

### CROSS CONNECTION PROGRAM

Protecting Our Water System From Contamination

A cross connection is a connection between a water pipe and a source of contamination. Examples of cross connections include hose ends submerged in pools, hot tubs or buckets, irrigation systems and most hose-end sprayer applications. Cross connections are extremely dangerous because they provide opportunities for contaminated fluids to be pulled back into the water system.

To protect our water supply, avoid using hose-end sprayers and maintain an air gap by keeping the hose end above the water surface when filling containers. Irrigation systems are required to have a backflow assembly. Backflow assemblies require a plumbing permit, must be inspected by a cross connection specialist, and must be tested by a certified tester when installed, and yearly thereafter. For more information or a list of certified testers, see the City’s website at www.auburnwa.gov/services/utilities/water.htm or call the Water Division at 253-931-3048.

### WATER USE EFFICIENCY

The main components of the City of Auburn Water Use Efficiency (WUE) program are managing the water distribution system to minimize water loss, and encouraging responsible use of water by our customers.

Water loss is the difference between the total water produced and the water used by our customers, presented here as a percentage of water produced. The City of Auburn Water Utility goal since 1999 has been to maintain water loss at or below 10 percent. In accordance with the Water Use Efficiency reporting requirements, the three year average for the years up to and including 2016 was 5.1 percent. In an effort to limit water loss, the Utility performs annual system leak detection and repair; tests production and service meters, calibrating or replacing them as required; and issues permits for water withdrawal from hydrants.

Responsible water use by our customers is promoted by the Utility through educational programs for school children and homeowners. Quantifying the benefit of educational programs and corresponding behavioral changes is difficult, but reductions in water use and/or waste can have a significant impact on the amount of water used as a whole. The City of Auburn is committed to efficiently managing the water distribution system and encourages you to use water wisely.

The City’s Water Use Efficiency Annual Performance Report and other information regarding Auburn’s Water Use Efficiency program are available on the City of Auburn’s website at www.auburnwa.gov/services/utilities/water.htm.

### FLUORIDE

The City of Auburn does not add fluoride to your drinking water. In 2016, the City purchased water from Tacoma Public Utilities which adds fluoride to their treated water. This water mixes with the City of Auburn’s water and depending on your location in the water system you may receive fluoridated water. Fluoride levels present in Auburn’s water range from 0.02 - 1.77 ppm. If you have questions about fluoride for dental use, please consult with your doctor or dentist. For more information on fluoride in drinking water, visit the Environmental Protection Agency (EPA) website at www.epa.gov.

### DEFINITIONS

- **MCCLG**: Maximum Contaminant Level Goal
  - The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
- **MRDL**: Maximum Residual Disinfectant Level
  - The highest level of a disinfectant allowed in drinking water. Disinfectants are added to drinking water to destroy or remove microbial contaminants.
- **MCCL**: Maximum Contaminant Level
  - The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLs are set as close to the MCLG as feasible using the best available treatment technology.
- **MRDLG**: Maximum Residual Disinfectant Goal
  - The level of a drinking water disinfectant below which there is no known or expected risk to health.
- **AL**: Action Level
  - The concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.
- **TT**: Treatment Technique
  - Turbidity is a measurement of the cloudiness of the water and has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth.

### CROSS CONNECTIONS

- **VOLATILE ORGANIC SUBSTANCE**
  - Halogenated Aromatics (ppb)
    - NA
    - 60
    - ND - 6.0
  - Total Trihalomethanes (ppb)
    - NA
    - 80
    - 2.2 - 21.1

### OTHER MONITORED SUBSTANCE

- **Chloride (ppm)**
  - None
  - 250
  - 3 - 8
- **Sulfate (ppm)**
  - None
  - 250
  - 6 - 14
- **Chlorine Residual (ppm)**
  - 4.0
  - (MRDL)
  - 4 (MRDL)
  - 0.64
  - 0.37 - 0.89
- **Total Coliform Bacteria**
  - 0
  - Must not be detected in more than 5% of samples collected in any month

### UNIT DESCRIPTION

- **ppm**: parts per million, or micrograms per liter (μg/L)
- **μg/L**: micrograms per liter (μg/L)

### REQUIRED HEALTH INFORMATION FROM THE EPA

#### HEALTH ISSUES

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised 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. Environmental Protection Agency (EPA)/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the EPA’s Safe Water Drinking Hotline at 800-426-4791.

#### CONTAMINANTS AND REGULATIONS

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 at 800-426-4791. The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. 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. Microbiological contaminants, such as viruses and bacteria, can come from septic systems, livestock and wildlife. Inorganic contaminants, such as salts and metals, can be naturally occurring or result from urban stormwater run-off, septic systems or fertilizer use. Pesticides and herbicides may come from a variety of sources such as agriculture, urban stormwater run-off and residential uses. Organic chemical contaminants, including synthetic and volatile organic chemicals, are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater run-off, and septic systems. Radioactive contaminants can be naturally occurring or be the result of oil and gas production and mining activities. In order to ensure that tap water is safe to drink, EPA establishes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations set limits for contaminants in bottled water that are intended to provide similar protection for public health.

### ADDITIONAL INFORMATION

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<td><strong>INORGANIC SUBSTANCE</strong></td>
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<tr>
<td><strong>Arsenic (ppb)</strong></td>
<td>0</td>
<td>10</td>
<td>ND - 2</td>
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<tr>
<td><strong>Nitrate (ppm)</strong></td>
<td>10</td>
<td>10</td>
<td>0.3 - 3.5</td>
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<tr>
<td><strong>Fluoride (ppm)</strong></td>
<td>4</td>
<td>6.0</td>
<td>0.024 - 0.041</td>
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<tr>
<td><strong>Turbidity (NTU)</strong></td>
<td>NA</td>
<td>TT</td>
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</tr>
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</table>

- **Soil runoff**
- **Erosions of natural deposits**
- **Natural deposits, fertilizer, septic tanks**
- **Treatment additive**

### UNIT DESCRIPTION

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- **μg/L**: micrograms per liter (μg/L)
THE AUBURN WATER UTILITY IS PROUD TO PRESENT YOU WITH OUR 2016 WATER QUALITY REPORT.

This report is a snapshot of 2016 water quality. The test results in this report show that Auburn's water meets or surpasses all federal and state standards for public drinking water. Auburn's water comes from a combination of wells drawing water from deep below the city, springs located near the walls of the valley and surface water from Tacoma Public Utilities. Water from the valley wells, springs and Tacoma is distributed to the entire Auburn service area. Additional wells are located in Lakeland Hills and serve Auburn customers in the Lakeland Hills neighborhood.

AUBURN WATER UTILITY
2016 WATER QUALITY REPORT

Auburn gets most of its water from 7 wells and 2 springs located in the Valley. Three additional wells in Lakeland Hills provide water for Auburn customers in that area. Auburn also has connections to the regional water supply provided by Tacoma. Water from melted snowpack is stored behind the Howard Hansen Dam and treated and conveyed to Tacoma by a 60-inch diameter pipe. In 2016, Auburn supplemented its supply with water purchased from Tacoma. Having groundwater and surface water (purchased water) gives Auburn both reliability and flexibility in terms of its water supply.

Water from wells 290 to 750 feet in depth gets pumped at rates of 180 to 3,500 gallons per minute (gpm). The Springs could flow at rates up to 3,800 gpm.

Upgrades completed in 2016 at Well 1 and Well 4 improve the chlorination systems and provide generators for back-up power at these facilities.

Water quality is generally very good and requires minimal treatment. The water is soft to moderately hard. Water from wells and springs is aerated for pH adjustment through 2 corrosion control facilities and then chlorine is added for disinfection. Auburn does not add fluoride to its water; however, water purchased from Tacoma has fluoride added. Fluoride is naturally occurring in groundwater at levels up to 0.2 parts per million (ppm). In 2016, water received from Tacoma has fluoride levels range from 0.02 to 1.77 ppm. The amount of fluoride in the water depends on the location within the distribution system. Visit the City's website at www.auburnwa.gov/services/utilities/water.htm for the latest map showing fluoride levels throughout the City.

Although most wells and springs are in the Valley, water storage tanks/reservoirs are generally located at the high point on the hills. Auburn has 8 reservoirs with a total storage capacity of 15.8 million gallons. Improvements completed in 2016 at Reservoir 5 in Lakeland Hills added a new coat of paint to its exterior and additional safety features.

Auburn has 9 pump stations that pump water from the valley up to the hills to the reservoirs, and boost it to higher elevations and pressure on the hills. Auburn's newest pump station is located near the Auburn Academy.

About 275 miles of water main ranging from 4” to 30” in diameter deliver water to homes and businesses throughout Auburn. A portion of Auburn's distribution system is more than 50 years old. Most of these pipes are made of cast iron and are susceptible to breakage with age. Auburn has an ongoing program of evaluating and upgrading its water mains to ensure its distribution system is reliable and well maintained.