



HUNTSVILLE UTILITIES is pleased to provide you with this year's Annual Water Quality Report. This publication is our commitment to keep you, our customer, informed on issues related to water service. This report provides information concerning the source of your drinking water, treatment techniques, test results, as well as an explanation of the numbers and terms used in it. Huntsville Utilities works diligently to provide high quality water at the lowest possible price. We are committed to providing a quality drinking water that meets or exceeds all state and federal drinking water standards.

WATER SOURCES: Huntsville Utilities supplies drinking water to approximately 100,000 customers from both surface water and groundwater sources. Surface water from the Tennessee River and Guntersville Lake is processed through three conventional surface water treatment plants, the South Parkway facility, Southwest Treatment Plant, and the Southeast Treatment Plant. Groundwater is supplied from the Lincoln and Dallas Well Treatment Plant and Williams Well. All the groundwater wells produce from limestone aquifers. Our source is also supplemented by treated water purchased from Limestone County Water Authority's Turner Water Treatment Plant.

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 radioactive material, and it can pick up substances resulting from the presence of animals or from human activity.

SOURCE WATER ASSESSMENT: Huntsville Utilities has developed a Source Water Assessment plan that assists in protecting our water sources. This plan provides information about potential sources of contamination and classifies potential contaminants as high, moderate, or non-susceptible to contaminating the water source. In 2015 we updated the Source Water Assessment. These reports are available for review in our office during normal business hours by appointment. Please help us make these efforts worthwhile by doing what you can to protect our source water. For example, carefully follow instructions on pesticides and herbicides you use for your lawn and garden, and properly dispose of household chemicals, paints and waste oil. Please inform us if you observe actions that might compromise the quality of our drinking water.

LEAD AND DRINKING WATER: As required by federal and state agencies, we also have an outside laboratory monitor our distribution system for lead. Levels of lead in our system have always been well below the minimum standard. Even though we do not have a problem with lead, the following information about lead is required to be in this report: 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. Huntsville Utilities 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 on the EPA website at

<https://www.epa.gov/your-drinking-water/basic-information-about-lead-drinking-water> or by calling the EPA's Safe Drinking Water Hotline at 1-800-426-4791.

QUESTIONS: Public interest and participation in decisions affecting drinking water or other utility issues is encouraged. If you have any questions about this report or concerning your water utility, please contact Jim Reynolds in the Water Quality Lab at (256) 650-6374 or by email at waterlab@hsvutil.org. More information about contaminants in drinking water and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at (800) 426-4791.

If you would like to attend one of our regularly scheduled board meetings, you may check our website (www.hsvutil.org) for the meeting schedule. They are usually held on the last Tuesday of each month at 8:30 a.m. at Huntsville Utilities, 112 Spragins Street. Board members include Mr. Jim Batson, Dr. Dorothy W. Huston, and Mr. Max (Gripp) Luther.

Definitions
Action Level - the concentration of a contaminant that, if exceeded, triggers some follow-up action
ADEM - Alabama Department of Environmental Management - Alabama's environmental regulatory agency
AWPCA - Alabama Water Pollution Control Association
Disinfection byproducts - produced when disinfectants used in water treatment react with natural organic matter present in the source water
Distribution System Evaluation (DSE) - a one-year study conducted by water systems to monitor disinfection byproducts.
EPA - the United States Environmental Protection Agency.
Maximum Contaminant Level (MCL) - highest level of contaminant allowed in drinking water.
Maximum Contaminant Level Goal (MCLG) - the level of a contaminant in drinking water below which there is no known or expected risk to health.
Millirems per year (mrem/yr) - measure of radiation absorbed by the body.
Minimum Reporting Limit (MRL) - either not detected or is smallest measured concentration that can be measured by using a given analytical method
Nephelometric Turbidity Unit (NTU) - a measure of the clarity of water.
Not Applicable (NA) - Not applicable to water system because not required.
Non-Detect (ND) - laboratory analysis indicates that the contaminant is not present at a detectable level; less than the MRL.
Not Required (NR) - laboratory analysis not required due to waiver.
Parts per billion (ppb) or Micrograms per liter (µg/l) - corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.
Parts per million (ppm) or Milligrams per liter (mg/l) - corresponds to one minute in two years or a single penny in \$10,000.
Parts per quadrillion (ppq) or Picograms per liter (picograms/l) - corresponds to one minute in 2,000,000,000 years, or a single penny in \$10,000,000,000,000.
Parts per trillion (ppt) or Nanograms per liter (nanograms/l) - corresponds to one minute in 2,000,000 years, or a single penny in \$10,000,000,000.
Picocuries per liter (pCi/L) - a measure of the radioactivity in water.
Running annual average (RAA) - the required method of calculating compliance on disinfection byproducts, TTHM and HAA5.
Treatment Technique (TT) - a required process to reduce a contaminant.
UCMR - Unregulated Contaminant Monitoring Rule.
Variations & Exemptions (V&E) - State or EPA permission not to meet an MCL or a treatment technique under certain conditions.

EPA recommends that Americans continue to use and drink tap water as usual. The World Health Organization (WHO) stated that the, "presence of the COVID-19 virus has not been detected in drinking-water supplies and based on current evidence the risk to water supplies is low."

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Huntsville Utilities 2020 Water Quality Report
Esta información acerca de su agua potable es muy importante. Le recomendamos que alguien traducirlo para usted.

2020 ANNUAL WATER QUALITY REPORT

Testing Performed January - December 2019

HUNTSVILLE UTILITIES

ELECTRICITY • NATURAL GAS • WATER



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Excellence Awards

Huntsville Utilities has been recognized numerous times over the past two decades for outstanding service, receiving several excellence awards over the years. The most recent awards are:



- AWPCA Best Operated Plant for the Southwest Plant
- ADEM 2019 plant optimization award for the Southwest Plant (12th consecutive year)
- ADEM 2019 plant optimization award for the South Parkway Plant (2nd consecutive year)
- ADEM 2019 plant optimization award for the Southeast Plant

Office Hours: Monday - Friday, 8 a.m. to 5 p.m.
www.hsvutil.org

DRINKING WATER INFO



All drinking water, including bottled water, may be reasonably expected to contain at least small amounts of some contaminants. 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.

The presence of contaminants does not necessarily indicate that water poses a health risk. MCL's, defined in a List of Definitions in this report, are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL for a lifetime to have a one-in-a-million chance of having the described health effect.

Contaminants 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, and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally-occurring or from urban storm water run-off, wastewater discharges, oil/gas production, mining, or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, storm water run-off, 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.

Huntsville Utilities takes at least 150 samples monthly throughout our distribution system to analyze for Coliform bacteria. Coliform organisms are commonly found in humans, animals, and the environment and are generally harmless to humans; however, the presence of Coliforms is an indication that other harmful micro-organisms may be present. Public water systems must not find total Coliforms in over 5.0% of all samples taken in a month, where the number of samples collected per month is based on the population served.

Huntsville Utilities also tests your source water for *Cryptosporidium* and *Giardia*. *Cryptosporidium* was detected in the raw source water in a range of 0 - 0.40 and *Giardia* in a range of 0 - 0.30 organisms/Liter. These pathogens can enter the water from animal or human waste. Some people may be more vulnerable to contaminants in drinking water than the general population. People who are immuno-compromised such as cancer patients undergoing chemotherapy, organ transplant recipients, HIV/AIDS positive or other immune system disorders, some elderly, and infants can be particularly at risk from infections. People at risk 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) or from www.cdc.gov/parasites/crypto/gen_info/infect_ic.html. This language does not indicate the presence of *Cryptosporidium* in your drinking water.

Water systems using surface sources or groundwater under the influence of surface water must provide a filtration process to produce filtered water turbidity no greater than 0.3 turbidity units (NTU) in 95% of filtered water samples analyzed each month and at no time exceeds 1.0 NTU. Groundwater sources must produce treated water which at no time exceeds 5.0 NTU.

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.

MONITORING SCHEDULE

The EPA or ADEM requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. This report contains results from the most recent monitoring which was performed in accordance with the regulatory schedule.

Constituents Monitored	Huntsville	Limestone Co. (Turner WTP)
Inorganic Contaminants	2019	2019
Lead/Copper	2019	2017
Microbiological Contaminants	current	current
Nitrates	2019	2019
Radioactive Contaminants	2018	2019
Synthetic Organic Contaminants	2018	2018
Volatile Organic Contaminants	2019	2017
Disinfection By-products	2019	2019
Cryptosporidium	2019	2017
DSE Contaminants	2019	2018
UCMR4 Contaminants	2019	2019

As you can see by the Table of Detected Drinking Water Contaminants below, our system had no violations. We have learned through our monitoring and testing that some constituents have been detected. We are pleased to report that our drinking water meets federal and state requirements.

DETECTED DRINKING WATER CONTAMINANTS							
Contaminants	Violation Y/N	Huntsville	Limestone Co Turner WTP	Unit Msmt	MCLG	MCL	Likely Source of Contamination
Chlorine	NO	2.2-3.6	1.2-2.0	ppm	MRDLG=4	MRDL=4	Water additive used to control microbes
Total Organic Carbon	NO	0.76-1.53	0.92 – 3.48	ppm	n/a	TT	Soil runoff
Total Coliform bacteria	NO	5 positive samples ¹	ND	Present or Absent	0	presence in 5% of monthly samples	Naturally present in the environment; used as an indicator that other bacteria may be present
Turbidity (filtered)	NO	Highest 0.12	Highest 0.28	NTU	n/a	TT	Soil runoff
Copper	NO	0.14 ² 0 > AL	ND	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from preservatives
Fluoride - WTP	NO	0.51-0.63	ND	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from factories
Nitrate (as Nitrogen)	NO	0.52-1.90	0.57-1.14	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
TTHM [Total trihalomethanes]	NO	High LRAA 36.1 Range 13.7-51.5	33.4 Range 13.9-58.5	ppb	0	80	By-product of drinking water chlorination
HAA5 [Total haloacetic acids]	NO	High LRAA 28.7 Range 15.5-37.2	37.0 Range 7.3-52.3	ppb	0	60	By-product of drinking water chlorination
Unregulated Contaminants							
Chloroform	NO	ND-14.0	7.13-39.7	ppb	n/a	n/a	Naturally occurring in the environment or from runoff
Bromodichloromethane	NO	ND-3.67	1.48-8.68	ppb	n/a	n/a	Naturally occurring in the environment or from runoff
Chlorodibromomethane	NO	ND-0.54	ND-1.23	ppb	n/a	n/a	Naturally occurring in the environment or from runoff
Secondary Contaminants							
Chloride	NO	7.03-7.83	7.95-11.4	ppm	n/a	250	Naturally occurring in the environment or from runoff
Hardness, as CaCO ₃	NO	62.8-69.6	115-139	ppm	n/a	n/a	Naturally occurring in the environment or from runoff
Manganese	NO	ND	ND-0.02	ppm	n/a	0.05	Erosion of natural deposits; leaching from pipes
pH	NO	7.68-7.73	7.00-8.30	S.U.	n/a	n/a	Naturally occurring in the environment or from runoff
Sodium	NO	7.04-16.6	1.50-3.41	ppm	n/a	n/a	Naturally occurring in the environment
Sulfate	NO	23.9-28.2	3.91-11.6	ppm	n/a	250	Naturally occurring in the environment or from runoff
Total Dissolved Solids	NO	72.0-140	148-172	ppm	n/a	500	Naturally occurring in the environment or from runoff
Zinc	NO	ND	ND-0.06	ppm	n/a	5	Erosion of natural deposits; discharge; runoff from landfills
DSE Disinfection Byproduct							
TTHM [Total trihalomethanes]	NO	1.20-43.2		ppb	0	80	By-product of drinking water chlorination
HAA5 [Total haloacetic acids]	NO	ND-43.3		ppb	0	60	By-product of drinking water chlorination

¹ Positive samples detected in 2019: March (1), August (3) and December (1). However, this was not an MCL violation since Coliform was not present in 5% of samples taken. All follow-up samples were negative for Coliform and E. coli.

² Figure shown is 90th percentile, and number of samples > the Action Level = 0

UCMR4

The Fourth Unregulated Contaminant Monitoring Rule (UCMR4) requires some systems to monitor for 30 unregulated contaminants during January 2018 through December 2020 on an assigned schedule. The table below shows the results of our monitoring during 2019.

Unregulated Contaminant Rule 4 (UCMR4) Contaminants					
Contaminants	Unit Msmt	Level Detected	Contaminant	Unit Msmt	Level Detected
Germanium	ppb	ND	1-butanol	ppb	ND
Manganese	ppb	ND-4.7	2-methoxyethanol	ppb	ND
Alpha-hexachlorocyclohexane	ppb	ND	2-propen-1-ol	ppb	ND
Chlorpyrifos	ppb	ND	Butylated hydroxyanisole	ppb	ND
Dimethipin	ppb	ND	O-toluidine	ppb	ND
Ethoprop	ppb	ND	Quinoline	ppb	ND
Oxyfluorfen	ppb	ND	Total organic carbon (TOC)	ppb	1310-2430
Profenofos	ppb	ND	Bromide	ppb	ND
Tebuconazole	ppb	ND	HAA9	ppb	10.5-46.0
Total permethrin (cis- & trans-)	ppb	ND	HAA6Br	ppb	3.0-5.5
Tribufos	ppb	ND	HAA5	ppb	7.57-42.7

Huntsville Utilities has chosen to provide our water customers with a table of all contaminants for which the Environmental Protection Agency and the Alabama Department of Environmental Management require testing. These contaminants were *not detected* in your drinking water unless they are also listed in the Table of Detected Drinking Water Contaminants elsewhere in this report.

STANDARD LIST OF PRIMARY DRINKING WATER CONTAMINANTS					
Contaminant	MCL	Unit of Msmt	Contaminant	MCL	Unit of Msmt
Bacteriological Contaminants					
Total Coliform Bacteria	<5%	present or absent	Dichloromethane	100	ppb
Fecal Coliform and E. coli	0	present or absent	1,2-Dichloropropane	5	ppb
Turbidity	TT	NTU	Di (2-ethylhexyl)adipate	400	ppb
Cryptosporidium	TT	Calculated organisms/liter	Di (2-ethylhexyl)phthalate	6	ppb
Radiological Contaminants					
Beta/alpha emitters	4	mrem/yr	Dinoseb	7	ppb
Alpha emitters	15	pCi/l	Dioxin [2,3,7,8-TCDD]	30	ppq
Combined radium	5	pCi/l	Diquat	20	ppb
Uranium	30	pCi/l	Endothal	100	ppb
			Endrin	2	ppb
Inorganic Chemicals					
Antimony	6	ppb	Epichlorohydrin	TT	TT
Arsenic	10	ppb	Ethylbenzene	700	ppb
Asbestos	7	MFL	Ethylene dibromide	50	ppt
Barium	2	ppm	Glyphosate	700	ppb
Beryllium	4	ppb	Heptachlor	400	ppt
Cadmium	5	ppb	Heptachlor epoxide	200	ppt
Chromium	100	ppb	Hexachlorobenzene	1	ppb
Copper	AL=1.3	ppm	Hexachlorocyclopentadiene	50	ppb
Cyanide	200	ppb	Lindane	200	ppt
Fluoride	4	ppm	Methoxychlor	40	ppb
Lead	AL=15	ppb	Oxamyl [Vydate]	200	ppb
Mercury	2	ppb	Polychlorinated biphenyls (PCBs)	0.5	ppb
Nitrate	10	ppm	Pentachlorophenol	1	ppb
Nitrite	1	ppm	Picloram	500	ppb
Selenium	.05	ppm	Simazine	4	ppb
Thallium	.002	ppm	Styrene	100	ppb
			Tetrachloroethylene	5	ppb
Organic Contaminants					
2,4-D	70	ppb	Toluene	1	ppm
Acrylamide	TT	TT	Toxaphene	3	ppb
Alachlor	2	ppb	2,4,5-TP(Silvex)	50	ppb
Benzene	5	ppb	1,2,4-Trichlorobenzene	.07	ppm
Benzo(a)pyrene [PAHs]	200	ppt	1,1,1-Trichloroethane	200	ppb
Carbofuran	40	ppb	1,1,2-Trichloroethane	5	ppb
Carbon tetrachloride	5	ppb	Trichloroethylene	5	ppb
Chlordane	2	ppb	Vinyl Chloride	2	ppb
Chlorobenzene	100	ppb	Xylenes	10	ppm
Dalapon	200	ppb	Disinfectants & Disinfection Byproducts		
Dibromochloropropane	200	ppt	Chlorine	4	ppm
o-Dichlorobenzene	600	ppb	Chlorine Dioxide	800	ppb
p-Dichlorobenzene	75	ppb	Chloramines	4	ppm
1,2-Dichloroethane	5	ppb	Bromate	10	ppb
1,1-Dichloroethylene	7	ppb	Chlorite	1	ppm
cis-1,2-Dichloroethylene	70	ppb	HAA5 [Total haloacetic acids]	60	ppb
			TTHM [Total trihalomethanes]	80	ppb
UNREGULATED CONTAMINANTS					
1,1 – Dichloropropene	Aldicarb	Chloroform	Metolachlor		
1,1,1,2-Tetrachloroethane	Aldicarb Sulfone	Chloromethane	Metribuzin		
1,1,2,2-Tetrachloroethane	Aldicarb Sulfoxide	Dibromochloromethane	N-Butylbenzene		
1,1-Dichloroethane	Aldrin	Dibromomethane	Naphthalene		
1,2,3 – Trichlorobenzene	Bromobenzene	Dicamba	N-Propylbenzene		
1,2,3 – Trichloropropane	Bromochloromethane	Dichlorodifluoromethane	O-Chlorotoluene		
1,2,4 – Trimethylbenzene	Bromodichloromethane	Dieldrin	P-Chlorotoluene		
1,3 – Dichloropropane	Bromoform	Hexachlorobutadiene	P-Isopropyltoluene		
1,3 – Dichloropropene	Bromomethane	Isopropylbenzene	Propachlor		
1,3,5 – Trimethylbenzene	Butachlor	M-Dichlorobenzene	Sec-Butylbenzene		
2,2 – Dichloropropane	Carbaryl	Methomyl	Tert-Butylbenzene		
3-Hydroxycarbofuran	Chloroethane	MTBE	Trichlorofluoromethane		