



Lake Whatcom Management Program 2012 Annual Progress Report

Prepared by the Lake Whatcom
Interjurisdictional Coordinating Team

February, 2013

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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) (LWWSD) 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 2012 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 2012 Annual Progress Report* is organized around 12 Program Areas that have provided structure to previous management program documents. This year's Annual Progress 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 2012, and Program Area recommendations for 2013. Some Program Areas include additional reference materials to better illustrate annual performance or to provide links to additional information.

Highlights from 2012 include the completion of several stormwater capital improvement projects in the watershed, as well as the County's receipt of the American Public Works Association (APWA) Washington State Chapter Environmental Project of the Year Award for their Brownsville to E. 16th Place project in the Silver Beach Creek Watershed. Additionally, the City completed 24 infiltration, dispersion, and/or re-vegetation projects on private properties in the watershed as part of the Homeowner Incentive Program. Community Outreach Program Area highlights include the completion of three rain gardens at Geneva Elementary School as part of the Homeowner Incentive Program, as well as participation of Lake Whatcom Education Team staff in the Institute for Watershed Studies 50th Anniversary Celebration and Whatcom Water Weeks.

In July of 2012, the Lake Whatcom Management Program launched its Aquatic Invasive Species Prevention Program at Bloedel Donovan. Aquatic invasive species staff completed 1,794 boater surveys and visual inspections at Lake Whatcom between July 14 and September 30, 2012. The majority of the surveys were conducted at Bloedel Donovan with some additional surveys and visual inspections being conducted at Sudden Valley. The City of Bellingham and Whatcom County also adopted aquatic invasive species ordinances prohibiting the transport or release of aquatic invasive species into local waters and authorizing local enforcement staff to conduct watercraft inspections to prevent new infestations. In 2012, the Whatcom County Noxious Weed Board also conducted a Lake Whatcom aquatic invasive species inventory to record the presence and distribution of aquatic invasive species in the lake. No new aquatic invasive species were discovered as a result of this effort. More information on invasive species efforts in 2012 can be found under the Recreation and Spill Response and Hazardous Materials Program Areas or in the Lake Whatcom Aquatic Invasive Species Program 2012 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 2012:

- **Number of development units removed from watershed:**
 - Total of 774 lots removed from development to date
- **Number of acres purchased through Acquisition Program (% of land protected in watershed):**
 - Total of 1,922.54 acres purchased to date (9% of the total watershed)
- **Number of acres protected with easements:**
 - Total of 989 acres protected with easements to date
- **Percentage of remaining developable land protected in watershed (projected):**
 - 38 % (Estimated 4,400 acres protected to date)

Summary of Program Area Activities 2012:

- City purchased the Uy Property in April, 2012, protecting 47 acres in the watershed and reducing development potential by 28 units
- City purchased the Crabtree Property in August, 2012, protecting 1.71 acres in the watershed and reducing development potential by 1 unit
- City purchased 320 acres on Galbraith Mountain from Polygon in December of 2012 reducing development potential by 17 units
- County continues to work with DNR to transfer or reconvey over 8,000 acres of watershed forest to the County for park use
- Sudden Valley converted 30 SVCA-owned properties with the least development potential (with an assessed value of approx. \$885,000) into green spaces
- No additional conservation easements were finalized by the City in 2012 but the conservation easement for the Uy Property is very close to completion
- All acquisition properties were inspected at least annually, about 80% were inspected quarterly
- Property management highlights include: 4,590 native plants planted, invasive weed control on 9 properties, 3 trail encroachment responses and removal/restoration, 5 property boundaries marked or clarified, 2,500 feet of road decommissioned, 3.5 miles of road maintenance including brushing, mowing, and ditch clearing, stewardship plans created for all watershed properties, 1 underground storage tank removed, 1 hazard tree assessment, several fences removed, and 25 volunteer stewards recruited.

Cost Estimates 2012:

Year	Party	FTEs (\$)	Capital Costs	Other	Total
2012	City	1.7 (\$170,000)	\$700,000	\$2.055 million	\$2.925 million
	County	1.25 (\$125,000)	\$225,000	\$75,000	\$425,000
	District/Other	0.2 (SVCA) (\$20,000)		\$903,000 (property value and annual dues)	\$923,000
Total		3.15 (\$315,000)	\$925,000	\$3.03 million	\$4.27 million

Reference Documents:

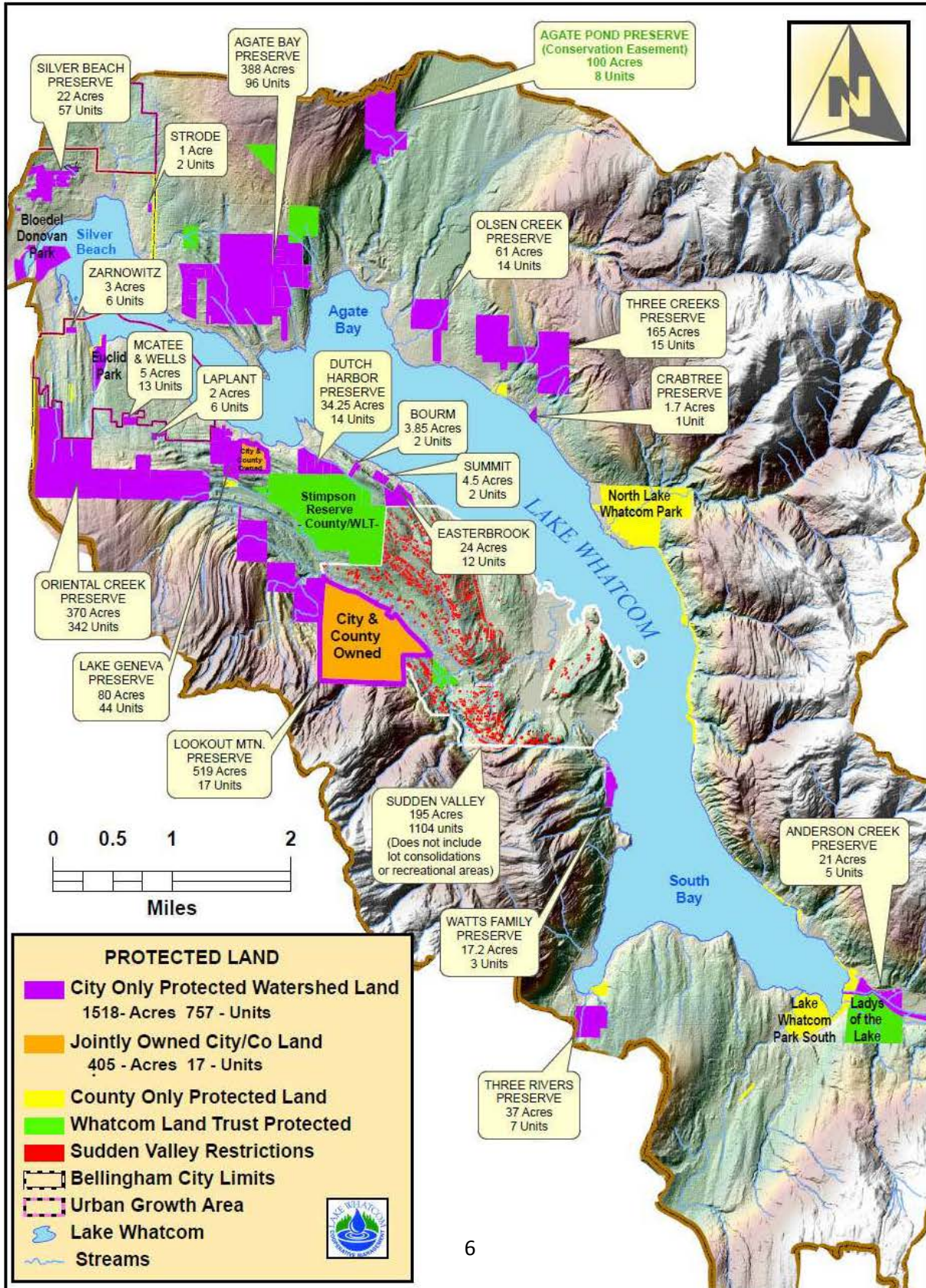
Goals and policy of the Land Preservation Program Area

<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>

PROTECTED PROPERTY IN THE LAKE WHATCOM WATERSHED (As of 12-14-2012)



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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 2012:

- **Acres of stormwater treated in watershed:**
 - The County currently has facilities treating approximately 950 acres of developed land in the watershed, 135 acres above the City of Bellingham water intake line in Geneva, and 815 acres in the Silver Beach Creek Watershed.
 - The City has treatment facilities that provide some level of treatment for 284 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 our 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 175 lbs of the 439 lbs required to be removed to meet the TMDL goal.
 - 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 monitoring program began in the summer of 2011.
 - **Silver Beach Creek Improvements (Brownsville to E. 16th 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. Project completed in the fall of 2012.
- **Efficiency and phosphorus removal rate for stormwater facilities:**
 - County (Geneva and Silver Beach Creek):
 - Bio-infiltration swales – 70-80%
 - Treatment vaults – Phosphosorb media 52%, ZPG media 28%
 - The City has 46 main treatment systems in the watershed with other smaller ones associated with our HIP program. The average removal efficiency for removal of phosphorus to the forested standard is 56%. 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. 16th 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 2012: 24
 - Number of new projects permitted and ready for construction: 20
 - Phosphorus removed in 2012 as a result of HIP projects: 1.99 lbs @ \$20,895.63/lb
 - Projected phosphorus removal from HIP Grant: Based on cost approx. 26 lbs
 - Number of new properties requesting and provided site visit: 43
- **Homeowner Incentive Program (HIP) projects in 2012: (Acres treated)**
 - Infiltration projects – 0.61 acres (2.01 acres to date)
 - Filtration projects – 0.00 acres (0.47 acres to date)
 - Re-vegetation projects – 1.47 acres (2.00 acres to date)
 - Disperser/Other – 0.23 acres (0.23 acres to date)
 - Total – 2.31 acres (4.71 acres to date)

Summary of Program Area Activities 2012:

- Whatcom County Public Works awarded 2012 Environmental Project of the Year by the American Public Works Association (APWA) Washington State Chapter for its Brownsville Drive to E. 16th Place project completed in 2011 in the Silver Beach Creek Watershed
- West Reach completed (County) – 40 Acres Treated
- Upper Silver Beach Creek Phase I - Brownsville to E. 16th Place in operation (County) – 744 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
- 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 2012:

Year	Party	FTEs (\$)	Capital Costs	Other	Total
2012	City	2.7 (\$270,000)	\$50,000	\$100,000	\$420,000
	County	2.0 (\$200,000)	\$550,000	\$75,000	\$825,000
	District/Other	0.2 (SVCA) (\$20,000)			\$20,000
Total		4.9 (\$490,000)	\$600,000	\$175,000	\$1.3 million

Planned Activities for 2013:

- Coronado-Fremont Stormwater Improvements (County) - stormwater treatment and streambank stabilization
- Homeowner Incentive Program (HIP) projects City + County (Interlocal)
- Design will be 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). Retrofit of Huntington and Shepardson Streets (NEP/DOE grant).

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>



Brownsville Drive to E. 16th Place Project (2/2012)

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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 2012:

- **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
 - Lot sizes: 5,991 square feet and 9,783 square feet
 - Total parcel area: 15,774 square feet (0.36 acres)
- **Number of new homes and remodels, lot size, total lot area, and Open Space (County):**
 - 20 new homes, 18 additions/remodels, 10 detached structures
 - Lot size range: 5,600 square feet to 19.5 acres
 - Open Space on developed lots maintained on 71.5 acres
- **Total area of new and redeveloped properties considered phosphorus neutral due to Lake Whatcom stormwater and development requirements (City):**
 - 15,744 square feet (0.36 acres)
 - Since 2009 BMC 6.80 changes: 4.2 acres
- **Total area of Native Growth Protection Area (NVPA) established as a result of new/redeveloped homes (City):**
 - 4,757 square feet of NVPA
- **Total area protected through Protective Native Growth Area covenant (County):**
 - 5.85 acres (254,826 square feet)

Summary of Program Area Activities 2012:

- City staff identified minor code changes to clarify and streamline process and reported on these to City Council
- County passed draft phosphorus runoff standards through Planning Commission

Cost Estimates 2012:

Year	Party	FTEs (\$)	Capital Costs	Other	Total
2012	City	0.08 (\$8,000)			\$8,000
	County	1.4 (\$140,000)			\$140,000
	District/Other	0.3 (SVCA) (\$30,000)			\$30,000
Total		0.54 (\$54,000)			\$54,000

Recommendations for 2013:

- City will complete FAQ on code requirements and post on City website
- City will take minor code changes to City Council
- City will continue to track NVPAs to ensure their success
- City and County staff will continue to collaborate to meet TMDL requirements
- County will pursue adoption of phosphorus neutral stormwater regulations
- County will develop educational materials on new regulations

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) 20.71, 20.80.636, WCDS Chapter 2, Section 221, 20.80.735, 16.16 (Critical Areas Ordinance), Title 23 (Shoreline Management Program)



Example of NVPA on property of new lakeside home

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 2012:

- **Number of people contacted/educational materials distributed:**
 - Events
 - 6 watershed residents attended Sustainable Landscaping Workshops, 3 as participants, 3 as demonstration properties – 9/11/12 - 9/27/12
 - 102 people at World Water Day; approximately 586 passive attendees (trail users seeing signage)– 3/25/12
 - 25 attendees at Silver Beach Creek Event - Displays on composting, pet waste, bioswale
 - 30 people at Institute for Watershed Studies 50th Anniversary – 5/19/12
 - 25 attendees at presentation of HIP program as an example of citizen stewardship to a group of regional stormwater educators during STORM Symposium – 9/20/12
 - 20 adults and 120 elementary students volunteered at two rain garden planting events at Geneva Elementary School – 10/19/12 - 10/20/12
 - 80 contacts (pet waste display) at Paws and Claws at Bloedel Donovan Park – 7/29/12
 - 3 Lake Whatcom septic system trainings on 4/10/12, 5/15/12, 12/6/12
 - Online
 - Lake Whatcom Management Program website: >2,000 unique visits
 - City of Bellingham Lake Whatcom web page: 848 unique visits
 - City of Bellingham Lake Whatcom stewardship page: 74 unique visits
 - E-newsletter: 4 issues, 197 subscribers, 280 opens
 - One-on-one
 - 43 HIP project site assessments (educated about Lake Whatcom issues, pollution sources and solutions that were unique to the individual property)
 - 60 HIP participants received follow up visits (educated about plans, permits and installation)
 - 24 HIP participants received final inspection visits (educated about maintenance)
 - 80 additional visits, calls or emails about HIP projects were made
 - Printed materials
 - 15 phosphorus signs and brochures distributed to fertilizer retailers
 - 500 phosphorus brochures delivered to retailers
 - 4,200 stewardship survey postcards sent to watershed residents
 - 150 HIP booklets distributed
 - 3 new "Entering Lake Whatcom Watershed" signs added to entrances to the watershed
 - 12 new rotating signs with stewardship messages installed around the watershed
 - 367 illicit discharge information letters with Car Wash Kit information sent to schools, churches, fire stations and businesses with large parking lots citywide

- Incentives
 - 213 car wash coupons delivered
 - 134 native plant coupons delivered
 - 56 dog bag leash dispensers delivered
 - 50 bus tokens delivered
- **Estimated response to educational materials, i.e. changes in behavior:**
 - Stewardship survey postcards and incentives changed behavior of over 330 households:
 - Over 200 car washes were diverted from the watershed
 - Up to \$3,216 worth of native plants will be planted in the watershed
 - 56 additional residents were given tools to bag pet waste
 - 100 trips from the watershed will be taken by bus
 - Native plant coupons included HIP information, produced 12 new HIP participants
- **Number of opportunities to coordinate with education staff:**
 - 7 Lake Whatcom Education Team meetings held to coordinate and collaborate on events and outreach materials and included staff from the City of Bellingham, Sudden Valley, Whatcom County, WSU Whatcom County Extension, Institute for Watershed Studies, and Veda Environmental.
- **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:**
 - Distributed 700 water conservation kits
 - 104 rain barrels sold, 11 participants in rain barrel construction workshop
 - Residential fixture retrofits: 10 clothes washers, 1 cistern, 5 toilets, 1 drip irrigation system, and 91 multi-family toilets
 - 12 participants in rain water irrigation workshop

Summary of Program Area Activities 2012:

- **Lake Whatcom Incentive Survey Postcards**
 - Postcards on four topics were mailed to all Lake Whatcom Watershed residents within the city limits. Each postcard included an educational message, a few short survey questions, and a positive behavior change incentive connected to four topics: pet waste, car washing, native planting, and trip reduction. See images below.
 - This outreach strategy was highly successful. 482 of the postcards were returned from 330 households. The design of this outreach strategy was meant to achieve three goals:
 - to encourage people to read the educational message on the mailing and have some way to track whether it was being read
 - to give people a tool that aids them and incentivizes them to make a positive behavioral change that benefits Lake Whatcom water quality
 - to gather some information that may help inform future outreach messaging and strategies
- **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).
 - Updated and expanded Lake Whatcom Watershed residents database including owners, tenants and stewards (program participants and volunteers).
 - Sudden Valley introduced a weekly feature on their Community and Environmental Services webpage and featured articles in the community newspaper highlighting Lake Whatcom water quality issues highlighting watershed friendly practices and tips.
- **Pet Waste Survey**
 - A survey of Bellingham dog owners found an increase in the number of dog owners picking up their dogs waste at home and on walks and disposing of it in the trash.

- On walks, 84% pick up every time, an increase from 75% in 2008.
- At home, 55% pick up daily or immediately, up from 39% in 2008.
- 60% know the trash is the correct place to dispose of dog waste, up from 29% in 2008.
- The survey also highlighted two areas in need of improvement. There is a significant decrease in frequency of pick up during dark, wet or cold times, and 15% of dog owners thought an outdoor pile, compost or yard waste bin were the correct disposal method.
- **Landscaping Workshops**
 - Gardening Green: Sustainable Landscaping workshop series offered 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. Whatcom County contracted with WSU Whatcom Extension to facilitate these workshops. Extension completed evaluation of workshop series to evaluate knowledge change, behavioral change, and community capacity building
 - WSU Extension volunteers contributed to community capacity building via tours, talks to neighborhood groups, friends, neighbors, and gardening green parties
- **Aquatic Invasive Species Outreach**
 - Sudden Valley hosted an aquatic invasive species educational event during Water Week presented by City and County staff to community members
 - Sudden Valley installed signage at the marina relating to aquatic invasive species
 - Clean, Drain, Dry your boat signage created and posted at Bloedel Donovan Park
 - Additional AIS outreach efforts are highlighted under Program Area 9: Recreation

Cost Estimates 2012:

Year	Party	FTEs (\$)	Other	Total
2012	City	1.0 (\$100,000)	DOE 2008 Centennial Grant Amendments \$11,000 DOE Grant Funding \$58,185	\$169,185
	County	0.25 (\$25,000)	DOE Grant Funding \$75,000	100,000
	District/Other	0.2 (SVCA)/ 0.15 (WSU Extension) (\$35,000)		\$35,000
Total		1.60 (\$160,000)	\$144,185	\$304,185

Recommendations for 2013:

- Develop a prioritized list of desired behaviors that Lake Whatcom Watershed residents can do to reduce phosphorus runoff.
- Duplicate stewardship survey postcard mailing and incentive distribution in the Silver Beach Creek Watershed using the incentives purchased from the 2009 PSP grant for SBCW residents

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>

Lake Whatcom Incentive Survey Postcards

Please help us count the dogs in your neighborhood!

If you have a dog, please fill out and return this postcard.

How many dogs? _____ What size(s)? _____ lbs

Are you interested in volunteering to refill a dog bag dispenser if we add one in your neighborhood? ☐ Yes
Bags provided. (If yes, include address or call 778-7970)

get a leash bag dispenser

The #1 reason pet owners don't pick up, is when they forget a bag. Thanks for protecting Lake Whatcom!

Would you like a free bag dispenser?

☐ Yes, please! ☐ No, thanks.

Name: _____

Address: _____

City, State, Zip: _____

Funded
by a grant
from: 

Please help us understand the watershed...

How much of your outdoor property is covered in lawn?

___none ___1-25% ___25-50% ___50-75% ___75-100%

Considering that lawn is a pollution source for Lake Whatcom, how much of your lawn are you interested in replacing with native plants?

___none ___1-25% ___25-50% ___50-75% ___75-100%

get a coupon for \$24 of plants!



Beautify your property while filtering and slowing down stormwater. Thank you for protecting Lake Whatcom!

☐ **Yes! Please send me a coupon!**
(get a coupon while supplies last)

Name: _____

Address: _____

City, State, Zip: _____

Funded
by a grant
from: 

ATTENTION: Dangerously high levels of fecal coliform bacteria have been found in waterways leading to Lake Whatcom.

We need your help! Runoff from your property drains into ditches or storm drains which flow into Lake Whatcom. Pet waste and failing septic systems are the main sources of fecal coliform bacteria.

Pet waste is not fertilizer. It's not safe to compost it or bury it. Bacteria from pet waste can survive for weeks or years on the ground and in water.

Always scoop dog poop when on walks. In your yard, pick it up at least once a week. Daily pickup is best. Put it in the garbage.

Scoop it. Bag it. Trash it.

www.cob.org/lakewhatcom

Pet waste is raw sewage. It contains harmful bacteria (like E. coli) that can cause illness in children and pets.



Photo credit: BEE Magazine

Native plants improve lake water quality!

Where native plants once helped the Lake Whatcom Watershed filter and slow rain runoff, now impervious surfaces and lawns allow rainwater to carry natural pollutants (such as sediments, bacteria, and nutrients) and human pollutants (including soaps, pet waste, metals, and fertilizers) directly into the lake with little to no natural filtration.

You can help us restore the Lake Whatcom Watershed by planting native plants on your property. Native plants require less water and maintenance than lawns and non-native plants.

Help this watershed function like a forest: plant native trees and shrubs!

Want to do more? Search "HQP" at www.cob.org



Lake Whatcom Rotating Stewardship Signs

Posted at entrances to the Lake Whatcom Watershed and along main routes within the watershed. There are 13 locations and 15 rotating messages. Originally installed in 2005, these signs were updated using funds from the 2008 Centennial Clean Water Fund grant project.



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 2012:

- **Number of Data Management Team meetings held:**
 - 10 Data Management Team meetings were held in 2012
- **Number of monitoring contracts overseen:**
 - Lake Whatcom Monitoring Contract (IWS)
 - Brown and Caldwell Tributary Monitoring
 - Whatcom County Health Department

Summary of Program Area Activities 2012:

- Data Management Team received regular updates on the Lake Whatcom Monitoring Contract with WWU's Institute for Watershed Studies (IWS)
- Lake Whatcom 2010/2011 Annual Water Quality Monitoring Report was completed and is available on the Institute for Watershed Studies website. Chlorophyll levels in 2011 were almost the same level as they were in 2009. There was also a substantial oxygen decrease despite a cold summer.
- Data Management Team received regular updates on the status of the TMDL *Water Quality Improvement* Plan for Lake Whatcom from the DOE. Once approval is granted by the EPA, the first task will be to develop milestones to meet TMDL goals.
- Brown and Caldwell released 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 storm event sampling at Silver Beach Creek
- The Whatcom County Health Department reported only 7 parcels of the 673 known septic systems remain without completed Reports of System Status. Actions taken to achieve the goal of 100% compliance with County inspection requirements included over 150 enforcement actions that consisted of notices of violations, civil penalties and other actions.
- City Water Utility in conjunction with IWS piloted a dissolved air floatation pretreatment system. This system has been recommended as an effective approach for minimizing supply impacts resulting from summer algal blooms.
- Data Management Team received regular updates on the Asian clam infestation and the development of aquatic invasive species prevention and management efforts

Cost Estimates 2012:

Year	Party	FTEs (\$)	Capital Costs	Other	Total
2012	City	0.02 (\$2,000)		\$316,031	\$318,031
	County	0.04 (\$4,000)		\$80,000	\$84,000
	District/Other			\$18,000	\$18,000
Total		0.06 (\$6,000)		\$414,031	\$420,031

Recommendations for 2013:

- Create an “Incident Command” type structure to be used to better coordinate agency responses to reports of changes to water quality (e.g. soap and turbidity) to improve efficiency and use resources and expertise more effectively

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 degradation of lake water quality due to accidental or deliberate introduction of biological and chemical agents through prevention and response programs

Program Area Description: This program area aims to prevent water quality impacts associated with the discharge of biological or chemical substances into Lake Whatcom. 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. In 2011, this program area was updated to include reporting on response efforts to aquatic invasive species infestations as a result of the confirmed presence of Asian clams in Lake Whatcom.

Performance Measures 2012:

- **Number of spills/incidents:**
 - No additional Asian clam colonies were discovered in Lake Whatcom in 2012
 - No additional aquatic invasive species were discovered during Lake Whatcom Aquatic Invasive Species Inventory conducted in August/September, 2012
 - Two boats stopped with Brazilian elodea at Aquatic Invasive Species Check Station in 2012
- **Pounds of hazardous materials collected from watershed:**
 - No hazardous materials collection events were held in 2012
- **Number of Spill Response Team meetings held:**
 - No Spill Response Team meetings held in 2012

Summary of Program Area Activities 2012:

- **Brief report on actions taken to prevent and/or manage spills or incidents:**
 - Staff continued to conduct shoreline surveys for Asian clams around Lake Whatcom in 2012. No new Asian clam colonies were discovered. Whatcom County Noxious Weed Board conducted Lake Whatcom Aquatic Invasive Species Inventory to record presence and distribution of all submersed and nearshore aquatic plants in Lake Whatcom. No new aquatic invasive species were discovered.
 - Two boats found to be transporting Brazilian elodea were stopped at the Lake Whatcom Aquatic Invasive Species Check Station in 2012. The fragments were removed prior to the boats being allowed to launch. Brazilian elodea has not been documented in Lake Whatcom.
 - Dive team from Washington Department of Fish and Wildlife (WDFW) conducted two preliminary dive surveys in Basins 1 and 2 to develop dive protocol for mapping extent of Asian clams in Lake Whatcom in February, 2012
 - Created report summarizing Asian clam response efforts currently underway at Lake George, New York and Lake Tahoe, California/Nevada and response options for Lake Whatcom

Cost Estimates 2012:

Year	Party	FTEs (\$)	Capital Costs	Other	Total
2012	City	0.3 (\$30,000)			\$30,000
	County	0.1 (\$10,000)			\$10,000
	District/Other				
Total		0.4 (\$40,000)			\$40,000

Recommendations for 2013:

- Create Rapid Response Notification Database and Rapid Response Aquatic Invasive Species Plan for Lake Whatcom
- Convene a Response Team and conduct a tabletop exercise in response to a zebra/quagga mussel infestation using the Incident Command System
- Include a Lake Whatcom section in Emergency Operations Plans
- Conduct a hazardous materials collection event in the watershed in 2013

Reference Documents:

Lake Whatcom Aquatic Invasive Species Program 2012 Annual Report

<http://www.cob.org/documents/pw/lw/2012-lwpm-ais-report.pdf>

Lake Whatcom Aquatic Invasive Species Inventory Report 2012

<http://www.cob.org/documents/pw/lw/lw-ais-inventory-report-2012.pdf>

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 Toxics Coalition

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>

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 2012:

- **Amount harvested on DNR lands in Lake Whatcom watershed in 2012:**
 - Harvested “Puffball CH sorts” timber sale between June and August, 2012 - 90 acres for a total of 2,855 mbf (thousand board feet) “Southside” was harvested in 2011 and replanted in 2012
- **Amount harvested on private lands in Lake Whatcom watershed in 2012:**
 - 3,876 mbf (thousand board feet) from approved Forest Practice Applications effective as of 2012
- **Summary of DNR silviculture activities:**
 - Reforested 433 acres since January 2005 – 70 acres were either done in 2012 or bid on and will be completed in 2013
 - Vegetation Management – Ground Herbicide Treatment: None in 2012
- **Number of IJC meetings held:**
 - IJC met twice with DNR staff and once with the Lake Whatcom Joint Policy Group.

Summary of Program Area Activities 2012:

- IJC completed their comment report on the Sushi Timber Sale.
- Tracked and reported on Polygon logging activities on Galbraith Mountain.

Cost Estimates 2012: \$5,000

Planned Activities for 2013:

- IJC will report on 2012 activities at Joint Policy Meeting
- Tracking DNR harvest "Sushi" site in 2013

Year	Party	FTEs (\$)	Capital Costs	Other	Total
2012	City	0.01 (\$1,000)			\$1,000
	County	0.01 (\$1,000)			\$1,000
	District/Other				
Total		0.02 (\$2,000)			\$2,000

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

Interjurisdictional Committee (IJC) Reports

http://www.dnr.wa.gov/Publications/Im_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 2012:

- **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 2012:

- **WTA (Whatcom Transportation Authority) bus use:**
 - According to WTA, the number of round trip bus rides to and from the Lake Whatcom Watershed was about 42,120 in 2011. That's about 285 passengers per day on an average weekday, and 195 passengers per day on an average Saturday. WTA collects this average ridership data every two years.
- **Outreach - printed materials & incentives:**
 - 1046 stewardship survey postcards about trip reduction and 50 bus tokens and bike/bus maps mailed to City watershed residents
 - Respondents to this survey reported taking regular trips to the following locations: downtown (63%), Barkley (61%), Lakeway (49%), Guide Meridian (37%), schools (24%).
- No updates made to the ICT/Joint Policy Group in 2012

Cost Estimates 2012:

Year	Party	FTEs (\$)	Capital Costs	Other	Total
2012	City	0 (\$0)			\$0
	County	0 (\$0)			\$0
	District/Other				
Total		0 (\$0)			\$0

Recommendations for 2013:

- Re-visit Transportation Program Area work plan tasks and goals in 2013
- Communicate with WTA about the need for bus service between the Silver Beach neighborhood and Barkley area.

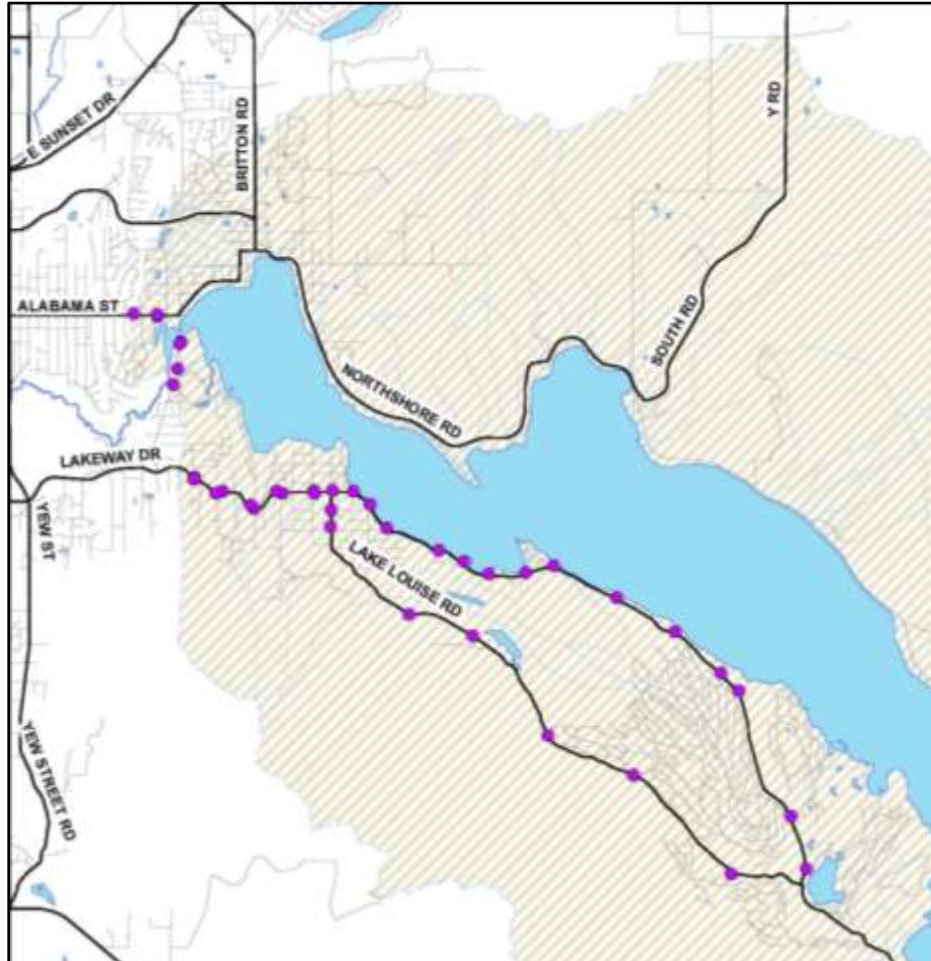
Reference Documents:

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/>

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.

Performance Measures 2012:

- **Number of recreational users contacted:**
 - 1,794 watercraft owners/operators through boater surveys/visual inspections conducted at Bloedel Donovan and Sudden Valley between 7/14/2012 and 9/30/2012
 - 109 park users stopped at Aquatic Invasive Species Check Station at Bloedel Donovan and Sudden Valley to read display, ask questions, and collect educational materials
 - Over 90 park users attended public hearings on Bloedel Donovan Park planning efforts. Park Dept. outreach included several hundred mailings and several meetings with park user groups.
 - 1,000 people via the Noxious Weed Board Booth at the Northwest Washington Fair

Summary of Program Area Activities 2012:

- Launched Aquatic Invasive Species Prevention Program at Bloedel Donovan on 7/14/2012
- Interacted with 1,794 watercraft owners/operators through boater surveys, visual inspections, and education/outreach at Aquatic Invasive Species Check Station between 7/14/2012 and 9/30/2012
- Continued to monitor spread of aquatic invasive species as well as any new prevention and management efforts
- 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 100th Meridian Initiative - Columbia River Basin Team meetings, in Portland, OR on June 6, 2012 and Spokane, WA on October 3-4, 2012

Cost Estimates 2012:

Year	Party	FTEs (\$)	Capital Costs	Other	Total
2012	City	0.6 (\$60,000)			\$60,000
	County	0.3 (\$30,000)			\$30,000
	District/Other				
Total		0.9 (\$90,000)			\$90,000

Recommendations for 2013:

- Begin implementing Mandatory Inspection Program in April, 2013
- Conduct outreach with watershed users regarding new program requirements for 2013
- Schedule meetings with watercraft launch owners/operators regarding new program requirements for 2013

Reference Documents:

Lake Whatcom Aquatic Invasive Species Program 2012 Annual Report

<http://www.cob.org/documents/pw/lw/2012-lwpm-ais-report.pdf>

Aquatic Invasive Species Action Plan for Lake Whatcom Reservoir

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

Washington Invasive Species Council

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

Washington Invasive Species Education

<http://www.wise.wa.gov/index.aspx>

100th Meridian Initiative

<http://www.100thmeridian.org>

Boatnotes Handbook

http://www.cob.org/documents/pw/environment/Boatnotes-Handbook_2006_6.pdf

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 2012:

- **Estimate of gallons of water conserved in City:** 26 million gallons in 2011 (Report: June, 2012)
- **Number of meters installed in City (% of meter installations completed):** 2,831 meters and assembly boxes installed in 2012 (18% completed)
- **Estimate of water use reduction in the District service area:** 9.7 less million gallons produced in 2012 compared to 2011 as a result of on-going conservation efforts and the repair and replacement of water lines. This follows a 5.8 million gallon reduction in 2011.
- **Number of overflows:** 0 in 2012 (District)
- **Related capital projects completed in 2012:**
 - 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)
 - Completion of budgeted Capacity, Management, Operation & Maintenance (CMOM) program utilized to find leaks in the water distribution system within the Geneva community (District)
- **Number of new connections made within 200 feet of sewer line:**
 - 8 new connections in 2012 (District)

Summary of Program Area Activities 2012:

- An estimated 24 million gallons of water was saved in 2010 as a result of the City's Water Conservation Program
- 2010 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 rebate project (the City's Community Energy Challenge and Water Conservation Program partnership), and the multi-unit residential water rebate project, irrigation water customer class water rebate project
- City completed Sustainable Water Management project: installation of a rainwater harvesting demonstration system using the new permitting guidelines
- City continued to contract with County Health Department 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 673 known septic systems remain without completed Reports of System Status. Actions taken to achieve the goal of 100% compliance with County Code inspection requirements included over xxxx enforcement actions that included notices of violations and other actions.

- 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 2012:

Year	Party	FTEs (\$)	Capital Costs	Other	Total
2012	City	0.3 (\$30,000)		\$97,520	\$127,520
	County	0.1 (\$10,000)			\$10,000
	District/Other	0.45 (\$45,000)	\$393,000		\$393,000
Total		0.85 (\$85,000)	\$393,000	\$97,520	\$530,520

Recommendations for 2013:

- 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 2013 toward design work associated with the future (2014-2015) upgrade to the Strawberry Point, Boulevard, Par, and Country Club 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 Northshore and Sudden Valley communities.
- The District has also budgeted resources for use with the City through an interlocal agreement toward the funding of staff to coordinate invasive species protection activities at Lake Whatcom. In addition, the District also continues to participate with the City and County through an interlocal 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>

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

City of Bellingham Municipal Code Amendments

Ordinance 2007-04-031

16.80.080 - Development Standards For Residential Single Development

Program Area: 11. Administration

Goal:

Administer and coordinate Management Plan implementation.

Program Area Description: This program area includes tasks necessary to administer and coordinate meetings, contracts, projects and reporting to facilitate the implementation of the Lake Whatcom Management Plan.

Performance Measures 2012:

- **Number of meetings held:**
 - ☐ 12 ICT meetings
 - ☐ 10 Lake Whatcom Joint Policy Group meetings
 - ☐ 1 Joint Council and Commission meeting – March 21, 2012
 - ☐ Also see Program Areas 4 and 5
- **Number of contracts overseen:**
 - ☐ Lake Whatcom Monitoring Contract (IWS)
 - ☐ Brown and Caldwell Tributary Monitoring
 - ☐ Whatcom County Health Department

Summary of Program Area Activities 2012:

- 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 2012. Topics included: updates on Lake Whatcom aquatic invasive species prevention program, Whatcom County Lake Whatcom Overlay District stormwater regulations, discussion of Lake Whatcom budget/work plan priorities, 2012 stormwater projects, 2012 Lake Whatcom Annual Monitoring Report, Build-Out Analysis Report for 2012, and impacts of forestry activities in the Lake Whatcom watershed.
- The City and County Councils and the LWWSD Commission met together to discuss program accomplishments from 2011 and program goals for 2012 at a joint meeting on March 21, 2012
- Reports that were valuable to management efforts in 2012 included:
 - Lake Whatcom 2010/2011 Annual Water Quality Monitoring Report
 - Cost-Benefit Analysis of activities to reduce phosphorus loading to the lake
 - Aquatic Invasive Species Action Plan for Lake Whatcom
 - Brown and Caldwell - Lake Whatcom Tributary Monitoring Phase 2 Report

Cost Estimates 2012:

Year	Party	FTEs (\$)	Capital Costs	Other	Total
2012	City	0.5 (\$50,000)			\$50,000
	County	0.2 (\$20,000)			\$20,000
	District/Other	0.1 (\$10,000)			\$10,000
Total		0.8 (\$80,000)			\$80,000

Recommendations for 2013: 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 2012:

- **Number of enforcement activities in Lake Whatcom watershed in 2012:**
 - City: (Conducted daily during construction season and twice weekly during seasonal closure)
 - Conducted a total of 4,303 site inspections in watershed
 - Total number of permitted watershed sites for 2012: 48
 - Total number of unpermitted watershed sites for 2012: 5
 - Conducted a total of 298 site inspections on unpermitted sites
 - Issued 15 correction notices in watershed
 - Issued 3 stop work orders for unpermitted sites and turned 1 over to Legal Dept.
 - County:
 - Conducted a total of 595 site inspections in watershed
 - Total number of permitted building sites in the watershed for 2012: 64
 - Total number of Shoreline permits in the watershed for 2012: 16
 - Total number of correction notices in the watershed for 2012: 14
 - Total number of enforcement cases for 2012: 13

Summary of Program Area Activities 2012:

- 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 building season and bi-weekly monitoring during the closed season to assure compliance with seasonal requirements.
- Sudden Valley implemented six major enforcement-related revisions adopted in 2010 as well as enforced the many other provisions contained in the Architectural Control Committee Guidelines

Cost Estimates 2012:

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
Total		1.2 (\$120,000)			\$120,000

Recommendations for 2013:

- Reconvene enforcement team to discuss making reporting of enforcement activities in the watershed more consistent across jurisdictions
- Reconvene enforcement team to discuss role of enforcement in aquatic invasive species prevention efforts in the Lake Whatcom watershed

Reference Documents:

BMC 15.42 subsections 070-110

Whatcom County Comprehensive Stormwater Plan

Lake Whatcom Management Program Contacts:

Whatcom County Public Works

Chris Brueske, 715-7450, cbrueske@co.whatcom.wa.us

City of Bellingham Natural Resources

Clare Fogelsong, 778-7900, cfogelsong@cob.org

Lake Whatcom Water and Sewer District

Patrick Sorensen, 734-9224, patrick.sorensen@lwwsd.org