment

### Summary of Program Area Activities 2013:

- IJC completed their comment report on the Turkey Tail timber sale.
- IJC completed their comment report on the BPA right-of-way timber removal.

### Cost Estimates 2013:

Year	Party	FTEs (\$)	Capital Costs	Other	Total
2013	City	0.01 (\$1,000)			\$1,000
	County	0.01 (\$1,000)			\$1,000
	District/Other				
<b>Total</b>		<b>0.02 (\$2,000)</b>			<b>\$2,000</b>

**Planned Activities for 2014:**

- IJC will report on 2014 activities at Joint Policy Meeting.

**Reference Documents:**

City of Bellingham Critical Areas Ordinance (BMC 16.55)

<http://www.cob.org/documents/planning/comprehensive-plan-code-amendments/critical-area-ordinance/2005-12-06-final-cao.pdf>

City of Bellingham Shoreline Master Program (BMC Title 22)

<http://www.cob.org/documents/planning/shoreline-master-program/november-final-draft-cc.pdf>

Whatcom County Critical Areas Ordinance (WCC 16.16)

<http://www.whatcomcounty.us/pds/naturalresources/criticalareas/index.jsp>

Whatcom County Shoreline Management Program (WCC Title 23)

[http://www.whatcomcounty.us/pds/naturalresources/shorelines/regulations/codeandmaps/pdf/SMP\\_CountyApproved\\_EcologyApproved\\_090323\\_clean\\_000.pdf](http://www.whatcomcounty.us/pds/naturalresources/shorelines/regulations/codeandmaps/pdf/SMP_CountyApproved_EcologyApproved_090323_clean_000.pdf)

Interjurisdictional Committee (IJC) Reports

[http://www.dnr.wa.gov/Publications/lm\\_lkwa\\_pilot\\_11report.pdf](http://www.dnr.wa.gov/Publications/lm_lkwa_pilot_11report.pdf)

# 8. Transportation

## Program Area: 8. Transportation

### Goal:

Design and develop transportation systems that include alternatives to automobiles, locate “through” routes away from the lakeshore, ensure treatment of runoff before entering the lake and otherwise protects water quality.

**Program Area Description:** This program area aims to limit transportation-related impacts to water quality by encouraging watershed residents to use alternative transport and to limit the number of vehicle mile trips being made in the watershed. Motorized vehicles are a source of a variety of pollutants found in stormwater runoff. Pollutants such as oil, antifreeze, rubber, heavy metals, transmission and brake fluid can be deposited and accumulate on roadway surfaces through normal vehicle use. These pollutants can be carried during rain events to storm drains and ditches and eventually end up in our streams and lakes.

### Performance Measures 2013:

- **Changes in public transportation use in the watershed: unknown**
  - Vehicle mile trip reduction
  - Bus ridership in watershed (see below)
- **Number of new bus stops in watershed: 0**
- **Number of new high visibility covered bus stations in Sudden Valley/Geneva: 0**

### Summary of Program Area Activities 2013:

- **WTA (Whatcom Transportation Authority) bus use:**
  - Based upon WTA's bus schedule, there were about 7,670 trips to and from (round-trip) the Lake Whatcom watershed in 2013 and an average of 30.5 boardings per hour on routes through the watershed (based upon WTA's available ridership data from January 2013 through October 2013).
- **Outreach - printed materials & incentives:**
  - No updates made to transportation-related outreach in 2013
- **Updates made to ICT/Joint Policy Group:**
  - No updates made to the ICT/Joint Policy Group in 2013
- Whatcom County Solid Waste Advisory Committee took up prospect of limiting curbside service levels to bi-weekly pick-up.

### Cost Estimates 2013:

Year	Party	FTEs (\$)	Capital Costs	Other	Total
2013	City	0.0 (\$0)			\$0
	County	0.0 (\$0)			\$0
	District/Other				
<b>Total</b>		<b>0.0 (\$0)</b>			<b>\$0</b>

### Recommendations for 2014:

- Re-visit Transportation Program Area work plan tasks and goals in 2014

### Reference Documents:

City of Bellingham Comprehensive Plan Ch. 3 Transportation Element  
TG 38 and TG 39



Whatcom County Comprehensive Plan Ch. 6 Transportation Element

Smart Trips – Whatcom County

<http://www.whatcomsmarttrips.org/>

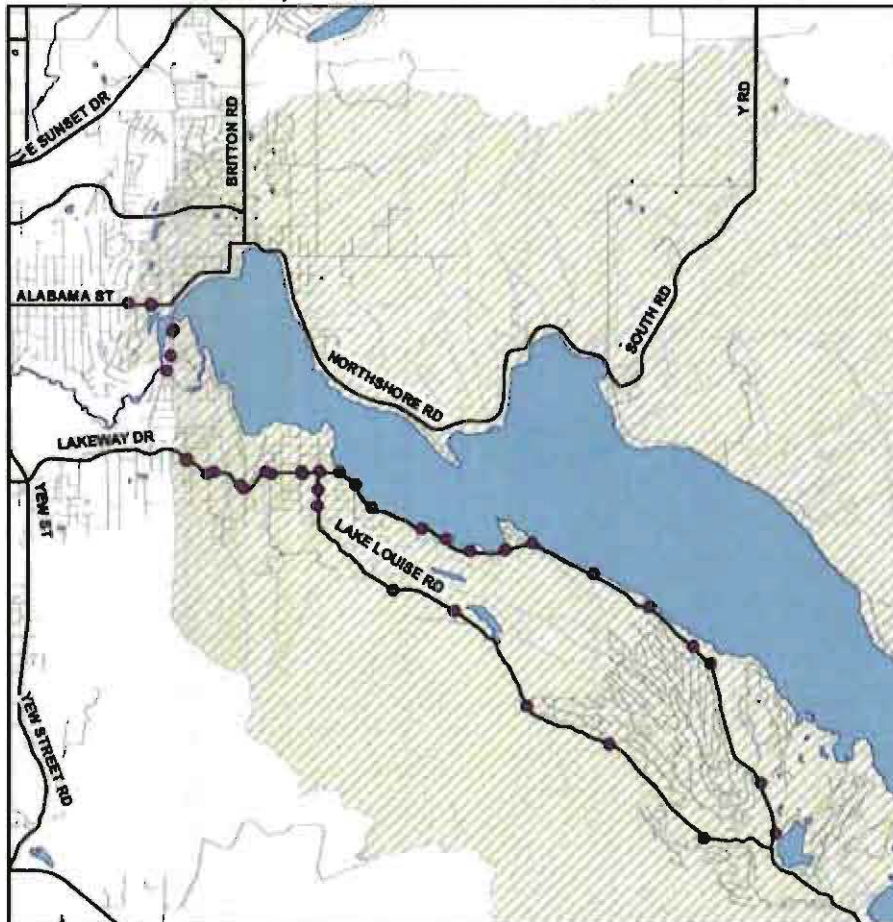
Whatcom Transit Authority - Ridership Reports

<http://www.ridewta.com/ridership>

Whatcom Transit Authority - Schedules

<http://www.ridewta.com/routes> by number

WTA Bus Stops within the Lake Whatcom Watershed



**Program Area: 9. Recreation**

**Goal:**

Promote recreational opportunities that do not degrade water quality, and improve on ways to reduce impacts of existing activities.

**Program Area Description:** This program area aims to promote recreational opportunities that minimize impacts to water quality while reducing the impacts of existing recreational activities. The Lake Whatcom watershed is a popular recreational site for local residents and visitors. Recreational opportunities in the watershed include boating, swimming, fishing, hiking, biking, and horseback riding. Some of these activities have the potential to adversely impact the watershed and water quality through the release of pollutants, the destruction of wildlife habitat, and the spread of invasive species. Aquatic Invasive Species Program prevention efforts are reported in Program Area 13.

**Performance Measures 2013:**

- **Number of recreational users contacted:**
  - At least 50 people received information on the proposed stormwater and shoreline improvement projects at Bloedel Donovan Park via reports and updates to City Council, the Parks Board, and the City website.

**Summary of Program Area Activities 2013:**

- Began design phase of stormwater and shoreline improvement projects at Bloedel Donovan Park to include onsite stormwater mitigation, the removal of the existing concrete bulkhead, beach improvements, as well as expanding native planting areas. Construction is expected to begin in summer/fall of 2014.
- City staff from Public Works and Parks met on several occasions to discuss the Aquatic Invasive Species Prevention Program and to problem solve potential impacts of the inspection program on other recreational activities taking place at the Bloedel Donovan Park.

**Cost Estimates 2013:**

Year	Party	FTEs (\$)	Capital Costs	Other	Total
2013	City	0.01 (\$1,000)			\$1,000
	County				
	District/Other				
<b>Total</b>		<b>0.01 (\$1,000)</b>			<b>\$1,000</b>

**Recommendations for 2014:**

- Re-visit Recreation Program Area performance measures in 2014
- Design educational messages for the Bloedel Donovan Park stormwater and shoreline improvement projects that promote recreational opportunities that minimize impacts to water quality
- Work with landowners and Bonneville Power Administration to better protect lands from damage resulting from off-road recreational activities
- Continue to pursue opportunities for collaboration between the Parks and Public Works Departments to better accommodate watercraft inspections at Bloedel Donovan Park.

**Reference Documents:**

Bellingham Municipal Code (BMC) 16.80 (Lake Whatcom Reservoir Regulatory Chapter), 15.42 (Stormwater Regulations), 16.55 (Critical Areas Ordinance), Title 22 (Shoreline Master Program)

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## Program Area: 10. Utilities & Waste Management

### Goal:

Promote conservation of water resources and provision of city sewer to areas with on-site treatment.

**Program Area Description:** This program area aims to promote water efficiency amongst all user groups (residential, industrial, and commercial) and to minimize water quality impacts associated with on-site waste system and sewage overflows. Reducing water withdrawal demands on Lake Whatcom reduces water treatment costs. On-site septic systems must be properly maintained in order to effectively treat sewage without leaching into surrounding soils. Reducing the number of overflows in sewage systems will prevent additional nutrient loading into Lake Whatcom.

### Performance Measures 2013:

- **Estimate of gallons of water conserved in City:** 28 million gallons in 2012 (Report: June, 2013)
- **Number of meters installed in City (% of meter installations completed):** 3,946 meters and assembly boxes installed in 2013 (47% completed)
- **Estimate of water use reduction in the District service area:** 3.1 million less gallons produced in 2013 compared to 2012 as a result of on-going conservation education efforts and the repair of water leaks in District water lines. This follows a 9.7 million gallon reduction in 2012.
- **Number of overflows:** 0 in 2012 (District)
- **Related capital projects completed in 2013:**
  - Annual repair of numerous sewer manholes and main spot repairs done through an on-going systematic review of both the District's water distribution and sewer collection lines (District)
  - Water service rebuilds (District)
  - Water main replacement at Polo Park Bridge in Sudden Valley (District)
  - Completion of budgeted annual Capacity, Management, Operation & Maintenance (CMOM) program utilized to find leaks in the water distribution system within the Sudden Valley community (District)
- **Number of new connections made within 200 feet of sewer line:**
  - 13 new sewer and 5 new water connections in 2013 (District)

### Summary of Program Area Activities 2013:

- An estimated 28 million gallons of water was saved in 2012 as a result of the City's Water Conservation Program (Report: June, 2013)
- 2012 estimated water savings were achieved through the City's adopted water conservation program measures: public outreach (rain barrel program, leak detection, water conservation kit distribution), single-family water conservation rebate project (the City's Community Energy Challenge and Water Conservation Program partnership), and the multi-unit residential and irrigation water conservation rebate projects.
- City completed Sustainable Water Management project: installation of a rainwater harvesting demonstration system using the new 2011 permitting guidelines.
- County Health Department continued to enforce septic system operation and maintenance regulations, update database of septic systems, respond to failing septic systems, and conduct homeowner education. The Whatcom County Health Department reported only 7 parcels of the 690 known septic systems remain without an OSS evaluation. These 7 parcels have been through the enforcement process for non-submittal of an evaluation which consisted of a civil penalty and forwarding to collections if they did not pay the penalty. These parcels will continue to be

monitored with the goal of achieving compliance with County operation and maintenance requirements.

- The District’s ongoing water conservation efforts are based upon voluntary compliance through its ratepayers and continued efforts to identify leaks and repair them. Public notification recommend odd/even address watering during the summer months. The District utilizes notices through its website, billings, and outdoor signage used during the summer months.

**Cost Estimates 2013:**

Year	Party	FTEs (\$)	Capital Costs	Other	Total
2013	City	0.3 (\$30,000)		\$97,520	\$127,520
	County	0.1 (\$10,000)			\$10,000
	District/Other	0.5 (\$50,000)	\$518,930		\$568,930
<b>Total</b>		<b>0.9 (\$90,000)</b>	<b>\$518,930</b>	<b>\$97,520</b>	<b>\$706,450</b>

**Recommendations for 2014:**

- City currently has 9,300 metered accounts and is on schedule to meet the metering mandate by 2017.
- Increase provision of water consumption and conservation information
- District efforts will be focused in 2014 toward design work associated with the future (2014-2015) upgrade to the Strawberry Point, Boulevard, and Lowe sewer pump stations (\$280,000 if funded by a pending PPTF loan). Both the Strawberry Point and Boulevard sewer pump stations are adjacent to Lake Whatcom.
- Budgeted Capacity, Management, Operation, & Maintenance (CMOM) efforts for inflow and infiltration (I&I) identification and repair in the Sudden Valley community.
- The District continues to budget resources for use with the City through an interlocal agreement toward the funding of staff and resources to coordinate invasive species protection activities at Lake Whatcom. In addition, the District also continues to participate with the City and County through an inter-local agreement to fund water quality testing.

**Reference Documents:**

Washington State 2003 Municipal Water Supply-Efficiency Requirements Act

<http://www.doh.wa.gov/ehp/dw/Programs/wue.htm>

City of Bellingham’s Water Use Efficiency Program

<http://www.cob.org/documents/pw/utilities/2008-water-use-efficiency-program.pdf>

City of Bellingham Water Use Efficiency Annual Performance Report - 2012

<http://www.cob.org/documents/pw/environment/water-conservation/wue-report-2012.pdf>

On-Site Sewage System Rules and Regulations

Whatcom County Health Department

Chapter 24.05 WCC

[http://www.co.whatcom.wa.us/health/pdf/oss\\_regulations.pdf](http://www.co.whatcom.wa.us/health/pdf/oss_regulations.pdf)

Lake Whatcom Water & Sewer District 2010 Water System Comprehensive Plan

<http://lwwsd.org/resources/2010-water-system-comprehensive-plan/>

Lake Whatcom Water & Sewer District 2007 Comprehensive Sewer Plan

<http://lwwsd.org/resources/2007-comprehensive-sewer-plan/>

## Program Area: 11. Administration

### Goal:

Administer and coordinate ICT and committee activities to support Management Plan implementation.

**Program Area Description:** This program area aims to effectively administer and coordinate the Interjurisdictional Coordinating Team (ICT) and Program Area Committee activities to support the successful implementation of the Lake Whatcom Management Plan.

### Performance Measures 2013:

- **Number of meetings held:**
  - 7 ICT meetings
  - 9 Lake Whatcom Joint Policy Group meetings
  - 1 Joint Council and Commission meeting – 3/28/2013
  - Also see Program Areas 4 and 5
- **Number of contracts overseen:**
  - Lake Whatcom Monitoring Contract (IWS)
  - Hydrologic Services
  - Brown and Caldwell Tributary Monitoring

### Summary of Program Area Activities 2013:

- The ICT met on a regular basis to identify task implementation issues, discuss program updates, and prepare topics for meetings of the Lake Whatcom Joint Policy Group.
- Lake Whatcom Joint Policy Group meetings were held monthly in 2013. Topics included: updates on aquatic invasive species prevention program, TMDL approval process, education and outreach efforts and strategy, Whatcom County Lake Whatcom overlay stormwater regulations, Lake Whatcom budget/work plan priorities, 2013 stormwater projects, Build-Out Analysis Report for 2013; and discussion of role of Policy Group, its operating principles, and possible changes needed to make group more effective in addressing budget and policy issues.
- The City and County Councils and the LWWSD Commission met together to discuss program accomplishments from 2012 and program goals for 2013 at a joint meeting on 3/28/2013.
- Reports that were valuable to management efforts in 2013 included:
  - Lake Whatcom 2011/2012 Annual Water Quality Monitoring Report
  - Aquatic Invasive Species Action Plan for Lake Whatcom
  - Brown and Caldwell - Lake Whatcom Tributary Monitoring Phase 2 Report

### Cost Estimates 2013:

Year	Party	FTEs (\$)	Capital Costs	Other	Total
2013	City	0.5 (\$50,000)			\$50,000
	County	0.2 (\$20,000)			\$20,000
	District/Other	0.1 (\$10,000)			\$10,000
<b>Total</b>		<b>0.8 (\$80,000)</b>			<b>\$80,000</b>

### Recommendations for 2014:

- Continue to support the successful implementation of the Lake Whatcom Management Plan

### Reference Documents:

1992 Lake Whatcom Joint Resolution  
<http://lakewhatcom.org/cc10resolution1992.htm>

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## Program Area: 12. Enforcement

### Goal:

Improve City and County enforcement of regulations aimed at protecting lake water quality.

**Program Area Description:** This program area aims to support enforcement of land use, development and other associated regulations to protect the water quality of Lake Whatcom. An enforcement team was convened by the Interjurisdictional Coordinating Team (ICT) in 2008 to improve enforcement actions in the watershed.

### Performance Measures 2013:

- **Number of enforcement activities in Lake Whatcom watershed in 2013:**
  - City: (Conducted daily during construction season and twice weekly during seasonal closure)
    - Conducted a total of 4,122 site inspections in watershed
    - Total number of permitted watershed sites for 2013: 87
    - Total number of unpermitted watershed sites for 2013: 4
    - Conducted a total of 4 site inspections on unpermitted sites
    - Issued 11 correction notices in watershed
    - Issued 4 stop work orders for unpermitted sites and turned 1 over to Legal Dept.
    - Issued 1 stop work orders for permitted sites and turned 1 over to Legal Dept.
  - County:
    - Conducted a total of 504 site inspections in watershed
    - Total number of building permits submitted in 2013: 88
    - Total number of building permits issued in 2013: 100
    - Total number of land disturbance permits issued in 2013: 11
    - Total number of Shoreline permits in the watershed for 2013: 24
    - Total number of correction notices in the watershed for 2013: 38
    - Total number of enforcement cases for 2013: 18
    - Total number of stop work orders: 2

### Summary of Program Area Activities 2013:

- The City of Bellingham continues to prioritize inspections and enforcement in the Lake Whatcom watershed. Daily inspections of the watershed are conducted between June and October when construction is authorized. Twice weekly inspections are conducted during the closed period to assure compliance with seasonal requirements.
- The County conducts regular weekly monitoring during the construction season and bi-weekly monitoring during the seasonal closure to assure compliance with seasonal requirements.
- Sudden Valley implemented enforcement-related revisions adopted in 2010 as well as enforced the many other provisions contained in the Architectural Control Committee Guidelines.

### Cost Estimates 2013:

Year	Party	FTEs (\$)	Capital Costs	Other	Total
2012	City	0.5 (\$50,000)			\$50,000
	County	0.5 (\$50,000)			\$50,000
	District/Other	0.2 (SVCA) (\$20,000)			\$20,000
<b>Total</b>		<b>1.2 (\$120,000)</b>			<b>\$120,000</b>



**Recommendations for 2014:**

- Reconvene enforcement team to discuss making reporting of enforcement activities in the watershed more consistent across jurisdictions
- Create an “Incident Command” type structure to better coordinate agency responses changes in water quality (e.g. soap and turbidity) to improve efficiency and use resources and expertise more effectively
- Reconvene enforcement team to discuss potential code changes to improve efficiency and to meet desired water quality outcomes

**Reference Documents:**

BMC 15.42 subsections 070-110

Whatcom County Comprehensive Stormwater Plan

## Program Area: 13. Aquatic Invasive Species

### Goal:

Prevent new aquatic invasive species introductions to Lake Whatcom and other area waterbodies and minimize impacts associated with established aquatic invasive species.

**Program Area Description:** This program area aims to prevent and minimize the impacts of aquatic invasive species infestations on municipal and private water supply infrastructure, water quality, recreational opportunities, and on the existing aquatic ecosystem. The Aquatic Invasive Species Program includes strategies for preventing the introduction of aquatic invasive species, such as zebra and quagga mussels, and for stopping the spread of established aquatic invasive species to new waters. These strategies include education and outreach, inspecting and decontaminating watercraft and recreational equipment, monitoring Lake Whatcom and other area lakes to detect the presence/absence of new aquatic invasive species, and the adoption of more stringent regulations and enforcement.

### Performance Measures 2013:

- **Number of interactions with the public:**
  - 6,000 registered boat owners in Whatcom County received Watercraft Inspection Program postcards to inform them of new program requirements in 2013
  - 2,188 unique watercraft owners/operators contacted through watercraft inspections conducted at Lake Whatcom and Lake Samish between 3/9/2013 and 10/30/2013
  - 5,000 additional interactions through sealing/unsealing boats as part of the Wire Seal Program
  - Over 1,000 park users stopped at the Aquatic Invasive Species Check Station at Bloedel Donovan to read the display, ask questions, and collect educational materials.
- **Number of watercraft inspections conducted:**
  - 3,192 watercraft inspections conducted between 3/9/2013 and 10/30/2013
    - 2,810 inspections conducted at Bloedel Donovan AIS Check Station
    - 213 inspections conducted at private residences on Lake Whatcom and Lake Samish
    - 69 inspections conducted at Sudden Valley Marina
    - 52 inspections conducted at the WDFW Lake Samish boat launch
    - 42 inspections conducted at Nevada Street
    - 6 inspections conducted at the WDFW Lake Whatcom launch at South Bay (the majority of inspections at South Bay occurred at private residences)
- **Number of watercraft requiring further action before being allowed to launch:**
  - 83 boats found to be transporting vegetation that had to be removed
  - 45 boats with standing water on board that had to be drained or towel dried
  - 4 boats found to be transporting either saltwater mussels, bryozoans, or unidentifiable organic matter that had to be removed
  - 4 boats decontaminated using high-pressure, hot-water mobile unit
- **Number of watercraft intercepted with zebra or quagga mussels:**
  - No watercraft with invasive mussels were intercepted at the Aquatic Invasive Species Check Station in 2013.
- **Aquatic Invasive Species Monitoring Program results:**
  - 9 Whatcom County lakes surveyed by the Whatcom County Noxious Weed Board for the presence/absence of aquatic invasive species
  - 3 new non-native plant species discovered in Cain Lake
  - 100 acres of Eurasian watermilfoil discovered in Lake Terrell

- No new Asian clam infestations discovered in 2013
- No evidence of zebra or quagga mussels was found on artificial substrates in Lake Whatcom or Lake Samish in 2013

### Summary of Program Area Activities 2013:

- Launched mandatory Watercraft Inspection Program at Bloedel Donovan on 4/27/2013. Bloedel Donovan Aquatic Invasive Species Check Station was staffed from 5 a.m. to 9 p.m., or dawn to dusk, 7 days a week through 10/30/2013. Inspections were also offered at additional locations in an effort to increase compliance with the new requirements.
- Aquatic invasive species inspectors conducted a total of 3,192 watercraft inspections and sold 1,923 Annual Permits and 311 Day Passes during 2013 season to help fund the continuation of the program in 2014 (Total revenue from fees in 2013 was approximately \$103,000).
- While the majority of the watercraft that were inspected were clean, there were several instances where watercraft required some level of decontamination.
  - 83 watercraft found to be transporting aquatic vegetation were stopped at the Aquatic Invasive Species Check Station in 2013. The plant fragments were removed prior to the watercraft being allowed to launch. Aquatic invasive plant species documented included curlyleaf pondweed, Eurasian watermilfoil, and Brazilian elodea.
  - 45 watercraft were intercepted with standing water on board that had to be drained or towel dried prior to allowing the watercraft to launch.
  - 4 watercraft found to be transporting either saltwater mussels, bryozoans, or unidentifiable organic matter were also stopped at the Aquatic Invasive Species Check Station.
  - 4 watercraft were decontaminated using a high-pressure, hot-water mobile decontamination unit. These watercraft either contained standing water from another waterbody, had unidentifiable organic material on the hull, or had unidentifiable organisms found on the hull/propeller.
  - No watercraft with invasive mussels were intercepted at the Aquatic Invasive Species Check Station in 2013. However, 3 boats had last been launched in lakes with established zebra or quagga mussel populations and 15 watercraft operators reported having taken their watercraft to a waterbody infested with zebra or quagga mussels in the past.
- Continued to monitor Whatcom County lakes to detect the presence/absence of new aquatic invasive species infestations as well as to monitor the spread of existing aquatic invasive species infestations.
  - Staff continued to conduct shoreline surveys for Asian clams around Lake Whatcom in 2013. No new Asian clam colonies were discovered.
  - Whatcom County Noxious Weed Board conducted Lake Samish Aquatic Invasive Species Inventory to record presence and distribution of all submersed and nearshore aquatic plants in the lake. No new aquatic invasive species were discovered. Additional aquatic invasive species surveys were also conducted at Wisner Lake, Lake Terrell, Toad Lake, Fazon Lake, Lake Padden, Sunset Pond, Silver Lake, and Cain Lake. Three new non-native plant species were discovered in Cain Lake and a significant infestation of Eurasian watermilfoil was discovered in Lake Terrell.
- Continued to monitor the spread of aquatic invasive species as well as any new prevention and management efforts being implemented at the local, regional, and national levels.
- Continued to communicate with local, state, and regional aquatic invasive species personnel to share information and gather resources to aid in the prevention and management of aquatic invasive species in Lake Whatcom.
  - Attended two 100<sup>th</sup> Meridian Initiative - Columbia River Basin Team meetings, in Vancouver, WA on 5/14/2013 and 10/15/2013
  - Attended regional discussion "Preventing an Invasion: Building a Regional Defense against Quagga and Zebra Mussels" on 5/15/2013 in Vancouver, WA

### Cost Estimates 2013:

Year	Party	FTEs (\$)	Capital Costs	Other	Total
2013	City	1.2 (\$120,000)	\$30,000	PSP Grant Funding \$90,000	\$240,000
	County	0.4 (\$40,000)			\$40,000
	District/Other	0.3 (\$30,000)			\$30,000
<b>Total</b>		<b>1.9 (\$190,000)</b>	<b>\$30,000</b>	<b>\$90,000</b>	<b>\$310,000</b>

### Recommendations for 2014:

- Include non-motorized, hand-carried watercraft in Watercraft Inspection Program in 2014
- Conduct outreach with watershed users regarding new program requirements for 2014
- Schedule meetings with other municipalities/organizations in Washington and British Columbia to collaborate on aquatic invasive species prevention efforts at the local level
- Create Rapid Response Notification Database and Rapid Response Aquatic Invasive Species Plan for Lake Whatcom
- Convene a Response Team and conduct a tabletop exercise to practice response to a potential zebra/quagga mussel infestation using the Incident Command System

### Reference Documents:

Lake Whatcom Aquatic Invasive Species Program 2013 Annual Report

<http://www.cob.org/documents/pw/lw/2013-lwmp-ais-report.pdf>

Aquatic Invasive Species Action Plan for Lake Whatcom Reservoir

<http://www.lakewhatcom.whatcomcounty.org/resources>

Lake Whatcom Aquatic Invasive Species Incident Report: Asian clams

<http://www.cob.org/documents/pw/lw/lake-whatcom-incident-report-9-30-2011.pdf>

Washington Invasive Species Council

<http://www.invasivespecies.wa.gov>

**Aquatic Invasive Species Inspections at Bloedel Donovan**





Left (Aquatic invasive species inspector decontaminating watercraft at Bloedel)  
Right (Mobile decontamination unit)



Organic material found on propeller of  
watercraft in 2013 (pre-decontamination)

**Lake Whatcom Management Program Contacts:**

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715-7450

City of Bellingham Natural Resources  
Clare Fogelsong, 778-7900, [cfogelsong@cob.org](mailto:cfogelsong@cob.org)

Lake Whatcom Water and Sewer District  
Patrick Sorensen, 734-9224, [patrick.sorensen@lwbsd.org](mailto:patrick.sorensen@lwbsd.org)

RESOLUTION NO. \_\_\_\_\_

**A JOINT RESOLUTION OF BELLINGHAM CITY COUNCIL, WHATCOM COUNTY COUNCIL, AND LAKE WHATCOM WATER AND SEWER DISTRICT COMMISSIONERS REAFFIRMING OUR SHARED COMMITMENT TO THE HEALTH OF LAKE WHATCOM, SETTING MILESTONES FOR 2014 THROUGH 2016 TO IMPROVE ITS WATER QUALITY, AND SETTING GOALS FOR THE WORK PLAN OF THE LAKE WHATCOM POLICY GROUP.**

**WHEREAS**, Lake Whatcom is the drinking water source for approximately 100,000 Whatcom County residents; and

**WHEREAS**, the lake's water quality has been generally declining since at least 1988; and

**WHEREAS**, in 1992 the City of Bellingham, Whatcom County, and the precursor to the Lake Whatcom Water and Sewer District jointly formed the Lake Whatcom Management Program and thereby declared their intention to work together to protect and manage Lake Whatcom; and

**WHEREAS**, Lake Whatcom was first listed on the 303(d) list of impaired water bodies under the federal Clean Water Act for excessive levels of phosphorus and fecal coliform in 1998; and

**WHEREAS**, a Total Maximum Daily Load (TMDL) Report of Findings for total phosphorus and fecal coliform in the Lake Whatcom Watershed was issued in 2008 by the Washington State Department of Ecology (DoE) and the US Environmental Protection Agency (EPA) which, when finalized as an Implementation Plan, will require dramatic reductions in phosphorus loading to the Lake; and

**WHEREAS**, excessive phosphorus levels in Lake Whatcom have required substantial investments from the City of Bellingham, Whatcom County and the Lake Whatcom Water and Sewer District to ensure long-term access to sufficient amounts of high quality drinking water; and

**WHEREAS**, the City, County and District strive to ensure that their investments result in effective, sustained annual reductions of phosphorus loading to the lake; and

**WHEREAS**, sustained reductions in phosphorus loading to the Lake will reduce the long-term costs to the City, its water customers, and the customers of the Lake Whatcom Water and Sewer District; and

**WHEREAS**, substantial additional investments over a number of years will be needed to clean up the Lake; and

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**WHEREAS**, the Lake Whatcom Management Program's series of 5 Year Plans have established and implemented actions in major Program Areas needed to improve water quality in the Lake; and

**WHEREAS**, in 2014 development of the next 5 Year Plan will identify and schedule implementation of actions for the five year period, 2015 to 2019; and

**WHEREAS**, completion of a TMDL Implementation Plan will require melding of the load reduction actions contained in the 5 Year Plans with identification of long-term costs needed to achieve reduction targets identified in the 2008 TMDL Report, identification of funding sources, and establishment of a timeline for achieving those reduction targets; and

**WHEREAS**, the Lake Whatcom Policy Group is well positioned to work with staff and the Administrations to identify and facilitate the work needed to complete the TMDL Implementation Plan;

**NOW THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF BELLINGHAM:**

In cooperation with their respective administrations the councils/commissions of the Lake Whatcom Management Program establish the following milestones for actions necessary to complete and implement a TMDL Implementation Plan and direct the Lake Whatcom Policy Group to initiate and oversee the accomplishment of these milestones.

1. **2014.** Establish policy principles for all areas of investment, and identify expenditures needed to achieve load reduction goals in each area.
2. **2015.** Analyze expenditure levels, identify funding sources and set specific timetables for each area of investment.
3. **2016.** Complete an Implementation Plan for phosphorus reduction and control of fecal coliform that will meet the requirements of the TMDL, protect our drinking water, and restore lake and tributary water quality.

**PASSED** by the City Council this \_\_\_ day of \_\_\_\_\_, 2014.

\_\_\_\_\_  
Council President

City of Bellingham  
City Attorney  
210 Lottie Street  
Bellingham, Washington 98225  
360-778-8270

APPROVED by me this \_\_\_\_\_ day of \_\_\_\_\_, 2014.

\_\_\_\_\_  
Mayor

ATTEST: \_\_\_\_\_  
Finance Director

APPROVED AS TO FORM:

\_\_\_\_\_  
Office of the City Attorney

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City Attorney  
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RESOLUTION NO. \_\_\_\_\_

**A JOINT RESOLUTION OF BELLINGHAM CITY COUNCIL, WHATCOM COUNTY COUNCIL, AND LAKE WHATCOM WATER AND SEWER DISTRICT COMMISSIONERS INVITING THE SUDDEN VALLEY COMMUNITY ASSOCIATION TO SEND A REPRESENTATIVE TO PARTICIPATE IN THE LAKE WHATCOM POLICY GROUP**

**WHEREAS**, Lake Whatcom is the drinking water source for approximately 100,000 Whatcom County residents, including the residents of Sudden Valley; and

**WHEREAS**, Whatcom County, the City of Bellingham and the Lake Whatcom Water and Sewer District have all established policy declaring their commitment to jointly protect and manage Lake Whatcom; and

**WHEREAS**, in 2010 in order to improve communication between the governing bodies and administrative staff those same entities formed the Lake Whatcom Policy Group, comprised of 2 members each from the City and County Councils and 1 member from the Lake Whatcom Water and Sewer District Commissioners; and

**WHEREAS**, the Sudden Valley Community Association plays an integral part in achieving needed reductions in pollution, is currently participating in staff team work sessions, and has been a long-term participant in activities needed to protect the Lake; and

**NOW THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF BELLINGHAM:**

- 1) The Sudden Valley Community Association (SVCA) Board of Directors be invited to participate as a member of the Lake Whatcom Policy Group.
- 2) SVCA may select 1 representative to participate in Lake Whatcom Policy Group activities.

**PASSED** by the City Council this \_\_\_ day of \_\_\_\_\_, 2014.

\_\_\_\_\_  
Council President

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City Attorney  
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**APPROVED** by me this \_\_\_\_\_ day of \_\_\_\_\_, 2014.

\_\_\_\_\_  
Mayor

**ATTEST:** \_\_\_\_\_  
Finance Director

**APPROVED AS TO FORM:**

\_\_\_\_\_  
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