

Community Participation

Location: City Hall at 400 W Main, Henderson, Texas

Phone Number: (903) 657-5246

To learn about future public meetings (concerning your drinking water), or to request to schedule one, please call us.

Questions

For more information about this report, or for any questions relating to your drinking water, please call Randy Boyd at 903-657-5246 or e-mail rboyd@hendersontx.us.

ANNUAL WATER REPORT

*Water testing
performed in 2015*

QUALITY



Presented By

City of Henderson

MAXIMUM RESIDUAL DISINFECTANT LEVEL

Systems must complete and submit disinfection data on the Surface Water Monthly Operations Report (SWMOR). On the CCR report, the system must provide disinfectant type, minimum, maximum and average levels.

Disinfectant	Year Sampled	Average Level	Minimum Level	Maximum Level	MRDL	MRDLG	Unit of Measure	Potential Source of Contamination
Chloramine	2015	1.40	0.50	2.30	4.0	<4.0	ppm	Disinfectant used to control microbes.

DISINFECTION BYPRODUCTS

Contaminant	Year Sampled	Average Level	Minimum Level	Maximum Level	MCL	Unit of Measure	Potential Source of Contamination
Haloacetic Acids (HAA5)	2015	22.6	<1.0	95.3	60	ppb	Byproduct of drinking water disinfection.
Total Trihalomethanes (TTHMs)	2015	38.0	1.3	97.2	80	ppb	Byproduct of drinking water disinfection.

UNREGULATED CONTAMINANTS

Bromoform, chloroform, dichlorobromomethane, and dibromochloromethane are disinfectant byproducts. There is no maximum contaminant level for these chemicals at the entry point to distribution.

Contaminant	Year Sampled	Average Level	Minimum Level	Maximum Level	Unit of Measure	Potential Source of Contamination
Chloroform	2011-2015	19.3	<1.0	116.02	ppb	Byproduct of drinking water disinfection.
Bromoform	2011-2015	2.1	<1.0	25.30	ppb	Byproduct of drinking water disinfection.
Bromodichloromethane	2011-2015	13.6	<1.0	133.58	ppb	Byproduct of drinking water disinfection.
Dibromochloromethane	2011-2015	8.2	<1.0	77.21	ppb	Byproduct of drinking water disinfection.

UNREGULATED CONTAMINANT MONITORING RULE 2 (UCMR2)

Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist the EPA in determining the occurrence of unregulated contaminants in drinking water and whether further regulation is warranted. Any unregulated contaminants detected are reported in the following table. For additional information and data visit <http://www.epa.gov/safewater/ucmr/ucmr2/index.html>, or call the Safe Drinking Water Hotline at (800)426-4791.

Contaminant	Year Sampled	Average Level	Minimum Level	Maximum Level	Unit of Measure	Potential Source of Contamination
Chloroform	2015	17.31	1.3	43.9	ppb	Byproduct of drinking water disinfection.
Bromoform	2015	1.67	<1.0	3.9	ppb	Byproduct of drinking water disinfection.
Bromodichloromethane	2015	11.91	<1.0	24.9	ppb	Byproduct of drinking water disinfection.
Dibromochloromethane	2015	7.99	<1.0	27.4	ppb	Byproduct of drinking water disinfection.

LEAD AND COPPER

Contaminant	Year Sampled	The 90th Percentile	Number of sites Exceeding Action Level	Action Level	Unit of Measure	Potential Source of Contamination
Lead	2013	2.03	0	15	ppb	Corrosion of household plumbing systems; erosion of natural deposits.
Copper	2013	0.182	0	1.3	ppm	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.

Additional Health Information for Lead "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. This water supply 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 or at <http://www.epa.gov/safewater/lead>."

ASBESTOS

Some people who drink water containing asbestos well in excess of the maximum contaminant level (MCL) for many years may have an increased risk of developing benign intestinal polyps.

Year Sampled	Average Level	Minimum Level	Maximum Level	MCL Limit	Unit of Measure	Potential Source of Contamination
2013	<0.185	<0.185	<0.185	7	MFL	Decay of asbestos cement water mains; and erosion of natural deposits.

TURBIDITY

Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches. Turbidity is removed by Clarifiers (sedimentation basins) and Filtration (Filters)

Contaminant	Year Sampled	Highest Single Measurement	Lowest monthly % of Samples Meeting Limits	Turbidity Limit	Unit of Measure	Potential Source of Contamination
Turbidity	2015	0.3	100%	0.3	NTU	Soil Runoff

TOTAL ORGANIC CARBON

Total organic carbon (TOC) no health effects. The disinfectant can combine with TOC to form disinfection byproducts. Disinfection is necessary to ensure that water does not have unacceptable levels of pathogens. Byproducts of disinfection include trihalomethanes (THMs) and haloacetic acids (HAA) which are reported elsewhere in this report.

Contaminant	Year Sampled	Average Level	Minimum Level	Maximum Level	Unit of Measure	Potential Source of Contamination
Source Water	2015	6.42	5.40	7.54	ppm	Naturally present in environment
Drinking Water	2015	3.09	2.34	4.17	ppm	Naturally present in environment
Removal Ratio	2015	1.16	0.92	1.30	% removal	N/A

*Removal ratio is the percent of TOC removed by the treatment process divided by the percent of TOC required by TCEQ to be removed.

TOTAL COLIFORM

Total coliform bacteria are used as indicators of microbial contamination of drinking water because testing for them is easy. While not disease-causing organisms, they are often found in association with other microbes that are capable of causing disease. Coliform bacteria are more hardy than many disease-causing organisms; therefore, their absence from water is a good indication that the water is microbiologically safe for human consumption.

Contaminant	Year Sampled	Highest Monthly Number of Positive Samples	MCL	Unit of Measure	Potential Source of Contamination
Total Coliform Bacteria	2014	1	*	Presence	Naturally present in the environment.

*Two or more coliform found samples in any single month.

Fecal Coliform REPORTED MONTHLY TESTS FOUND NO FECAL COLIFORM BACTERIA

SECONDARY AND OTHER CONSTITUENTS NOT REGULATED (NO ASSOCIATED ADVERSE HEALTH EFFECTS)

Constituent	Year Sampled	Average Level	Minimum Level	Maximum Level	Secondary Limit	Unit of Measure	Potential Source of Contamination
Aluminum	2015	0.074	0.074	0.074	0.2	ppm	Abundant naturally occurring element.
Bicarbonate	2015	32.7	32.7	32.7	N/A	ppm	Corrosion of carbonate rocks such as limestone.
Calcium	2015	12.7	12.7	12.7	N/A	ppm	Abundant naturally occurring element.
Chloride	2015	64.1	64.1	64.1	300	ppm	Abundant naturally occurring element; used in water purification; byproduct of oil field activity.
Copper	2015	0.0024	0.0024	0.0024	1	ppm	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
Iron	2015	<0.02	<0.02	<0.02	0.3	ppm	Erosion of natural deposits; iron or steel water delivery equipment or facilities
Lead	2015	<0.0004	<0.0004	<0.0004	N/A	ppm	Corrosion of household plumbing systems; erosion of natural deposits.
Magnesium	2015	4.71	4.71	4.71	N/A	ppm	Abundant naturally occurring element.
Manganese	2015	0.003	0.003	0.003	0.05	ppm	Abundant naturally occurring element.
pH	2011	8.1	7.7	8.5	>7.0	units	Measure of corrosivity of water.
Sodium	2015	44.7	44.7	44.7	N/A	ppm	Erosion of natural deposits; byproduct of oil field activity.
Sulfate	2015	43.1	43.1	43.1	300	ppm	Naturally occurring; common industrial byproduct; byproduct of oil field activity.
Total Alkalinity as CaCO3	2015	32.7	32.7	32.7	N/A	ppm	Naturally occurring soluble mineral salts.
Total Dissolved Solids	2015	207.0	207.0	207.0	1000	ppm	Total dissolved mineral constituents in water.
Total Hardness as Magnesium	2015	51.2	51.2	51.2	N/A	ppm	Naturally occurring calcium.
Zinc	2015	0.0023	0.0023	0.0023	5	ppm	Moderately abundant naturally occurring elements used in the metal industry.

In the water loss audit submitted to Texas Water Development Board for the time period of Jan-Dec 2014, our system lost an estimated 57,695,145 gallons of water. If you have any questions about the water loss audit please call 903-657-5246.

TOTAL TRIHALOMETHANES (TTHM)

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 systems, and may have an increased risk of getting cancer.

Violation Type	Violation Begin	Violation End	Violation Explanation
N/A			

In July 2014 state analyzed a 141.7 ppb sample; MCL limit is 80ppb. Violation is based on a running average of 4 quarterly samples collected by state contractor. City is having an independent contract lab sample in between the state samples to insure issue is corrected; all samples since have been below MCL.

Definitions

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

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.

MFL: Million fibers per liter (a measure of asbestos)

MREM (millirems): a measure of radiation absorbed by the body.

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

NTU (Nephelometric

Turbidity Units):

A measure of clarity.

pCi/L (picocuries per liter): A measure of radioactivity.

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).

ppt: parts per trillion, or nanograms per liter.

PPQ: parts per quadrillion, or picograms per liter.

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

Quality First

Our Drinking Water Meets or Exceeds All Federal (EPA) Drinking Water Requirements

This report is a summary of the quality of the water we provide our customers. The analysis was made by using the data from the most recent U.S. Environmental Protection Agency (EPA) required tests and is presented in the following pages. We hope this information helps you become more knowledgeable about what's in your drinking water.

Where do we get our drinking water?

Water Sources: Carrizo Wilcox / Sabine River
Locations: Gregg and Rusk County
Types: Both Groundwater and Surface Water

The TCEQ completed an assessment of your source water and results indicate that some of our sources are susceptible to certain contaminants. The sampling requirements for your water system are based on this susceptibility and previous sample data. Any detections of these contaminants may be found in this report. For more information on source water assessments and protection efforts at our system, contact James Hughes (903)836-2858.

Some of this source water assessment information will be available on Texas Drinking Water Watch at <http://dww.tceq.state.tx.us/DWW/>.

Este informe incluye informacion importante sobre el agua potable. Si tiene preguntas o comentarios sobre este informe en espanol, favor de llamar al tel (903)657-6551- para hablar con una persona bilingue en espanol.

Important Health Information

You may be more vulnerable than the general population to certain microbial contaminants, such as Cryptosporidium, in drinking water. Infants, some elderly, or immunocompromised persons such as those undergoing chemotherapy for cancer; those who have undergone organ transplants; those who are undergoing treatment with steroids; and people with HIV/AIDS or other immune system disorders can be particularly at risk from infections.

Cryptosporidium is a tiny intestinal parasite found naturally in the environment. It is spread by human and animal waste. If ingested, cryptosporidium may cause cryptosporidiosis, and abdominal infection (symptoms include nausea, diarrhea, and abdominal cramps). Some of the ways cryptosporidium can be spread include drinking water contaminated water, eating contaminated food that is raw or under cooked, exposure to the feces of animals or infected individuals (i.e changing diapers without washing hands afterward), or exposure to contaminated surfaces. Not everyone exposed to the organism becomes ill. During 2009, Henderson tested for cryptosporidium in it source water (Sabine River). Cryptosporidium has not been found in the source water

(Sabine River). Henderson works to protect from contamination and optimizes the treatment process.

You should seek advice about drinking water from your physician or health care provider. Additional guidelines on appropriate means to lessen the risk of infection by Cryptosporidium are available from the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791 or visit <http://water.epa.gov/drink/hotline>.

EPA Wants You To Know:

That ALL drinking water may contain contaminants. When drinking water meets federal standards there may not be any health-based benefits to purchasing bottled water or point of use devices. 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 EPA's Safe Drinking Water Hotline (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, 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 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 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.

Many constituents (such as calcium, sodium, or iron), which are often found in drinking water, can cause, taste, color, and odor problems. The taste and odor constituents are called secondary constituents and are regulated by the State of Texas, not the EPA. These constituents are not cause for health concern. Therefore, secondaries are not required to be reported in this document but they may greatly affect the appearance and taste of your water.

2015 Sampling Results for Contaminants in Drinking Water for Henderson

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. The following information lists all of the federally regulated or monitored contaminants which have been found in your drinking water. The U.S. EPA requires water systems to test for up to 97 contaminants.

REGULATED CONTAMINANTS

Contaminant	Year Sampled	Average Level	Minimum Level	Maximum Level	MCL	MCLG	Unit of Measure	Potential Source of Contamination
INORGANIC CONTAMINANTS								
Arsenic	2015	<0.700	<0.700	0.700	10	0	ppb	Erosion of natural deposits, runoff from orchards, runoff from glass and electronics wastes.
Barium	2015	0.077	0.077	0.077	2	2	ppm	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Chromium	2015	<0.227	<0.200	0.618	100	100	ppb	Discharge from steel and pulp mills; erosion of natural deposits.
Cyanide	2015	<5.0	<5.0	<5.0	200	200	ppb	Discharge from plastic and fertilizer factories; Discharge from steel/metal factories.
Fluoride	2015	0.069	0.069	0.069	4	4	ppm	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Nitrate	2015	0.097	<0.01	0.242	10	10	ppm	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits.
Selenium	2015	<1.0	<1.0	<1.0	50	50	ppb	Discharge from petroleum and metal refineries, erosion of natural deposits, discharge from mines.
Thallium	2015	<0.2	<0.2	0.35	2	0.5	ppb	Leaching from ore processing sites discharge from electronics, glass, and drug factories.
Beta/photon emitters	2014	<4.0	<4.0	<4.0	50	0	pCi/L	Decay of natural and man-made deposits.
Combined Radium 226/228	2014	1.5	1.5	1.5	5	0	pCi/L	Erosion of natural deposits.
ORGANIC CONTAMINANTS								
Di(2-ethylhexyl)phthalate	2015	0.55	<0.5	0.7	6	0	ppb	Discharge from rubber and chemical factories.