By Mayor Kelli Linville

A key measure of the health of a city is in its ability to provide essential services. I am proud of the work done each day in such areas as fire, police, and emergency management, in our communications and street infrastructure systems, and in our water and wastewater services. Reports about the failures in Flint, Michigan to provide safe water to its citizens have shocked all of us. It has also shined a light on how important it is to insist on safe water treatment and delivery systems. There were some fundamental deficiencies in Flint -- deficiencies that do not exist in Bellingham.

Providing safe drinking water is looked at like a three-legged stool. The first leg of that stool is the protection of the drinking water source. The second leg is effective water treatment, and the third leg safe delivery of that water to homes and businesses. All three legs are equally important in providing high quality drinking water.

Lake Whatcom, the source of our drinking water, is one of our community’s most precious resources. We are happy to report that through collaboration, hard work and a commitment to improving our county’s primary drinking water reservoir, the Lake Whatcom Management Program is showing success in protecting this valuable community asset. In fact, Bellingham recently won the regional American Water Works Association annual taste test. To learn more about our Lake Whatcom challenges, solutions and programs and how to get involved, please visit our website at www.cob.org/services/environment/lake-whatcom.

The second leg to the safe drinking water stool is effective water treatment. This publication describes steps Bellingham is taking to further improve its water treatment processes—through a new pretreatment step that will be online in 2018.

Fortunately Bellingham doesn’t have the lead water pipes that Flint Michigan has, so our focus to improve our water distribution system includes aggressive replacement of aging water lines, leak detection, and cleaning lines. We also out every day sampling water in the distribution system to assure that your drinking water remains pure and safe from lake to tap.

Respectfully,
Mayor Kelli Linville

Join us Sunday, March 20th at the Fairhaven Village Green anytime between 11 a.m. and 1 p.m.

WALK FOR WATER

Got clean, safe water from the tap whenever you need it? That’s something to be thankful for; Join us for our 8th annual Walk for Water event on Sunday, March 20 to show your appreciation! Any time between 11 a.m. and 1 p.m., you’re invited to participate in a 2.3-mile loop walk from the Fairhaven Village Green to Boulevard Park. At the halfway point, enjoy a water tasting and blind “taste test” of drinking water from five other water suppliers in Whatcom County. Each year the City’s Water Use Efficiency Program sponsors this free event in celebration of the United Nation’s World Water Day. It’s a day to draw attention to the world’s freshwater resources and the importance of their sustainable management. Our 2.3-mile walk symbolizes the distance, and acknowledges the hardship, that millions around the globe endure to get water for their daily needs. This year’s World Water Day theme is “Water and Jobs.” You’ll see signs along the walk with noteworthy factoids, local and global, on this topic. Bonus: The first 100 participants receive a free 20oz stainless steel water bottle. Hope to see you there!

For more information, visit www.cob.org/events
We are excited to announce that this summer, construction begins on a new pretreatment process (Step 1 in the figure to the right) that will purify your drinking water even more. Using pretreatment will also allow us to maximize the use of the existing water treatment plant. The pretreatment process we are adding is called dissolved air floatation (DAF) – it works by saturating the water with millions of tiny air bubbles. These air bubbles float away the algae and solids that can clog filters (Step 2) and that create unwanted disinfection by-products in our treated water. After filtration, water flows into a 16 million gallon reservoir for full disinfection (Step 3) before making its way to your home. For more information visit: www.cob.org/gov/projects/Pages/Public%20Works/pretreatment-ew-180.aspx

Currently at the water treatment plant, coagulant chemicals are added to the water right before it flows through filter beds comprised of anthracite coal and sand. While this in-line method of filtration has served us well for over 40 years, more efficient treatment processes are now available to us that improve our ability to provide high quality drinking water. The addition of the Dissolved Air Floatation system – starting in 2018 – will decrease the organic matter in the water before this water flows through the existing filter beds. Less organic matter in the water means a decrease in the amount of chemicals we need to add to the water during treatment – and will provide us with a more consistent and efficient means of treating water for now and in the future.
Those who know that Bill Evans has been the Chief Operator of Bellingham’s Water Treatment Plant for 27 years aren’t surprised that the City has been honored for the quality of its drinking water for so many years.

In his BTV-10 stint as “Bill Y the Water Guy,” he explained the process of water filtration in fun ways. However, it’s a topic Bill takes seriously - and so does his crew.

“Each member of our operations staff takes utmost care and consideration of every aspect of providing drinking water - covering 400 miles of water mains, 14 storage reservoirs and nine pump stations. That’s why we can provide the great-tasting, award-winning water to our customers!”

Under Bill’s guidance, Bellingham was the first water utility in Washington, one of just 12 nationwide, to win the American Water Works Association (AWWA) 15-year Director’s Award for water treatment excellence.

And in February, the City’s water won AWWA’s annual regional Taste Test, competing against both large municipalities and small water districts for the coveted honor.

We are proud to report that Bill has been recognized for excellence outside of Bellingham. In 2014, the state Department of Health presented him the Lifetime Achievement award for his work to maximize the City’s Water Treatment Plant operation and performance. Congratulations, Bill!

### Detected Substances

<table>
<thead>
<tr>
<th>Substances</th>
<th>2015 Level Detected</th>
<th>EPA Maximum Contaminant Level (MCL) or Action Level (AL)</th>
<th>In Compliance?</th>
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<tbody>
<tr>
<td><strong>Disinfection By-products (DBPs)</strong>: Total Trihalomethanes (THM) and Haloacetic Acids (HAA). THMs and HAA are the most common types of DBPs. The City samples for DBPs at eight sites in the water distribution system each quarter.</td>
<td><strong>THM</strong>: Average (all sites): 41.7 ppb Maximum single site average: 53.0 ppb Range: 16.8 to 79.9 ppb <strong>HAA</strong>: Average (all sites): 17.4 ppb Maximum single site average: 19.7 ppb Range: 8.8 to 24.2 ppb</td>
<td>For each site, the running annual average MCL must be: THM: Below 80 ppb and HAA:Below 60 ppb</td>
<td>YES</td>
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<td><strong>Free Chlorine Residual</strong>: Chlorine levels are monitored continuously at the water treatment plant and daily at representative points throughout the water distribution system.</td>
<td>Of the 1,103 free available chlorine samples collected in the distribution system along with water purity samples in 2015, the average free chlorine was 0.41 ppm. The range was &lt;0.01 to 0.90 ppm.</td>
<td>There is a requirement for a measurable chlorine residual at 95% of all routine monitoring sites each month.</td>
<td>YES</td>
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<tr>
<td><strong>Lead and Copper</strong>: 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.</td>
<td><strong>Lead</strong>: The 90th percentile value of the 37 homes sampled showed lead at the 4 ppb level. The range was &lt;1 to 13 ppb. No sites were above the action level. <strong>Copper</strong>: The 90th percentile value of the 37 homes sampled showed copper at the 64 ppb level. The range was &lt;5 to 94 ppb. No sites were above the action level.</td>
<td>The allowable highest 90th percentile values are: Lead AL: 15 ppb Copper AL: 1300 ppb</td>
<td>YES</td>
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<td><strong>Total and Fecal Coliform Bacteria</strong>: 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.</td>
<td>Of the 1,103 samples collected for total and fecal coliform in 2015, one tested positive for total coliform bacteria. Samples collected at that site the following day (and all other months of the year) were negative for total coliform. No sample was positive for fecal coliform bacteria in 2015.</td>
<td>Allowable highest percentage of total coliform-positive samples per month is 5%. The presence of any fecal coliform in drinking water for two consecutive samples would require public notification within 24 hours.</td>
<td>YES</td>
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<td><strong>Turbidity</strong>: Turbidity measures the clarity of the water. The City measures 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 effluent.</td>
<td>Bellingham’s single highest turbidity level for 2015 was 0.09 nephelometric turbidity units (NTU). Bellingham met the 0.3 NTU requirement in 2015 100% of the time.</td>
<td>Compliance means filtered water turbidity is less than or equal to 0.3 NTU in at least 95% of the measurements made each month and never exceeding 1.0 NTU.</td>
<td>YES</td>
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<td><strong>Inorganics</strong>: No inorganic substance with a maximum contaminant level (MCL) was detected at or above that level, but detections of two inorganics with a MCL were found at very low levels.</td>
<td><strong>Barium</strong>: 0.007 ppm <strong>Nitrate</strong>: 0.26 ppm</td>
<td>Barium MCL = 2 ppm Nitrate MCL = 10 ppm</td>
<td>YES</td>
</tr>
</tbody>
</table>

Where: ppm = parts per million, ppb = parts per billion, MCL = maximum contaminant level, AL = Action Level
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.

**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.