Increased Investments for Lake Whatcom Water Quality

Last year, with input from the City and County Councils and Water District Commission, the Lake Whatcom Management Program defined a target timeline for phosphorus and bacteria reductions that is more aggressive than the State’s mandate. This effort honors our community’s commitment to the health of our drinking water reservoir that serves over 100,000 people - about half the population of Whatcom County. This ambitious timeline is supported by a funding strategy that finances substantial increases in pollution-reduction projects and residential programs in the Lake Whatcom Watershed.

The Lake Whatcom Management Program is led by program staff from the City of Bellingham, Whatcom County, and the Lake Whatcom Water and Sewer District, working collaboratively to protect Lake Whatcom for our community.

Collaboration among the participating governments is guided by five-year work plans. A new plan calls for expanding investments in projects that capture and treat polluted runoff in both public rights-of-way and in residential areas, and delivering targeted programs to residents whose participation can make the most meaningful impact toward a cleaner Lake Whatcom. The proposed 2015-2019 work plan is currently available for public review at www.cob.org by searching “LWMP work plan,” and will be considered by the Councils and Commission on April 22nd.

We are on an ambitious, yet pragmatic course to improve the condition of our drinking water supply, meet state and federal pollution-reduction goals, and fulfill our community’s vision of a clean, protected Lake Whatcom for future generations.

Respectfully,
Mayor Kelli Linville and Council President Gene Knutson

Water Metering Project Update

2015 marks the third year of the state-mandated water metering project. To date, over half of our 15,000 unmetered water customers have been converted to metered water services. Water meters help to meet the Washington State Department of Health’s water use efficiency goals of a reliable long-term water supply, good stewardship of water resources, and efficient operation and management of water systems.

Public Works thanks you for your patience and cooperation as we continue to work to meet our 2017 deadline of a fully-metered water system.

Installation timeline by neighborhood

2014-2015 Sunnyland, Lettered Streets, Columbia, Cornwall, Birchwood, Meridian, Cordata

2015-2016 Fairhaven, South Hill, Happy Valley, WWU, Sehome, York

What are your local governments doing to protect your drinking water source?

Lake Whatcom is your drinking water reservoir. Here is some of the work that the City of Bellingham, Whatcom County, and the Lake Whatcom Water and Sewer District are doing to protect water quality in the lake:

• Building new and improved facilities that capture and treat polluted runoff in public rights-of-way
• Working with homeowners to construct pollution-reduction projects in residential neighborhoods and along the shoreline
• Acquiring forests to filter runoff, prevent erosion, and maintain them as protected lands
• Measuring pollutants and water quality
• Assessing and improving the effectiveness of projects and programs
• Tracking and reviewing forest practice permits
• Minimizing the risk of invasive species infestations
• Inspecting public and private stormwater facilities
• Enforcing land-disturbance and related watershed laws
• Ensuring a clean and protected drinking water reservoir

The Partnership for Safe Water

Let’s say you were making a list of all the things that make the City of Bellingham a special place. This list would probably include our scenic vistas, great parks, a vibrant downtown, plenty of good coffee, and an award winning water treatment plant. An award winning treatment plant you ask? Why yes, the City of Bellingham Water Treatment Plant staff are proud to report that we have received the 15 year Director’s Award in the Partnership for Safe Water (Partnership) program.

The Partnership is a federal program that water suppliers join voluntarily. This program encourages participants to continually improve surface water treatment plant operations. The process is based on a proven technique developed by the U.S. Environmental Protection Agency.

Bellingham joined the Partnership program in 1997. The program requires the City to demonstrate compliance with all drinking water regulations and to provide customers with drinking water that is better than what is required by law.

The Partnership has each water treatment plant conduct an intensive self-assessment analysis to identify and correct factors that could limit performance. The Partnership also includes a third party assessment by other industry professionals to review our practices. The recommendations given to Bellingham were few, confirming that we are doing a good job. Such a good job in fact, that our Water Treatment Plant was presented with a special Director’s Award for achieving excellence in water quality for the past 15 years. Bellingham is the only city in Washington State to receive the 15 year Director’s Award for safe water, and is one of only 12 cities in the U.S. to receive this award.

Unregulated Contaminants Monitoring Data Available for City of Bellingham

To ensure that tap water is safe to drink, the Washington Department of Health and the U.S. Environmental Protection Agency (EPA) regulate the amount of contaminants in public water systems. The U.S. Food and Drug Administration regulates contaminants in bottled water to provide similar protection for public health.

One rule requires all water suppliers in the country with more than 10,000 customers to test for a list of substances that either don’t yet have a drinking water standard set by the EPA, or that the standard may be lowered. Collecting data about trace elements and select chemical compounds helps the EPA decide whether they should set a drinking water standard.

The City of Bellingham collected this data in 2013/14 as required. Results from 2014 are shown in the chart below. For a copy of these results or more information, please contact Peg Wendling at (360) 778-7872 or pwendling@cob.org.

Bellingham’s water is very clean. The Unregulated Contaminants Rule asks water utilities to look for potential contaminants of concern at very low levels, measured in parts per billion and parts per trillion. With levels this low, we expect to see something. When we detect substances at these low levels, it does not mean there is cause for concern. In fact, as noted in the chart below, the substances that were found in our drinking water also are found widely in bottled water.

For more information on your drinking water go to: www.cob.org/services/utilities/water.aspx

<table>
<thead>
<tr>
<th>Unregulated Contaminant Rule 3 Inorganics Screen Results 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>All units in ug/L or parts per billion</strong></td>
</tr>
<tr>
<td><strong>Bellingham drinking water:</strong></td>
</tr>
<tr>
<td><strong>Bellingham tap water average</strong></td>
</tr>
<tr>
<td><strong>Bellingham tap water maximum value</strong></td>
</tr>
<tr>
<td><em>V</em>*</td>
</tr>
<tr>
<td>0.3</td>
</tr>
<tr>
<td><strong>Common brand of bottled water:</strong></td>
</tr>
<tr>
<td>Natural Artesian Water - Imported</td>
</tr>
<tr>
<td>1.0</td>
</tr>
<tr>
<td>Top Selling Brand - Purified Water w/ Minerals</td>
</tr>
<tr>
<td>0</td>
</tr>
<tr>
<td>Natural Spring Water - Imported</td>
</tr>
<tr>
<td>0</td>
</tr>
<tr>
<td>Popular Brand Vapor Distilled w/ Electrolytes</td>
</tr>
<tr>
<td>0</td>
</tr>
</tbody>
</table>

\(0 = \text{below detection level}\)
**Water AND Energy Rebates**

Lower two utility bills at the same time! Every drop of treated drinking water saved, saves energy, and every unit of energy saved, saves water.

Our Water Use Efficiency Program offers up to $400 in rebates to single-family residential water customers that participate in the Community Energy Challenge (CEC) AND install a high efficiency toilet and/or clothes washer. The City has partnered with the CEC to offer home water assessments in addition to the energy assessments they already provide. We want to help you identify where energy and water savings can be found and the no-cost, low-cost, rebates, and financing options available to you. You then get to decide how and if you want to implement measures. Participation is voluntary, on a first come, first serve basis. New construction is not eligible.

When you sign up, you’ll also help Bellingham win $5 million dollars towards energy efficiency projects from the Georgetown University Energy Prize! We are one of 50 communities competing in a two-year contest to reduce energy use in homes, schools, and municipal facilities.

For more information, visit [www.cob.org](http://www.cob.org) search “rebate.”

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**Detected Substances**

<table>
<thead>
<tr>
<th>Disinfection By-products (DBPs): Total Trihalomethanes (THM) and Haloacetic Acids (HAA), THMs and HAA's are the most common types of DBPs. The City samples for DBPs at eight sites in the water distribution system each quarter.</th>
<th>2014 Level Detected</th>
<th>EPA Maximum Contaminant Level (MCL) or Action Level (AL)</th>
<th>In Compliance?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>THM:</strong> Average (all sites): 37.4 ppb</td>
<td><strong>For each site, the running annual average MCL must be:</strong></td>
<td><strong>YES</strong></td>
<td></td>
</tr>
<tr>
<td>Maximum single site average: 49.7 ppb</td>
<td><strong>THM:</strong> Below 80 ppb and</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Range: 16.8 to 60.8 ppb</td>
<td><strong>HAA:</strong> Below 60 ppb</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>HAA:</strong> Average (all sites): 35.9 ppb</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum single site average: 17.3 ppb</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Range: 12.9 to 19.8 ppb</td>
<td></td>
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</table>

**Free Chlorine Residual:** Chlorine levels are monitored continuously at the water treatment plant and daily at representative points throughout the water distribution system.

- Of the 1,100 free available chlorine samples collected in the distribution system along with water purity samples in 2014, the average free chlorine was 0.40 ppm. The range was <0.01 to 0.87 ppm.

**Lead and Copper:** Lead and copper are monitored every three years in our customers’ homes to assess the amount of corrosion occurring in home plumbing. Homes selected are those with leaded solder and copper pipe. The most recent sampling was in 2014. Sampling will next be conducted in 2017.

- **Lead:** The 90th percentile value of the 37 homes sampled showed lead at the 3 ppb level. The range was <1 to 13 ppb. No sites were above the action level.
- **Copper:** The 90th percentile value of the 37 homes sampled showed copper at the 61 ppb level. The range was <5 to 94 ppb. No sites were above the action level.

**Total and Fecal Coliform Bacteria:** The City samples a minimum of 90 sites in the water distribution system each month for indicator bacteria to ensure the water maintains its purity from the treatment plant to our customers.

- Of the 1,100 samples collected for total and fecal coliform in 2014, none tested positive for total coliform bacteria. In addition, no sample was positive for fecal coliform bacteria in 2014.

**Turbidity:** Turbidity measures the clarity of the water. The City monitors turbidity continuously at the beginning, middle and end of the treatment process*. Turbidity reported for compliance is in the fully treated drinking water in the combined filter effluent.

- Bellingham’s single highest turbidity level for 2014 was 0.13 nephelometric turbidity units (NTU). Bellingham met the 0.3 NTU requirement in 2014 100% of the time.

**Inorganics:** No inorganic substance with a maximum contaminant level (MCL) was detected at or above that level, but detections of three inorganics with an MCL were found at very low levels.

- Barium = 0.007 ppm
- Nitrate + Nitrite = 0.23 ppm
- Nitrate = 0.23 ppm

**Inorganics**

<table>
<thead>
<tr>
<th>2014 Level Detected</th>
<th>EPA Maximum Contaminant Level (MCL) or Action Level (AL)</th>
<th>In Compliance?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barium MCL = 2 ppm</td>
<td><strong>Barium MCL = 2 ppm</strong></td>
<td><strong>YES</strong></td>
</tr>
<tr>
<td>Nitrate MCL = 10 ppm</td>
<td><strong>Nitrate + Nitrite = 10 ppm</strong></td>
<td><strong>YES</strong></td>
</tr>
</tbody>
</table>

*Due to maintenance on the system, from 12 P.M. on 01/16/15 to 08:30 A.M. on 01/20/15 the individual filter effluent turbidity was not measured from four filters when in use. At all times the plant continuously monitored the combined filter effluent turbidity from all filters in use and clearly met all standards. No health risk was expected to occur from this event. As a result procedures were put into place to ensure the plant continuously measures all filter turbidity outputs going forward.*
Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA’s Safe Drinking Water Hotline (1-800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons, such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune-system disorders, some elderly, and infants, can be particularly at risk from infections. These people should seek advice about drinking water from their health-care providers. The EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. Bellingham’s source water is Lake Whatcom on the eastern edge of town. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include:

**Microbial contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

**Inorganic contaminants**, such as salts and metals, which can occur naturally or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, and farming.

**Pesticides and herbicides**, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.

**Organic chemical contaminants**, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.

**Radioactive contaminants**, which can be naturally occurring or the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the Department of Health and EPA prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) and the Washington State Department of Agriculture regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

Elevated levels of lead in drinking water can cause serious health problems, especially for pregnant women and young children. In Bellingham, fortunately, lead is not found in the treated water, but lead in drinking water can come from pipes and faucets in our customers’ homes. The City of Bellingham is responsible for providing high quality drinking water, but cannot control the variety of materials used in customers’ plumbing. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for at least 30 seconds before using the water for drinking or cooking. You can capture this water to use on plants. If you are concerned about lead in your water, you may opt to have your water analyzed by a local laboratory. To learn more about lead in water, go to: [http://water.epa.gov/drink/info/lead](http://water.epa.gov/drink/info/lead).

**Definitions**

**Action Level (AL):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

**Maximum Contaminant Level (MCL):** The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

**Maximum Residual Disinfectant Level (MRDL):** The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants (e.g., chlorine, chloramines, chlorine dioxide).

**Maximum Contaminant Level Goal (MCLG):** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. Environmental Protection Agency.