



2009 Annual Drinking Water Quality Report

PWSID #CO0130035

Esta información es importante. Si no la pueden leer, necesitan que alguien se la traduzca.

The Genesee Water & Sanitation District is pleased to present to you this year's water quality report. Our constant goal is to provide you with a safe and dependable supply of drinking water.

General Information about Drinking Water: All 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 the water poses a health risk. 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 of infections. These people should seek advice about drinking water from their health care providers. For more information about contaminants and potential health effects, or to receive a copy of the U.S. Environmental Protection Agency (EPA) and the U.S. Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and microbiological contaminants call the EPA *Safe Drinking Water Hotline* at 1-800-426-4791.

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. Contaminants that may be present in source water include:

- **Microbial contaminants**, such as viruses and bacteria that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- **Inorganic contaminants**, 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**, that may come from a variety of sources, such as agriculture, urban storm water runoff, and residential uses.
- **Organic chemical contaminants**, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and also may come from gas stations, urban storm water runoff, and septic systems.
- **Radioactive contaminants**, that 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, the Colorado Department of Public Health and Environment prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

Our Water Source

Source
Bear Creek Intake

Water Type
Surface Water

If we used purchased water, this report is required to include water quality data for the purchased water with this report. Genesee does not purchase water.

The Colorado Department of Public Health and Environment has provided us with a Source Water Assessment Report for our water supply, you may obtain a copy of the report by visiting <http://www.cdphe.state.co.us/wq/sw/swaphom.html>.

Potential contamination in our source water area comes from EPA Hazardous Waste Generators; EPA Chemical Inventory/Storage Sites; Permitted Wastewater Discharge Sites; Aboveground, Underground and Leaking Storage Tank Sites; Solid Waste Sites; Existing/Abandoned Mine Sites; Other Facilities; Commercial/Industrial/Transportation; High Intensity and Low Residential; Urban Recreational Grasses; Row Crops and Fallow; Pasture/Hay; Deciduous, Evergreen and Mixed Forest; Septic Systems and Road Miles.”

The Source Water Assessment Report provides a screening-level evaluation of potential contamination that **could** occur. It does not mean that the contamination **has or will** occur. We can use this information to evaluate the need to improve our current water treatment capabilities and prepare for future contamination threats. This can help us ensure that quality finished water is delivered to your homes. In addition, the source water assessment results provide a starting point for developing a source water protection plan.

Please contact John McWilliams at 303-278-9780 to learn more about what you can do to help protect your drinking water sources. If you have any questions about the Annual Drinking Water Quality Report or to learn more about our system or to attend scheduled public meetings, please contact the District office at 303-278-9780 or email us at info@geneseewater.com. We want you, our valued customers, to be informed about the services we provide and the quality water we deliver to you every day.

Please share this information with all other people who drink this water especially those who may not have received this notice directly.



Terms and Abbreviations

To help you understand the terms and abbreviations used in this report, we have provided the following definitions:

- **Action Level (AL)** - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- **Action Level Goal (ALG)** - The “Goal” is the level of a contaminant in drinking water below which there is no known or expected risk to health.
- **Maximum Contaminant Level (MCL)** - The “Maximum Allowed” 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 (MCLG)** - The “Goal” 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 Level (MRDL)** - The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
- **Maximum Residual Disinfectant Level 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.
- **Nephelometric Turbidity Unit (NTU)** - Nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
- **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 (µg/L)** - One part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.
- **Parts per trillion (ppt) or Nanograms per liter (nanograms/L)** - One part per trillion corresponds to one minute in 2,000,000 years, or a single penny in \$10,000,000,000.
- **Parts per quadrillion (ppq) or Picograms per liter (picograms/L)** - One part per quadrillion corresponds to one minute in 2,000,000,000 years or one penny in \$10,000,000,000,000.
- **Picocuries per liter (pCi/L)** - Picocuries per liter is a measure of the radioactivity in water.
- **Running Annual Average (RAA)** - An average of monitoring results for the previous 12 calendar months.
- **Secondary Maximum Contaminant Level (SMCL)** - Non-enforceable, recommended limits for substances that affect the taste, odor, color or other aesthetic qualities of drinking water, rather than pose a health risk.
- **Treatment Technique (TT)** - A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.



Water Quality Data

Genesee Water & Sanitation District routinely monitors for contaminants in your drinking water according to Federal and State laws. The following table(s) show all detections found in the period of January 1, 2008 to December 31, 2008 unless otherwise noted. The State of Colorado requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. Therefore, some of our data, though representative, may be more than one year old. The “Range” column in the table(s) will show a single value for those contaminants that were sampled only once. Violations, if any, are reported on the last page of this report.

Note: Only detected contaminants appear in this report. If no tables appear in this section, that means that Genesee Water & Sanitation District did not detect any contaminants in the last round of monitoring.

Detected Regulated Substances

Monitored leaving the treatment plant:

Organics and Inorganics	Collection Date	Highest Value	Range	Unit	MCL	MCLG	Likely Source of Contamination
Barium	02/28/2008	0.02	N/A	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride	Monthly	1.00	0.79 – 1.00	ppm	4.0	4.0	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate	02/28/2008	0.68	N/A	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Disinfection By-Products	Year	Compliance Description			Requirement		Typical Sources
Control of Disinfection By-Products Precursors	2008	We used enhanced treatment to remove the required amount of natural organic material and/or we demonstrated compliance with alternative criteria.			TT		Natural organic material that is present in the environment
Turbidity	Collection Date	Level Found	TT Requirement		Likely Source of Contamination		
Turbidity	06/15/2008	0.20	Maximum 1.0 NTU for any single measurement		Soil runoff		
	Jan-Dec 2008	100%	In any month, at least 95% of samples must be less than 0.3 NTU				

Monitored in distribution system:

Substance	Collection Date	Average	Range	Units	MCL	MCLG	Likely Source of Contamination
Haloacetic Acids (HAA5)	Quarterly RAA	23	17 - 35	ppb	60	N/A	By-product of drinking water disinfection
Total Trihalomethanes (TTHM)	Quarterly RAA	44	27 – 64	ppb	80	N/A	By-product of drinking water disinfection
Chlorine (free)	Quarterly RAA	0.71	0.43 - 0.87	ppm	MRDL 4.0	MRDLG 4.0	Drinking water disinfectant

Monitored at customer taps:

Substance	Collection Date	90 th Percentile	Units	AL	Likely Source of Contamination
Copper	9/2006	0.29	ppm	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood Preservatives
Lead	9/2006	14	ppb	15	Corrosion of household plumbing systems, erosion of natural deposits

Detected Unregulated Substances

Monitored leaving the treatment plant:

Secondary Contaminants/Other Monitoring	Collection Date	Highest Value	Range	Units	Secondary Standard
MPA WTP Raw and Finished	6/11/2008	4.5	4.5	UNITS	N/A
Sodium	2/28/2008	17	17	MG/L	10000
Sulfate	2/28/2008	9	9	MG/L	250

Secondary standards are non-enforceable guidelines for contaminants that may cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, odor or color) in drinking water. The EPA recommends these standards, but does not require water systems to comply.

Health Information about Water Quality: Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested. Flush your tap for 30 seconds before using tap water.

Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system, and many have an increased risk of getting cancer. Additional information is available from the EPA *Safe Drinking Water Hotline* at 1-800-426-4791.

Violations			
Type	Category	Analyte	Compliance Period
Monitoring (TCR), Routine Minor	Failure to Monitor	Coliform (TCR)	07/01/2008 – 07/31/2008

Information About the Above Violation(s)

There are no additional required health effects violation notices.

Genesee Water & Sanitation is required to include an explanation of the violation(s) in the above table and steps taken to resolve the violation(s) with this report:

One of four monthly samples was improperly collected and was rejected by the lab. Unfortunately, the rejected sample went unnoticed until the following month when it was too late to submit another sample.

Genesee's Dam and Reservoir



Phase II construction of Genesee's new 101 acre foot dam and reservoir was complete in September 2008. Phase II construction consisted of placement and final grading of material previously excavated from the reservoir pool. The material was placed on the downstream area of the dam and contoured in a manner that blends with the natural slopes and provides a maintenance access to the dam crest. The reservoir was filled in September 2007 and has been successfully operating since with operational flexibility and water quality benefits exceeding original expectations. For nearly 1½ years the District has made use of the facility. The District pumps water from Bear Creek to the reservoir. Subsequently, the water is drawn from the reservoir through our treatment plant and into the distribution system. Not only does this give us drought protection for water use and fire protection, it uses the reservoir to expose our water to an added quality step. This procedure settles-out various suspended matter and exposes our water to sunlight/UV rays prior to treatment. This is helping us provide more stability to water quality and actually reducing the level of chemical treatment required.

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