Drinking Water Quality Report for 2012

Clean water is essential to the health and well-being of our community. The City of Albany places great importance on delivering quality water daily to every tap. Our goal is to provide safe, high quality drinking water to every customer. The City staff is responsible for testing water quality throughout the distribution system to make sure it meets or exceeds regulatory standards and customer expectations. These results are reported to the proper authorities. The Oregon Health Authority’s Drinking Water Program is responsible for promoting compliance with drinking water standards set by the US Environmental Protection Agency.

**Definitions & Terms in the Monitoring Results Table**

**AL:** Action Level; Concentration of a contaminant, when exceeded, triggers treatment for the water system to follow.

**Detected Level:** Refers to the highest level detected, unless otherwise indicated.

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

**MCLG:** 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.

**n/a:** Not Applicable

**NTU:** Nephelometric Turbidity Unit: The measure of the cloudiness of the water. We measure it because it is a good indicator of water quality and turbidity can interfere with disinfection.

**ppb:** Unit of measurement; parts per billion or micrograms per liter. For example, 1 ppb is one second out of 32 years or one penny in $10,000,000.

**ppm:** Unit of measurement; parts per million or milligrams per liter. For example, 1 ppm is one second out of 12 days or one penny in $10,000.

**Range:** The lowest amount (minimum) of a contaminant detected and the highest amount (maximum) detected during a sample period.

**TT:** Treatment Technique; A required process intended to reduce the level of a contaminant in drinking water.

**Turbidity:** A measure of water clarity. How much the material suspended in water decreases the passage of light through the water.

---

### Disinfection Byproducts

The detected levels equal the average for disinfection byproducts. The range is determined by individual tests at single sites. THMs and HAAs are potential carcinogens. If they exceed the MCL they may cause liver, spleen, kidney and central nervous system problems. Albany/Millersburg samples 7 sites quarterly; Dumbeck Lane samples 1 site annually, as required.

<table>
<thead>
<tr>
<th>REGULATED CONTAMINANTS</th>
<th>Unit</th>
<th>MCL</th>
<th>MCLG</th>
<th>Detected Level</th>
<th>Range (Low-High)</th>
<th>Major Sources/Sample Date</th>
<th>Violation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albany/Millersburg TTHM (Total Trihalomethanes)</td>
<td>ppb</td>
<td>80</td>
<td>n/a</td>
<td>31.81 (avg.)</td>
<td>14.9 - 70.7</td>
<td>Byproduct of drinking water disinfection</td>
<td>No</td>
</tr>
<tr>
<td>Albany/Millersburg HAAS (Total Halocetic Acid)</td>
<td>ppb</td>
<td>60</td>
<td>n/a</td>
<td>19.45 (avg.)</td>
<td>10.9 - 34.7</td>
<td>Byproduct of drinking water disinfection</td>
<td>No</td>
</tr>
<tr>
<td>Dumbeck Lane TTHM</td>
<td>ppb</td>
<td>80</td>
<td>n/a</td>
<td>44.80</td>
<td>n/a</td>
<td>September 2012</td>
<td>No</td>
</tr>
<tr>
<td>Dumbeck Lane HAAS</td>
<td>ppb</td>
<td>60</td>
<td>n/a</td>
<td>19.10</td>
<td>n/a</td>
<td>September 2012</td>
<td>No</td>
</tr>
<tr>
<td>Total Organic Carbon (TOC)</td>
<td>ppm</td>
<td>TT*</td>
<td>n/a</td>
<td>0.58 (avg.)</td>
<td>0.46 - 0.72</td>
<td>Naturally present in the environment/ Monthly 2012</td>
<td>No</td>
</tr>
<tr>
<td>Albany/Millersburg Total Chlorine Residual</td>
<td>ppm</td>
<td>4* MRLD</td>
<td>4* MRLDG</td>
<td>0.78 (avg.)</td>
<td>0.71 - 1.27</td>
<td>Disinfection used to control microbes; Samples taken daily</td>
<td>No</td>
</tr>
<tr>
<td>Dumbeck Lane Total Chlorine Residual</td>
<td>ppm</td>
<td>4* MRLD</td>
<td>4* MRLDG</td>
<td>0.42 (avg.)</td>
<td>0.17 - 0.70</td>
<td>Disinfection used to control microbes; Samples taken daily</td>
<td>No</td>
</tr>
</tbody>
</table>

### Turbidity

Turbidity is monitored daily as a good indicator of effectiveness of our filtration system.

<table>
<thead>
<tr>
<th>Turbidity</th>
<th>Unit</th>
<th>MCL</th>
<th>MCLG</th>
<th>Detected Level</th>
<th>Range (Low-High)</th>
<th>Major Sources/Sample Date</th>
<th>Violation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrogen</td>
<td>NTU</td>
<td>n/a</td>
<td>n/a</td>
<td>0.02 (avg.)</td>
<td>.01 - 0.17</td>
<td>Soil runoff / Tested daily in 2012</td>
<td>No</td>
</tr>
</tbody>
</table>

### INORGANIC CONTAMINANTS

**Minerals:** The city adds fluoride during treatment and samples daily to make sure it is at a safe level.

<table>
<thead>
<tr>
<th>Fluoride</th>
<th>Unit</th>
<th>MCL</th>
<th>MCLG</th>
<th>Detected Level</th>
<th>Range (Low-High)</th>
<th>Major Sources/Sample Date</th>
<th>Violation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ppm</td>
<td>4</td>
<td>4</td>
<td>0.72 (avg.)</td>
<td>0.64 - 0.78</td>
<td>Additive that promotes strong teeth</td>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

### Lead Compliance

Compliance is determined by 90% of the samples having lead levels less than or equal to the Action Level (AL) of 15 ppb. There were 40 samples taken at consumers’ taps and none exceeded the AL.

<table>
<thead>
<tr>
<th>Albany/Millersburg &amp; Dumbeck Lane</th>
<th>Unit</th>
<th>Test Date</th>
<th>Goal</th>
<th>Action Level (AL)</th>
<th>90th Percentile</th>
<th>Source</th>
<th>Violation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead</td>
<td>ppb</td>
<td>Aug 2012</td>
<td>0</td>
<td>15.00</td>
<td>0.45</td>
<td>Corrosion of household plumbing; Erosion of natural deposits</td>
<td>No</td>
</tr>
</tbody>
</table>

---

*Not all contaminants have Maximum Contaminant Levels (MCLs) or Goals (MCLGs); some have Maximum Residual Disinfectant Levels (MRDLs) or Goals (MRDLGs), Treatment Techniques (TT) or Action Levels (AL).*
Important Health Information

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 Environmental Protection Agency’s Safe Drinking Water Hotline at 1-800-426-4791. Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons 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 of infections.

These people should seek advice about drinking water from their health care providers. EPA/Centers for Disease Control (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 at 1-800-426-4791.

Where do we get our drinking water?

Albany, Millersburg and Dumbeck Lane receive their drinking water from the Santiam River through one of the two water treatment plants.

The Albany-Millersburg treatment plant uses membrane technology to filter the water. This plant is designed to produce up to 16 million gallons of treated water per day.

The Vine Street treatment plant uses conventional treatment and receives water from a separate intake. This plant is designed to produce up to 16 million gallons of treated water per day.

The water distribution system consists of seven reservoirs, six pumping stations and about 300 miles of pipeline that serve Albany, Millersburg and Dumbeck Lane.

The effect of lead in drinking water cause serious health problems, especially for pregnant women and young children.

Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of Albany is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components.

When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking.

If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods and steps you can take to minimize exposure is available from the federal Environmental Protection Agency at www.epa.gov/safewater/lead.

Corrosion Issues

The City of Albany Water Distribution Division started a new program this year to help deal with corrosion issues that the city has encountered in the past. A Cathodic Protection System uses methods to protect pipelines from corrosion and possible leaks due to corrosion. Cathodic protection is one of the most widely used forms of corrosion control. It is adaptable to many forms of metallic corrosion and when properly used, provides highly effective and economical protection from corrosion damage.

The city purchased Cathodic Protection equipment to begin testing soils in town. Completing a soil analysis before starting a capital improvement project or the replacement of water distribution mainline can help in the planning and development of future water distribution projects. The Cathodic Protection equipment purchased by the city allows maintenance personnel to complete field analysis of soils. The analysis is completed using a soil box, soil resistivity meter, and other equipment in a particular area of the city that is being excavated. The soil box equipment provides for quick and accurate measurement of resistivity of a sample of soil, water, or other electrolyte.

The City of Albany tests the soil resistivity, which is a measure of how much the soil resists the flow of electricity. Soil resistivity is one of the driving factors determining the corrosiveness of soil. The soil resistivity value is a critical factor in the design of a water distribution pipeline project due to a soil’s moisture content, temperature and chemical makeup. The Cathodic Protection equipment used in the field can provide city engineers and planners a fast and simple reading at multiple soil depths.

The electrical resistivity of soil can affect the rate of galvanic corrosion of metallic structures in contact with the soil. Higher moisture content or increased electrolyte concentration can lower resistivity and increase conductivity, thereby increasing the rate of corrosion.

The American Water Works Association (AWWA) estimates that it will cost US water utilities $325 billion over the next 20 years to upgrade water distribution systems that are corroding. A large number of parameters affect pipe corrosion, including water quality and composition, flow conditions, biological activity, and corrosion inhibitors. Corrosion of iron pipes in a distribution system can cause three distinct but related problems. First, pipe mass is lost through oxidation to soluble iron species or iron-bearing scale. Second, the scale can accumulate as large tubercles that increase head loss and decrease water capacity. Finally, the release of soluble or particulate iron corrosion-byproducts to the water decreases its aesthetic quality and often leads to consumer complaints of “red water” at the tap.

The water industry must be concerned with all three of these aspects of corrosion. Life expectancy of unprotected ductile iron pipes depends on the corrosiveness of soil present and tends to be shorter where soil is highly corrosive. Engineers and water authorities in the United States are divided on the use of different coatings, pipe materials, and cathodic protection. Mixed results have been found for all methods of protection; however this may be due to the impact of variations in local soil corrosiveness and temperature or by damage occurring during installation, which can impact effectiveness of protective coatings.

The City of Albany will continue to progressively test soils throughout town as a proactive measure that assists with pipeline maintenance and installation.

Public Participation

The City of Albany Public Works Department invites you to join them at City Council meetings held on the second and fourth Wednesdays of each month at 7:15 pm in City Hall, 333 Broadalbin Street SW.

Albany’s Water Superintendent is Jeff Kinney. He can be reached at 541-917-7628 or by e-mail: jeff.kinney@cityofalbany.net.

Dumbeck Lane Water District’s contact is Rod Lavedure. He can be reached at 541-619-6314.