



## Lake Whatcom Management Program 2000-2004 Work Plan Accomplishments

In January 2000, County Council, City Council, and Water District 10 Commissioners (now Lake Whatcom Water and Sewer District) adopted the *Lake Whatcom Reservoir Management Program 2000-2004 Work Plan*. The five-year work plan outlined tasks under ten program areas. Three program areas were identified as high priority: watershed ownership, stormwater management, and urbanization/ land development. In addition, three priority water quality concerns were identified: nutrients, fecal coliform bacteria, and other pollutants (i.e. pesticides, metals).

Over the past five years, this work plan guided the management activities in the watershed. Following is a condensed summary of accomplishments through this five-year work plan. The summary is organized by Program Area and Task as outlined in the *2000-2004 Work Plan*. The work plan can be found on the Lake Whatcom Management Program website (<http://www.lakewhatcom.wsu.edu/>) or at Whatcom County Water Resources Division (676-6876). A more detailed summary of work plan accomplishments will be available on the Lake Whatcom Management Program website in Spring 2004.

### ***Program Area 1: Watershed Ownership-***

*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.*

#### Task 1

- The assessed values of the watershed properties acquired through the City's Lake Whatcom Watershed Property Acquisition Program were multiplied by their property tax rate (consolidated levies) to determine the tax revenue the properties would have provided the county in 2003 and 2004.

#### Task 2

- The City purchased an easement at the foot of Alabama at Electric Avenue for a new stormwater facility. Some future stormwater retrofits may require an easement purchase, but those have not yet been identified.

#### Task 3

- Established land preservation/acquisition criteria based on recommendations from the Lake Whatcom Watershed Citizen Task Force. These criteria are based on proximity to waterbodies, slope, current land use, and potential land use.
- The City developed overlay land acquisition criteria that are considered for land purchased with the City's Land Preservation Fee. These include proximity to water intake and other specific physical features.

#### Task 4

- Compiled information describing land preservation options (tools and funding sources). The City's Land Preservation Fee and the County's Conservation Futures Fund are the primary funding sources for implementing land preservation goals.
- Established the Watershed Advisory Board to assist with the City's Land Acquisition Fee Program.

#### Task 5

- Purchased 877 acres of watershed land.
- Recorded covenants in Sudden Valley permanently restricting residential development on 198 parcels using joint agreements between the Sudden Valley Community Association, County, District and City.
- Exchanged 243 Sudden Valley transferable restrictive covenants for 243 permanent restrictive covenants, targeting priority parcels for water quality protection.

### ***Program Area 2: Stormwater Management***

*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.*

#### Task 1

- Conducted stormwater system inventories within the Lake Whatcom watershed detailing the locations of all catch basins and culverts within the watershed.

#### Task 2

- Coordinated development of pollutant loading and lake response models for the Lake Whatcom watershed through the WRIA 1 Project and Department of Ecology TMDL Process.

#### Task 3

- Completed data gaps evaluations through the Lake Whatcom Stormwater Program (2000), the Water Source Protection Plan (2000), and the WRIA 1 Project.

#### Task 4

- Prioritized activities that may have adverse impacts on the lake's water quality through the Water Source Protection Plan (2000). High priorities included residential development (new development and existing homes), municipal/commercial functions (power transmission and wastewater conveyance systems), and transportation (impervious surfaces, automobile impacts).

#### Task 5

- This task has not been implemented.

#### Task 6

- The City completed their stormwater utility update in 2001 that identified the compliance of existing laws, regulations, and policies within their stormwater programs.

#### Task 7

- Summarized stormwater funding mechanisms that have been implemented in similar communities.

#### Task 8

- Lake Whatcom Stormwater Program Early Action Project Examples:
  - County Roadside Maintenance Practices- The Lake Whatcom watershed continues (since 1991) to be a no spray zone for herbicides (WCC 12.48).
  - Erosion Control Best Management Practices- The County installs erosion and sediment control best management practices at all road maintenance projects in the watershed.
  - Stormwater Retrofits- The City installed stormwater treatment vault systems and rain gardens at Silver Shores neighborhood, Bloedel Donovan Park, Electric Avenue and Alabama Street.
  - The County is adapting ditch maintenance practices to focus these activities in the dry season.
  - The City sweeps arterials and side streets in the City's portion of the watershed three to four times a month.

- The County will begin sweeping arterials and residential roads in the County's portion of the watershed two times per month in spring 2004.
- The City mows roadside vegetation three times per year to assist with ditch maintenance.
- The City is earmarking \$250,000 per year for stormwater retrofits. In 2004, retrofits will occur at East Connecticut and Park Place.
- The City uses *First Down* for ice control. Sand is swept from the roads within one week of the end of icy conditions.

#### Task 9

- Whatcom County hired a staff member to review project proposals for compliance with zoning, land-use, and stormwater regulations. The position also inspects permitted sites for ongoing compliance, performs community outreach, and functions as a representative for the Planning Division for Lake Whatcom related issues.
- The City dedicated staff to provide technical assistance and compliance of stormwater regulations.

#### Task 10

- The City obtained Geographic Information System (GIS) data from the National Soil Conservation Service that is used to identify ground water recharge areas, and in development reviews for stormwater management.

#### Task 11

- This task has not been implemented.

#### Other Related Programs

- Whatcom County adopted Stormwater Special District standards in 2002 requiring permanent on-site stormwater quality and quantity facilities for single-family dwelling units and duplexes in the watershed.

### ***Program Area 3: Urbanization/ Land Development***

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

#### Tasks 1 & 3

- The City adopted development regulations in 2001, the "Silver Beach Ordinance", to limit impervious surfaces, retain native vegetation, and establish seasonal clearing restrictions in new and redevelopment in the watershed.
- The City developed, and made available to the public, an extensive list of native plants for revegetation requirements in the Silver Beach Ordinance.

#### Task 2

- The County and City inspectors coordinate with Department of Ecology inspectors to monitor the implementation and maintenance of stormwater source control and treatment best management practices (BMPs) for permitted clearing and development sites.
- The County and City are reviewing overlapping zoning and land use regulations for urban growth areas for consistency.

#### Task 4

- Whatcom County enhanced land development regulations in the watershed through the Water Resources Overlay District, Water Resources Special Management Area, and Stormwater Special District requirements. The regulations included a decrease in allowable impervious areas, establishment of tree canopy area retention, and establishment of seasonal restrictions on clearing activity.
- Developed educational materials that describe County development regulations and permit review processes in the watershed.

#### Task 5

- Refer to Community Outreach Task 9.

#### Task 6

- Tracking land development permits in the City and County.

#### Task 7

- Created an educational brochure and Transferable Development Right (TDR) packet to assist interested landowners. Conducted public forums and outreach efforts to educate development community about the TDR program.
- Reviewed and enhanced the County's Transferable Development Right (TDR) Program by establishing receiving areas, transfer ratios and minor program enhancements to help facilitate the program.
- Developed recommendations to further enhance coordination between the County and City.
- Established a framework for a development rights bank and allow for in lieu payments.

#### Task 8

- This task has not been implemented.

#### Task 9

- This task has not been implemented.

#### Task 10

- Assisted Sudden Valley Community Association with the density reduction program through joint purchase of parcels with restrictive covenants.

#### Task 11

- This task has not been implemented.

#### Task 12

- Updating City and County Shoreline Management Programs and Critical Areas Ordinances.

#### Other Related Projects

- The County implemented a rezone in the Lake Whatcom watershed that resulted in a reduction of approximately 1,400 potential dwelling units within the watershed.

### ***Program Area 4: Community Outreach***

*Provide 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.*

#### Tasks 1 & 2

- Created the Lake-Friendly Gardening Kit and Workshop Series to describe gardening practices with reduced impacts to water quality.
- Created a phosphorus-free fertilizer blend and educational brochure for distribution at a number of gardening supply stores in the county.
- Created an Integrated Pest Management (IPM) program for crane flies.

#### Task 3

- Established ten Mutt Mitt stations in the watershed with approximately 12,000 mitts distributed in the first year of the program.
- Created and distributed educational brochures describing the impacts of dog waste on water quality.

#### Task 4

- This task has not been implemented.

#### Task 5

- Restructuring the Lake Whatcom Management Program website to provide management program updates as well as watershed facts and stewardship tips.

- Updating the Lake Whatcom Management Program mailing and e-mail lists on an as needed basis.
- The Lake Whatcom Management Committee meeting on a monthly basis.
- Holding Special Joint Council/Commission meetings twice annually (March and September) to provide updates on Lake Whatcom Management Program activities and to discuss coordinated projects or programs.
- The City publishes a consumer confidence report, called "*Pure Facts*", annually that reports on Bellingham's drinking water quality and ways to protect it.
- The City and Black Dog Productions produce *Water Whys*, a television series that focuses on educating the public on a variety Whatcom County water issues, including Lake Whatcom.

#### Task 6

- Distributed City utility bills with watershed stewardship tips and messages.
- Distributed information about Lake-Friendly Gardening Kits and Phosphorus-Free Fertilizer in District utility bills.

#### Task 7

- This task has not been implemented.

#### Task 8

- Posted signs indicating entrance into the watershed on the major roadways.
- Posted educational signs for the City seasonal land clearing restrictions in the watershed.
- Posted watershed stewardship signs developed through the 5<sup>th</sup> Grade Poster Contest in the Bloedel Donovan Park bathrooms.

#### Task 9

- "Excellence in Watershed Stewardship" awards were presented to eight watershed residents in 2000 at the Celebrate Lake Whatcom event. Awards were based on the following source control elements: pesticide/fertilizer use, impervious surfaces, site-appropriate vegetation, automobiles use and maintenance, and waste management practices.

#### Task 10

- Created a diorama of the watershed that is used for community events and educational tours.

#### Task 11

- City provides watershed curriculum materials for students and teachers, a fifth grade program on watersheds, tours of the City's water and wastewater treatment plants, and water quality and insect survey test kits for stream ecology education.

#### Task 12

- The City participates in the Watershed Pledge Program by publishing an annual Pledge newsletter discussing watershed issues and mails Watershed Pledge information to residents of Bellingham.

#### Task 13

- Provided educational materials to support the actions of the Lake Whatcom Management Committee.

#### Task 14

- Developed an educational display, presentation and handbook describing the protection, enhancement, and creation of backyard riparian buffers.

#### Task 15

- The City offers stream kits for loan to teachers and groups interested in learning about stream ecology.

#### Other Related Activities

- Converted the Lake Whatcom slide show to video format, available at all Whatcom County libraries.

- The City supports a volunteer program for storm drain marking to increase the visibility of storm drains.
- The County, City, and Department of Ecology partnered to provide training for the ReSources and People for Lake Whatcom sponsored Stormwater Watchers Team.

### ***Program Area 5: Data and Information Management***

*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.*

#### Task 1

- Review water quality data through the Lake Whatcom Data Team.

#### Task 2

- Updated the Lake Whatcom Data Catalog and library collections.
- Conducted additional tributary water quantity and quality monitoring as identified through the Comprehensive Stormwater Program.

#### Task 3A

- Partnered with the Department of Ecology and Utah State University to collect additional tributary data (on a monthly basis) and storm event samples in 2003.

#### Task 3B

- This task has not been implemented.

#### Task 3C

- In partnership with the State, conducted follow-up studies on mercury in fish tissues, water, and sediment.
- Conducting a mercury source investigation through contract with USGS. This investigation was coordinated with the Department of Ecology's Lake Whatcom TMDL study.
- Conducted follow-up water quality and sediment monitoring of pentachlorophenol at the Cable Street stormdrain.

#### Task 3D

- Compiled information about waterfowl, impacts on water quality, and potential management options.

#### Task 3E

- Conducted water quality sampling for bacteria at the Bloedel Donovan swimming area.

#### Task 3F

- This task has not been implemented.

#### Task 3G

- Conducted a series of investigations on the Y-Road landfill.

#### Task 3H

- Compared water quality between the City and District intakes.

#### Other Related Programs

- The City continues to contract with Western Washington University for annual water quality monitoring.

### ***Program Area 6: Spill Response and Hazardous Materials***

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

#### Task 1

- Inventoried spill response equipment, restocked fire district supplies and created a surplus supply at Bloedel Donovan.
- A spill incident form was created to assist with tracking incidents and response equipment use in the watershed.

#### Task 2

- Developed a summary and map illustrating the location of spill incidents in 1998 and 1999.
- Created a spill incident form to assist with tracking incidents and response equipment use in the watershed.

#### Task 3

- Compiled information regarding pesticide restrictions in other communities.

#### Task 4

- Investigated potential options for restricting the transport of hazardous materials within the watershed.

#### Task 5

- Evaluated issues related to underground storage tanks and options for assisting watershed residents.

#### Task 6

- Enhanced public notification of spills through an automatic dialer system.

#### Task 7

- This task has not been implemented.

#### Task 8

- Conducted a spill response tabletop exercise.

#### Task 9

- Developed information regarding spill response and prevention for the website and boater's handbook.

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

*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.*

#### Task 1

- Received recommendations from the Forestry Forum regarding the Department of Natural Resources (DNR) Landscape Plan Draft Environmental Impact Statement (DEIS).

#### Task 2

- The County inventoried approximately 30 culverts in the Lake Whatcom watershed. Barriers to fish passage have been corrected in five watershed culverts.
- Compiled Lake Whatcom fishery reports generated by Washington State Department of Fish and Wildlife (WDFW).

#### Task 3

- The City is developing a Habitat Conservation Plan (HCP) for the water supply system including Lake Whatcom in response to Endangered Species Act listings and informed by salmon recovery goals.

### **Program Area 8: Transportation**

*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.*

#### Task 1

- Identified several projects that would open new routes for traffic now using lakeshore routes through the Bellingham Comprehensive Transportation Plan update draft.
- The County is using best available science for drainage and stormwater management associated with road projects to reduce impacts to water quality.
- The County is encouraging alternative transportation by providing improved bike lanes and sidewalks through road projects. County Public Works coordinates with the County Bicycle Advisory Committee for input on these improvements.

#### Task 2

- This task has not been implemented.

#### Task 3

- Created an article for the Water Whys newsletter and website describing water quality impacts associated with motorized vehicles and source control activities to reduce impacts.

#### Task 4

- The City adopted road standards specific to the watershed to reduce pavement and provide stormwater treatment.
- The County considers the City's road standards for subdivisions in the watersheds and applies these standards where feasible.

### **Program Area 9: Recreation**

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

#### Task 1

- Received recommendations from the Motorized Watercraft Advisory Committee regarding boating on Lake Whatcom.

#### Task 2

- Park Master Plans for the City and County are being updated and will address park use within the watershed.

#### Task 3

- Created a quick tips fact sheet describing boating stewardship in terms of water quality protection and safety.
- Created and distributed a boating kit and boating handbook to help boaters find ways to reduce impacts on the lake system. The handbook describes the potential impacts of boating on the lake system and steps individuals can take to protect the lake.

### **Program Area 10: Utilities and Waste Management**

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

#### Task 1

- Conducted a pilot water-metering project.

#### Task 2

- Completed a feasibility study on rainwater collection systems and offered a rain barrel program to City and County residents.



Task 3

- Applied for a Centennial Grant to design and install a demonstration garden.

Task 4

Task 5

- Public service announcements on water conservation are currently running on the public access channel.

Task 6

Task 7

- Compiled information about local and regional waterwise demonstration gardens. Developing descriptions and locations for website.

Other Related Programs

- The District completed the Lake Louise Interceptor Line that added capacity and flexibility to the District's Sewer System. During this last year's rainy season the District did not experience any overflows due to the high rain falls events. This was due to the increased capacity and ability to direct the flows to the new Lake Louise interceptor line.
- The District completed Lakewood Lane and Grand Avenue Sewer Extension Projects. These projects are part of the District's ongoing phase out of septic systems, with cost sharing of construction with landowners.
- The District continued ongoing program for the removal of septic systems within Sudden Valley.
- The District is locating, analyzing, prioritizing, excavating and repairing inflow and infiltration (I & I) needs within the sewer system. Targeted North Point area of Sudden Valley for a sliplining project in summer of 2004.