Annual

Water Quality Report

Water testing performed in 2010

Presented By

Gadsden Water Works

PWS ID#: AL0000577

Quality First

Once again we are proud to present our annual water quality report covering all testing performed between January 1 and December 31, 2010. As in years past, we are committed to delivering the best-quality drinking water possible. To that end, we remain vigilant in meeting the challenges of new regulations, source water protection, water conservation, and community outreach and education while continuing to serve the needs of all of our water users. Thank you for allowing us to continue providing you and your family with high-quality drinking water.

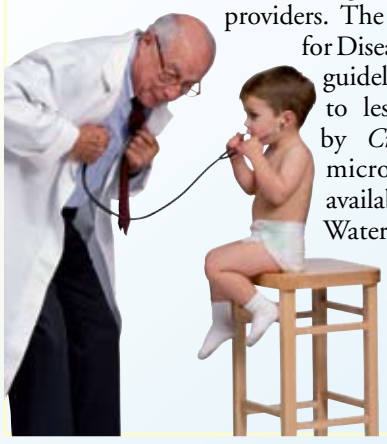
We encourage you to share your thoughts with us on the information contained in this report. Should you ever have any questions or concerns, we are always available to assist you.

How Long Can I Store Drinking Water?

The disinfectant in drinking water will eventually dissipate even in a closed container. If that container housed bacteria before it was filled with the tap water, the bacteria may continue to grow once the disinfectant has dissipated. Some experts believe that water could be stored up to six months before needing to be replaced. Refrigeration will help slow the bacterial growth.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as people with cancer undergoing chemotherapy, people who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) 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 (800) 426-4791 or http://water.epa.gov/drink/



Tap vs. Bottled

Thanks in part to aggressive marketing, the bottled water industry has successfully convinced us all that water purchased in bottles is a healthier alternative to tap water. However, according to a four-year study conducted by the Natural Resources Defense Council, bottled water is not necessarily cleaner or safer than most tap water. In fact, about 25 percent of bottled water is actually just bottled tap water (40 percent, according to government estimates).

The Food and Drug Administration is responsible for regulating bottled water, but these rules allow for less rigorous testing and purity standards than those required by the U.S. EPA for community tap water. For instance, the high mineral content of some bottled waters makes them unsuitable for babies and young children. Furthermore, the FDA completely exempts bottled water that's packaged and sold within the same state, which accounts for about 70 percent of all bottled water sold in the United States.

People spend 10,000 times more per gallon for bottled water than they typically do for tap water. If you get your recommended eight glasses a day from bottled water, you could spend up to $1,400 annually. The same amount of tap water would cost about 49 cents. Even if you installed a filter device on your tap, your annual expenditure would be far less than what you'd pay for bottled water.

For a detailed discussion on the NRDC study results, check out their Web site at www.nrdc.org/water/drinking/bw/exesum.asp

Lead and Drinking Water

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. Gadsden Water Works is responsible for providing high-quality drinking water, but we 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 or at www.epa.gov/safewater/lead

Community Participation

You are invited to participate in our public forum and voice your concerns about your drinking water. We meet the third Monday of each month beginning at 4 p.m. in the boardroom at the Administration Building, 515 Albert Rains Blvd., Gadsden, AL.

Information on the Internet

The U.S. EPA Office of Water (www.epa.gov/watrhome) and the Centers for Disease Control and Prevention (www.cdc.gov) Web sites provide a substantial amount of information on many issues relating to water resources, water conservation, and public health. Also, the state's Department of Environmental Management has a Web site (www.adem.state.al.us/WaterDivision/Drinking/DWMainInfo.htm) that provides complete and current information on water issues in Alabama, including valuable information about our watershed.

Source Water Description

The Gadsden Water Works customers are fortunate because we enjoy an abundant water supply from the Coosa River. Our water source comes from the Basin called the Middle Coosa. This watershed contains 23 rivers and streams. There are 420 lakes in the watershed, for a total of 31,285.7 acres of surface area. There are approximately 3,359.6 total river miles in this basin. The Middle Coosa Basin is fed from the Upper Coosa Basin and multiple aquifers, including Pennsylvanian aquifers, Valley and Ridge aquifers, and Valley and Ridge carbonate-rock aquifers. All of the sources provide approximately 5,300 cubic feet per second (cfs) average flow through the Gadsden area. From this source, our water treatment facilities provide 15 to 20 million gallons of clean drinking water every day for the City of Gadsden and surrounding water distribution systems. To learn more about our watershed on the Internet, go to http://cfpub.epa.gov/surf/huc.cfm?huc_code=03150106

Questions?

For more information about this report, or for any questions relating to your drinking water, please call Joe Owens, General Manager, at (256) 543-2884, ext. 222.

Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. 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 water poses a health risk.

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, including radioactive material, and it can pick up substances resulting from the presence of animals or from human activity. Substances that may be present in source water include:

Microbial Contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, or wildlife;

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may result from urban stormwater 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 stormwater runoff, and residential uses;

Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production and may also come from gas stations, urban stormwater runoff, and septic systems;

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

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

Nondetected Contaminants

The following substances were tested for in 2010 and not detected in our drinking water. Anyone interested in the detection limits and/or analytical information in general should contact Jack E. Davis at (256) 543-2884 ext. 212 or email him at jdavis@gadsdenwater.org.

1-Trichloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethylene, 1,2,4-Trichlorobenzene, 1,2-Dichloroethane, 1,2-Dichloropropane, Benzene, Carbon Tetrachloride, Cis-1,2-Dichloroethylene, Ethylbenzene, Methylene Chloride (Dichloromethane), Monochlorobenzene, o-Dichlorobenzene, p-Dichlorobenzene, Styrene, TCE (Trichloroethylene), Tetrachloroethylene, Toluene, Trans-1,2-Dichloroethylene, Vinyl Chloride, Xylenes, 1,1-Dichloropropene, 1,1,1,2-Tetrachloroethane, 1,1,2,2-Tetrachloroethane, 1,1-Dichloroethane, 1,2,3-Trichlorobenzene, 1,2,3-Trichloropropane, 1,2,4-Trimethylbenzene, 1,3-Dichloropropane, 1,3-Dichloropropene, 1,3,5-Trimethylbenzene, 2,2-Dichloropropane, Bromobenzene, Bromochloromethane, Bromoform, Bromomethane, Chloroethane, Chloromethane, Dibromomethane, Dichlorodifluoromethane, Hexachlorobutadiene, Isopropylbenzene, M-Dichlorobenzene, Methyl-Tertiary Butyl Ether (MTBE), N-Butylbenzene, Naphthalene, N-Propylbenzene, o-Chlorotoluene, p-Chlorotoluene, p-Isopropyltoluene, Sec-Butylbenzene, Tert-Butylbenzene, Trichlorfluoromethane, Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Copper, Cyanide, Lead, Mercury, Nickel, Nitrite, Selenium, Thallium, Foaming Agents (Surfactants), Silver, Dibromoacetic Acid, Monobromoacetic Acid, Monochloroacetic Acid.

Naturally Occurring Bacteria

The simple fact is, bacteria and other microorganisms inhabit our world. They can be found all around us: in our food; on our skin; in our bodies; and in the air, soil, and water. Some are harmful to us and some are not. Coliform bacteria are common in the environment and are generally not harmful themselves. The presence of this bacterial form in drinking water is a concern because it indicates that the water may be contaminated with other organisms that can cause disease. Throughout the year, we tested many water samples for coliform bacteria. In that time, none of the samples came back positive for the bacteria. Federal regulations now require that public water that tests positive for coliform bacteria must be further analyzed for fecal coliform bacteria. Fecal coliform are present only in human and animal waste. Because these bacteria can cause illness, it is unacceptable for fecal coliform to be present in water at any concentration. Our tests indicate no fecal coliform is present in our water.

Conclusion of the Source Water Assessment

The susceptibility analysis identified several contaminant sources that potentially could affect the quality of the source water as well as the operation of the Water Treatment Plant. To help address these concerns, the Gadsden Water Works and Sewer Board (GWWSB) developed its Contingency Plan. In addition, the GWWSB monitors numerous sampling points each month. These data are used to track the water quality in the river and to identify contaminant sources. These data will continue to be gathered and used for the monitoring of contamination to the river.

The GWWSB realizes that protection of its water resources is an important part of providing high-quality drinking water to the community. In an effort to protect its drinking water source, the GWWSB is an active member of the Coosa River Basin Clean Water Partnership, a group dedicated to protecting and restoring water quality and biological integrity in the Coosa River Basin. Feel free to contact us during regular business hours if you are interested in reviewing the assessment.

What's Your Water Footprint?

You may have some understanding about your carbon footprint, but how much do you know about your water footprint? The water footprint of an individual, community, or business is defined as the total volume of freshwater that is used to produce the goods and services that are consumed by the individual or community or produced by the business. For example, 11 gallons of water are needed to irrigate and wash the fruit in one half-gallon container of orange juice. Thirty-seven gallons of water are used to grow, produce, package, and ship the beans in that morning cup of coffee. Two hundred and sixty-four gallons of water are required to produce one quart of milk, and 4,200 gallons of water are required to produce two pounds of beef.

According to the U.S. EPA, the average American uses about 100 gallons of water daily. In fact, in the developed world, one flush of a toilet uses as much water as the average person in the developing world allocates for an entire day's cooking, washing, cleaning, and drinking. The annual American per capita water footprint is about 8,000 cubic feet, twice the global per capita average. With water use increasing six-fold in the past century, our demands for freshwater are rapidly outstripping what the planet can replenish.

To check out your own water footprint, go to www.h2oconserve.org or visit www.waterfootprint.org to see how the water footprints of other nations compare.

What Causes the Pink Stain on Bathroom Fixtures?

The reddish-pink color frequently noted in bathrooms on shower stalls, tubs, tile, toilets, sinks, toothbrush holders, and on pets' water bowls is caused by the growth of the bacterium *Serratia marcesens*. Serratia is commonly isolated from soil, water, plants, insects, and vertebrates (including man). The bacteria can be introduced into the house through any of the above-mentioned sources. The bathroom provides a perfect environment (moist and warm) for bacteria to thrive.

The best solution to this problem is to continually clean and dry the involved surfaces to keep them free from bacteria. Chlorine-based compounds work best, but keep in mind that abrasive cleaners may scratch fixtures, making them more susceptible to bacterial growth. Chlorine bleach can be used periodically to disinfect the toilet and help to eliminate the occurrence of the pink residue. Keeping bathtubs and sinks wiped down using a solution that contains chlorine will also help to minimize its occurrence.

Serratia will not survive in chlorinated drinking water.

Sampling Results

During the past year we have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants. The tables below show only those contaminants that were detected in the water. The state requires us to monitor for certain substances less often than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

Based on a study conducted by ADEM with the approval of the EPA, a statewide waiver for the monitoring of asbestos and dioxin was issued. Thus, monitoring for these contaminants was not required.

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chlorine (ppm)	2010	[4]	[4]	1.98	1.59–2.14	No	Water additive used to control microbes
Fluoride (ppm)	2010	4	4	0.98	0.59–1.5	No	Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAAs] (ppb)	2010	60	NA	20.98	7.1–36.0	No	By-product of drinking water disinfection
Nitrate (ppm)	2010	10	10	0.67	0.67–0.67	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
TTHMs [Total Trihalomethanes] (ppb)	2010	80	NA	37.3	14.8–76.2	No	By-product of drinking water disinfection
Total Organic Carbon (ppm)	2010	TT	NA	1.56	0.9–2.3	No	Naturally present in the environment
Turbidity[1] (NTU)	2010	TT	NA	0.293	0.012–0.293	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2010	TT	NA	100	NA	No	Soil runoff

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	MCLG	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chloride (ppm)	2010	250	NA	13.7	13.7–13.7	No	Runoff/leaching from natural deposits
Color (Units)	2010	15	NA	4.0	3.0–8.0	No	Naturally occurring organic materials
Iron (ppb)	2010	300	NA	17	7–80	No	Leaching from natural deposits; Industrial wastes
Manganese (ppb)	2010	50	NA	9	5–34	No	Leaching from natural deposits
pH (Units)	2010	6.5-8.5	NA	7.53	7.35–7.67	No	Naturally occurring
Sulfate (ppm)	2010	250	NA	8.72	8.72–8.72	No	Runoff/leaching from natural deposits; Industrial wastes
Total Dissolved Solids [TDS] (ppm)	2010	500	NA	78	78–78	No	Runoff/leaching from natural deposits
Zinc (ppm)	2010	5	NA	0.155	0.155–0.155	No	Runoff/leaching from natural deposits; Industrial wastes

UNREGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Bromodichloromethane (ppb)	2010	10.4	4.0–22.3	By-product of drinking water disinfection
Bromoform (ppb)	2010	2.9	2.4–3.2	By-product of drinking water disinfection
Chloroform (ppb)	2010	20.5	5.7–53.6	By-product of drinking water disinfection
Dibromochloromethane (ppb)	2010	5.6	1.3–19.0	By-product of drinking water disinfection
Sodium (ppm)	2010	7.72	7.72–7.72	Naturally occurring

[1] Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system.

Definitions

AL (Action Level): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

MCL (Maximum Contaminant Level): 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. Secondary MCLs (SMCL) are set for the control of taste and odor.

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.

MRDL (Maximum Residual Disinfectant Level): 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.

MRDLG (Maximum Residual Disinfectant Level Goal): 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.

NA: Not applicable

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

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