

**CITY OF TROY**  
Public Water System ID# 2290041  
**WATER QUALITY REPORT**

**JULY 2009**

We're pleased to present to you this years Water Quality Report. This report is designed to inform you about the quality and services we deliver to you everyday. Our goal is to provide you with a safe and dependable supply of drinking water.

During recent years we have sampled for over 80 different chemicals and have found very little contamination. Contamination is anything other than pure water. We sample total coliform bacteria monthly as an indicator of microorganisms that should not be present. The table below lists all the drinking water contaminants that we detected during the 2009 calendar year or in our most recent test noted. 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 a health risk. More information about contaminants and potential health effects can be obtained by calling our office at 835-2742 or the U.S. Environmental Protection Agency's (EPA's) Safe Drinking Water Hotline (1-800-436-4791)

Your drinking water sources are both from groundwater and surface water. The City has two active groundwater wells, Duthie Park Well and Big Meadow Well, and a slow sand treatment plant that treats water from Big Meadow Creek.

**DEFINITIONS**

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.

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.

Parts per billion (ppb) or micrograms per liter ( $\mu\text{g/L}$ ) - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

Picocuries per liter (*pCi/L*) - Picocuries per liter is a measure of radioactivity in water.

Running Annual Average (RAA) - The average of sample analytical results for samples taken during the previous four calendar quarters

Maximum Contaminant Level - The "maximum Allowed" (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.

NTU: Nephelometric Turbidity Unit- is a standard unit to measure water clarity.

Initial Distribution System Evaluation (IDSE): IDSE is an important part of the Stage 2 Disinfection By-Products Rule (DBPR). The IDSE is a one-time study conducted by some water systems, providing disinfection or chlorination, to identify distribution system locations with concentrations of trihalomethanes (THMs) and haloacetic acids (HAAs). Water systems will use results from the IDSE, in conjunction with their Stage 1 DBPR compliance monitoring data, to select monitoring locations for Stage 2 DBPR. Not all water systems were required to perform an IDSE.

## TEST RESULTS

<b>-Regulated</b>	<b>MCLG</b>	<b>MCL</b>	<b>Our Water</b>	<b>Sample date</b>	<b>Violation</b>	<b>Typical source of contamination</b>
Total coli form Bacteria	0	2	0	monthly	yes	Naturally present in the environment and are used as an indicator that other potentially-harmful bacteria may be present.
Nitrate as N (ppm)						
Duthie Park Well	10	10	.15	12/08	yes	Runoff from fertilizer use. leaching from septic tanks, sewage, Erosion of natural deposits
Big Meadow Well	10	10	2.1	12/08	yes	
Lead (ppb)	0	15	.4	12/07	no	Corrosion of household plumbing systems Erosion of natural deposits
Copper (ppm)	1.3	1.3	.695	12/07	no	Corrosion of household plumbing systems Erosion of natural deposits. Leaching from wood preservatives.
Alpha/Radiation (pCi/L)	0	15	0.4	09/98	no	Erosion of natural deposits
SSF	0	15	0.1	8/2002	no	
Duthie Park Well	0	15	6.0	8/2002	no	
Big Meadow Well	0	15	0.3	8/2002	no	
Fluoride (ppm)	4	4	.16	2/2009	no	Erosion of natural deposits. Water additive which promotes strong teeth. Discharge from fertilizer and aluminum factories.
Barium (ppb)	2	2	0.03	11/2001	no	Discharge of drilling wastes. Discharge from metal refineries. Erosion of natural deposits.
Chromium (ppb)	100	100	2	11/97	no	Discharge from steel and pulp mills. Erosion of natural deposits.
Turbidity (ntu)	N/A	5	1.0	daily	no	Natural Erosion
	TT	100%	78%		<b>*no</b>	

### **-Disinfection Byproducts (µg/L)**

	<b>MCL</b>	<b>Range (high-low)</b>	<b>RAA</b>	<b>Typical Sources</b>
Total Trihalomethanes (TTHMs)	80	38.4 - 19.3	57.7	By-product of drinking water disinfection
Haloacetic Acids (HAA5s)	60	3.81 - 0	1.9	
IDSE TTHMs	80	34.4-29.7	32.0	
IDSE HAA5s	60	18.1-4.68	22.7	

\*All of the City of Troy's surface water is treated by our slow sand filtration plant and disinfected. Slow sand treatment processes are required to have less than 1 NTU 95% of the time. Our NTU's range from .2 to 1.0 during the year. However, during the year treated water turbidity levels sometimes exceed 1.0 NTU in greater than 5% of samples (collected daily). On a case-by-case basis the Idaho Department of Environmental Quality has approved alternative higher turbidity limits for water treated by our slow sand filter, based on the determination that there is no significant interference with disinfection at the higher turbidity level. The City of

Troy has done numerous bacteriological tests during high turbidity periods, in addition to our monthly-required tests. Our slow sand filter is removing 100% of coliform bacteria before our disinfection process. Our disinfection process exceeds State and Federal requirements.

### **Compliance Violations**

The City incurred four failure to monitor (FTM) violations in 2009. These FTM violations were for disinfection byproducts (DBPs, Total Trihalomethanes and Haloacetic acids), source water *E. coli* bacteria, monthly total coliform bacteria and monthly distribution system chlorine residual and Nitrates and Arsenic.

- The City monitors for DBPs quarterly, however, in the January-March and October-December monitoring quarter these samples were not collected. All required DBP sample since this violation was incurred have been collected and are below the MCL.
- In the month of November the City incurred a violation for failing to monitor for source water *E. Coli* bacteria from Big Meadow creek, in a six-week period, as part of the Long Term 2 Enhanced Surface Water Rule. As part of the Rule the City is required to collect source water samples for *E. Coli* once every two weeks for one year. Water samples have been collected since the violation was incurred and are well within the levels that determine our treatment processes are adequate to protect against *Cryptosporidium* bacteria.
- During November, a monthly total coliform sample was not collected, as well as a chlorine residual from the distribution system.
- The City incurred a violation for not monitoring for Nitrates and arsenic annually.

**TT-Treatment Techniques** are required processes intended to reduce the level of a contaminant in drinking water. Turbidity is a measurement of cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites.

**Sources of drinking water**, both tap water and bottled water originates as surface water from rivers and lakes or as ground water from springs and wells. As water travels over the surface of land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material. Water picks up wastes from both human and animal activities. Surface water must be carefully filtered and disinfected to remove bacteria, viruses, and protozoa. Ground water is usually filtered naturally.

**Your drinking water comes ground water and surface water.** We have 2 wells; they are located in Duthie Park and on Big Meadow road, north of McKeehan road. Your wells are only marginal producers. They produce only about 20% of our water. The other 80% of your water comes from surface water. Your surface water comes from the Big Meadow drainage and is stored in an 8.4 million gallon reservoir located on Moscow Mountain. The water is transported through a pipeline to a slow sand filtration water treatment plant located at Big Meadow road and Umbarger road. After treatment, the water is pumped approximately 3 miles to town.

**EPA ensures that tap water is safe** to drink by writing regulations that limits both natural and man made contaminants. We treat our water according to both Idaho and EPA's regulations. Interstate bottled water is regulated by the U.S. Food and Drug Administration.

### **Contaminants that may be present include:**

*Microbial contaminants*, such as bacterial, viruses, and protozoa are very small living creatures that may be natural and harmless, or harmful if originating from septic systems, agricultural livestock operations or wildlife.

*Inorganic compounds*, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial, or domestic wastewater discharges, oil and gas production, mining, or farming.

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

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

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

#### **Source Water Assessment:**

A source water assessment for all of the Cities' sources potential risk to contamination is available online at the following website:

<http://www.deq.idaho.gov/water/SWARReports/InternetQuery.cfm>, or available upon request from the city.

#### **Health information**

**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. EPA/Centers for Disease Control and Prevention (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 or <http://www.epa.gov/safewater/hotline/>.

**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 Water Hotline at 1-800-426-4791 or <http://www.epa.gov/safewater/hotline/>.

#### **Lead informational statement (Health effects and ways to reduce exposure)**

If present, elevated levels of lead can 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 Troy 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 drinking 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 Safe Water Hotline or at <http://www.epa.gov/safewater/lead>.

**Our City Council meets:** the 2<sup>nd</sup> and 4<sup>th</sup> Wednesday of each month at City Hall at 5:00 PM. If you have any questions please call City Clerk at 835-2741.