



## City of Toledo

# 2007 Water Quality Report

### *Quality on Tap*

Once again, we're pleased to present this year's Annual Water Quality Report. This report is designed to inform you about the quality of water and services we deliver to Toledo residents every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water. This report is also a requirement of the 1996 Safe Drinking Water Act and is designed to increase public awareness of drinking water issues and to serve as a method for customers to make informed decisions regarding their drinking water. If, after reading this report, you have questions or would like more information, feel free to contact Bob Edenfield or Linda Hughes at the Water Treatment Plant at 541-336-2610, or Adam Denlinger at 336-2247 ext 207.

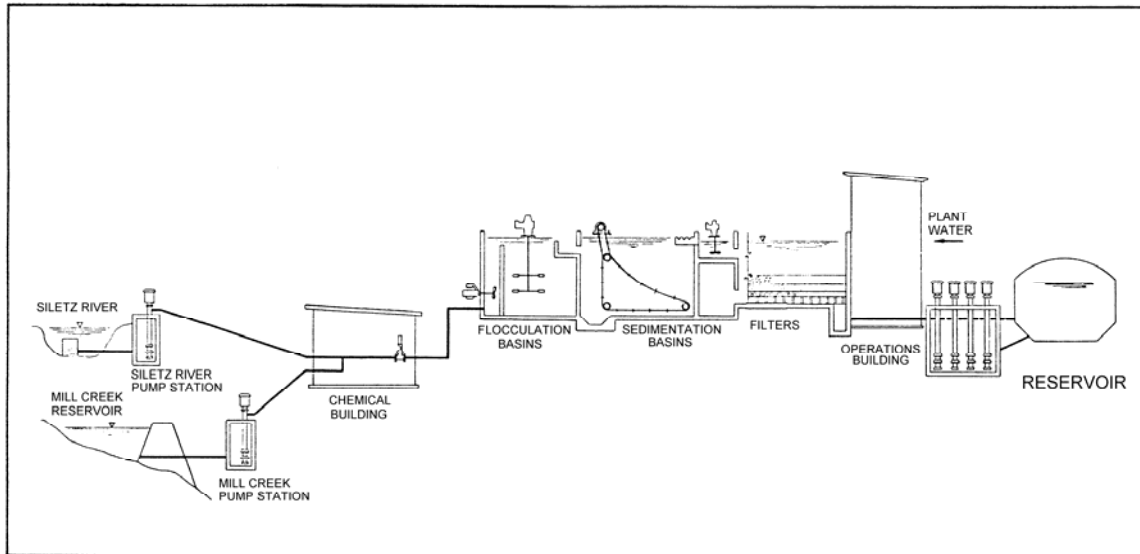
### **Where Do We Get Our Water?**

The City of Toledo has two sources of surface water. The City has an impoundment on Mill Creek, a tributary to the Yaquina River. We also have water rights on the Siletz River with our Point of Diversion near Camp 12. The City owns 4 square miles of the Mill Creek watershed with the remainder on Siuslaw National Forestland. The Siletz watershed is very large and is under private ownership and State and Federal ownership. We use water from the Mill Creek impoundment in the winter months and the Siletz source from mid May to October.

The City worked with the Department of Environmental Quality and Oregon Health Division to complete our source water assessment. The source water assessment will outline the watersheds we receive our raw water from, along with identifying and an inventory of significant potential threats.

### **How Is Our Water Treated?**

The Water Treatment Plant (WTP) is located in Toledo on Reservoir Road at the 300-foot elevation level. The WTP produced 350 million gallons of high quality water in 2008.



City of Toledo Water Treatment Plant

The raw water that we use is surface water and it must be treated, to remove impurities and disease causing organisms, before we can drink or utilize the water. The City of Toledo uses a chemical flocculation and rapid sand filter technique to treat water. Alum and lime are added at this stage too. Alum acts as a flocculent, meaning that dirt particles and impurities cling to the alum molecules and settle out in the sedimentation basins or are filtered out in the filters. The lime is for an alkalinity source. Without the proper alkalinity, alum will not work as a flocculent. After flocculation, the water goes through a sand and anthracite filter. Then, after filtration, the water is disinfected and the pH is adjusted. The finished water pH is kept between 7.3 and 7.6 for corrosion control. If you are interested in more detail about how the water is treated, you can arrange a tour of the plant by calling 541-336-2610.

## Water Quality Monitoring

The City of Toledo water utility routinely monitors for contaminants in your drinking water according to Federal and State laws. The following tables show the results of our monitoring for the period of January 1<sup>st</sup> to December 31<sup>st</sup>, 2007. All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. It's important to remember that the presence of these contaminants does not necessarily pose a health risk.

The data in the following tables are derived from 2005-2007 compliance period. It is the most current data available to the City. The City currently has a waiver for Nitrate testing, meaning that testing is done once per year instead of quarterly. The City also is not required to test for Inorganic Chemicals until the year 2014.

In this table you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

## Glossary

**Non-Detects (ND)** - laboratory analysis indicates that the contaminant is not present.

**Parts per million (ppm) or Milligrams per liter (mg/l)** - one part per million corresponds to one minute in two years or a single penny in \$10,000.

**Action Level** - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

**Treatment Technique (TT)** - A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

**MCL - The Maximum Allowed Level**, "MCL" is 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 Contaminant Level Goal** - The "Goal" (MCLG) is 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.

**Maximum Residual Disinfectant Goal (MRDLG)** - The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

**Hardness** – Hardness is an indication of the amount of dissolved minerals in water. Toledo water has one grain of hardness. 0-9 grains is considered soft water.

**Inorganic Chemicals** – Examples include things like metals, minerals and salts.

**NTU** – Unit of measurement used to describe water clarity. The smaller the number the clearer the water. 0.025 NTU is clearer than 1.0 NTU. Oregon mandates that water must be 0.3 NTU or lower.

**pH** – pH indicates whether water is acidic or basic.

**Primary Standards** – Legally enforceable standards that apply to public water systems. Primary standards limit the levels of specific contaminants that can adversely affect public health and are known or are anticipated to occur in water.

**SOC** – Synthetic Organic Chemicals – Examples include herbicides and insecticides.

**Total Coliform** – A group of bacteria that are naturally occurring in the environment and are used as an indicator that other, potentially harmful bacteria, may be present.

**Turbidity** – Turbidity indicates how cloudy the water is. Turbidity is measured in NTUs.

**VOC** – Volatile Organic Chemicals. Examples are things like petroleum-based chemicals and dry cleaning solvents.

## INORGANIC CHEMICALS MILL CREEK AND SILETZ RIVER WATER SOURCE

These substances were tested for in 2007 and detected.

Mill Creek						
Contaminant	Meets Regs?	Level Detection	Unit Measurement	MCLG	MCL	Likely source of contamination
Nitrate (as Nitrogen)	Yes	1.1	mg/L	10	10	Erosion of natural deposits
Sodium*	Yes	12.3**	mg/L	20 <sup>2</sup>	20 <sup>2</sup>	
Siletz River						
Contaminant	Meets Regs?	Level Detection	Unit Measurement	MCLG	MCL	Likely source of contamination
Nitrate (as Nitrogen)	Yes	ND	mg/L	10	10	Erosion of natural deposits
Sodium*	Yes	10.9**	mg/L	20 <sup>2</sup>	20 <sup>2</sup>	

\* No federal guidance has been established; persons on sodium-restricted diets may wish to discuss the level with their physician.

\*\* 2005 detection levels. Testing for sodium is done once every nine years and the next test will be performed in 2014.

Toledo's water is tested for contaminants in the distribution system as well. These contaminants are Total Coliform, Total Trihalomethanes, Lead and Copper.

Parameter	Unit Measurement	Measured Level	MCL	Likely Source	Meet Standards
Trihalomethanes	mg/L	0.0153	.080	By-product of naturally occurring organics and chlorine	Yes
Haloacetic acid	mg/L	0.0069	.060		Yes
Turbidity	NTU	Annual Average: 0.030 Highest Single Value: 0.20	0.3	Soil Erosion	Yes

### TOTAL COLIFORM

Toledo's water is tested monthly for total coliform. No positive results for bacterial contamination reported in 2007.

### ASBESTOS

Toledo's Water was tested for Asbestos in 2004 and none was detected. The City is not required to test for Asbestos until 2013.

## LEAD AND COPPER

Lead and Copper are both naturally occurring metals. Both have been used to make household plumbing fixtures for many years, although Congress banned the installation of lead solder, pipes and fixtures in 1986. The two contaminants get into drinking water when water reacts with the metals in the pipes and fixtures. This is more likely to happen when water sits in pipes for more than a few hours. When the level of lead or copper reaches the action level in 10% of the homes sampled, the water provider must begin certain water treatment steps.

Lead and Copper tests were done in fall of 2006. Next test period is 2009.

LEAD AND COPPER TEST RESULTS 2007						
Parameter	MCL	MCLG	Maximum Reported Value	Range	Likely Source	Meets Regs
Copper	90% of homes tested must have copper levels less than 1.3 ppm	0 mg/L	90% of homes tested had copper levels less than 0.16 ppm	None of the 20 homes tested had copper levels above 1.3 ppm	Household Plumbing systems	Yes
Lead	90% of homes tested must have lead levels less than 15 ppb	0 mg/L	90% of homes tested had non-detect lead levels	None of the 20 homes tested had lead levels above 15 ppb	Household Plumbing systems	Yes

Secondary contaminants do not have health impacts, and therefore, do not have MCL's. Secondary parameters describe non-health related characteristics of drinking water.

Unregulated Volatile Organics (VOC)	Reporting Limit	Results		Units
		Mill Creek	Siletz River	
Bromodichlormethane	0.0005	0.0015	0.0024	mg/L
Chlorodibromomethane	0.0005	0.0013	ND	mg/L
Chloroform	0.0005	0.0010	0.0038	mg/L

As you can see by the tables, our system had no violations. We're proud that your drinking water meets or exceeds all Federal and State requirements. We have learned through our monitoring and testing that some contaminants have been detected well below the MCL for each substance.

The year 2005 marked the beginning of a new cycle of testing as required by Federal and State laws. We tested the Siletz source and the Mill Creek source for Volatile Organic Chemicals (VOCs), Arsenic and Nitrate.

A source water protection survey was completed by the DEQ in 2002. A brochure explaining the process, reasons and results for the survey can be obtained from City Hall and the full report is available at City Hall as well.

**Hhhhhhh**



Some people may be more vulnerable to contaminants in drinking water than the general population. Immune-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. EPA/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

Stored Emergency Water: Every household is responsible for its own disaster preparedness and should have an emergency supply of potable water. A good rule of thumb: Each household should store a minimum of one gallon of water per person per day for 14 days. Households with animals should add adequate stored water supplies for their animals. The American Red Cross has detailed information about potable water storage at their website [www.redcross.org](http://www.redcross.org). An adequate emergency supply of drinking water in each household is a tremendous asset to the water system. Operators encourage every household to properly store enough potable water to meet their emergency needs.



A reminder: Water is a valuable and precious resource. It is essential to all life. Of all of the earth's water, 97% is in the oceans, 2% is frozen, and only 1% is available for drinking water. Water conservation benefits us all.



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