



City of Marysville 2012 Water Quality Report

- [All federal and state standards met or exceeded in 2012](#)

The City of Marysville Division of Water is able to report that we have a current, unconditioned license to operate our water system and all federal and state standards for drinking water were met or exceeded in 2012. Following is a summary of the water quality during 2012, including where your water comes from, what it contains, and how it compares to standards set by federal and state agencies.

- [Where does my water come from?](#)

Marysville's water source is a combination of surface water (Mill Creek) and ground water (wells). The sources of drinking water (both tap and bottled water) include rivers, streams, lakes, 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.

- [Drinking Water Contamination: How and where does it occur?](#)

Surface waters such as Mill Creek are by their nature susceptible to contamination. There are numerous potential contaminant sources along the banks of Mill creek that increases this risk. The protection areas around Mill Creek and the well field include some urbanized areas and contain a moderate number of potential contaminant sources, including agricultural runoff, inadequate septic systems, leaking underground storage tanks, and road and rail bridge crossings. As a result, the drinking water supplied to the City of Marysville's public water system is considered to have a moderately high susceptibility to contamination.

Contaminants that may be present in water include:

Microbial contaminants such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agriculture livestock operations and wildlife.

Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban storm 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 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 storm water runoff and septic systems.

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

Turbidity is a measure of the cloudiness of water and is an indication of the effectiveness of our filtration system. The turbidity limit set by the EPA is **{0.3NTU}** in 95% of the daily samples and shall not exceed 1.0 NTU at any time. As reported below, the City of Marysville Water system highest recorded turbidity result for 2012 was 0.26 NTU and lowest monthly percentage of samples meeting the turbidity limits was 100%.

Lead, if present in elevated levels 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 Marysville Water system 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 Safe Drinking Water Hotline at 800-426-4791 or at <http://www.epa.gov/safewater/lead>.

Cryptosporidium, The City of Marysville monitored the source water for Cryptosporidium during 2009. Cryptosporidium was detected in four (4) of twelve (12) samples collected from the source water. Cryptosporidium is a microbial pathogen found in surface water throughout the U.S. Although filtration removes cryptosporidium, the most commonly used filtration methods cannot guarantee 100 percent removal. Our monitoring of source water and /or finished water indicate the presence of these organisms. Current test methods do not enable us to determine if the organisms are dead or if they are capable of causing disease. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people are at greater risk of developing a life threatening illness. We encourage immuno-compromised individuals to consult their doctor regarding appropriate precautions to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health. 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. Historically, the Marysville public water system has effectively treated this source water to meet drinking water quality standards. The potential for water quality impacts can be further decreased by implementing measures to protect Mill Creek and the local aquifer. More detailed information is provided in the City of Marysville's Drinking Water Source Assessment report. To receive this report, please contact Fred McCreary, Chief Plant Operator, at (937) 644-9115.

- [People with Special Health Needs](#)

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised people who would include someone having cancer and undergoing chemotherapy; having undergone an organ transplant; having the HIV/AIDS virus or other immune system disorders, or 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 infections by cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

- **2012 Water System Improvements**

- Removed Lime Sludge from the Water Plant
- Painted the interior and exterior of the South tank
- Continued engineering process for new water treatment plant
- Completed several water main replacement projects throughout the City

How to Contact Us:

Water Billing: (937) 642-6861
8 a.m. – 5:00 p.m. M - F (excluding Holidays)

Water Plant: (937) 644-9115 24 hours/day, 7 days/week

Water Distribution: (937) 644-9858
7 a.m. – 3:30 p.m. M – F (excluding Holidays)

For questions about this report or to request a copy of the Drinking Water Source Assessment Report, call Fred McCreary, Chief Plant Operator, at (937) 644-9115.

Public participation and comments are encouraged at regular Marysville City Council meetings which meet the second and fourth Thursdays of the month at City Hall, 125 East Sixth Street. Input on our watershed is welcome.

- [Summary of Marysville Water Quality](#)

Summary of Marysville Water Quality

Listed below are 12 contaminants detected in Marysville's drinking water from 2008-2012. All are below allowed levels. Not listed are over 100 contaminants for which we tested that were not detected.

CONTAMINANTS (UNITS)	MCLG	MCL	LEVEL FOUND	RANGE OF DETECTIONS	VIOLATION	YEAR SAMPLED	MAJOR SOURCES
MICROBIOLOGICAL CONTAMINANTS							
Turbidity (NTU)	NA	TT	0.26	0.03-0.26	NO	2012	Soil runoff
Turbidity (% samples meeting standard)	NA	TT	100.00%	100%	NO	2012	Soil runoff
Chlorine (ppm)	MRDL=4.0	MRDL=4.0	1.29	0.94-1.49	NO	2012	Water additive use
Total Organic Carbon (TOC)	NA	TT	2.07	0.73-3.1	NO	2012	Present in the environment
INORGANIC CHEMICALS							
Copper (ppm) sampled at customer tap	1.3*	1.3 AL=1.3	90%=0.15	<0.05-0.231	NO	2011	Corrosion of household plumbing systems; erosion of natural deposits, leaching from wood preservatives deposits; leaching from wood preservatives
Flouride (ppm) sampled in distribution system	4	4	1.03	0.62-1.38	NO	2012	Erosion of natural deposits water additive which promotes strong teeth; discharge from fertilizer & aluminum factories
Lead (ppm) sampled at customer tap	0.015**	0.015 AL=0.015	<0.005 90%	<0.005-0.009	NO	2008	Corrosion of household plumbing systems; erosion of natural deposits, leaching from wood preservatives deposits; leaching from wood preservatives
Nitrate (ppm) sampled at plant tap	10	10	0.76	<0.10-0.76	NO	2012	Runoff from fertilizer use, leaching (from septic tanks) sewage; erosion of natural deposits
VOLATILE ORGANIC CHEMICALS							
TTHM (Total Trihalomethanes) (ppb)	0	80	58	45.5-60.1	NO	2012	By-product of drinking water chlorination
IDSE TTHM (Total Trihalomethanes) (ppb)	0	80	50.4	39-74.1	NO	2009	By-product of drinking water chlorination
HAA5 (PPB)	0	60	17.15	13.0-19.5	NO	2012	By-product of drinking water chlorination
IDSE HAA5 (PPB)	0	60	15.7	13.3-20.9	NO	2009	By-product of drinking water chlorination
<p>*Zero out of thirty (30) samples was found to have copper levels in excess of the action level of 1.3 ppm</p> <p>**Zero out of thirty (30) samples was found to have lead levels in excess of the action level of 0.015 ppm</p>							

Notes:

- TTHM highest levels allowed (MCL) are based on a running average of the last 4 quarters. The running average is updated every 3 months.
 - Turbidity is a measure of the cloudiness of water and is an indication of the effectiveness of our filtration system. The turbidity limit set by the EPA is 0.30 NTU in 95% of the daily samples and shall not exceed 1.0 NTU at anytime.
- Total Organic Carbon (TOC) has no health effects. However, TOC provides a medium when the water is disinfected for the formation of disinfection byproducts. TOC removal early in the treatment plant is required. The monthly TOC removal ratio is calculated at the ratio between the actual TOC removal and the TOC rule removal requirements. The actual ratio shown is the average of the ratios for the 12 months in 2012.

Definitions

- 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 allow for a margin of safety.
- 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.
- Treatment Technique (TT): A required process intended to remove the level of a contaminant in drinking water.
- Action Level (AL): The concentration of a contaminant which, if exceeded, triggers a treatment or other requirement which a water system must follow.
- ppm: Parts per Million (one penny out of 10 thousand dollars)
- ppb: Parts per Billion (one penny out of 10 million dollars)
- Distribution System: System of pipes used to deliver the water to the customer.
- "<" symbol: Less than
- ">" symbol: More than
- N/A = not applicable
- MRDL = Maximum Residual Disinfectant Level