

2016 DRINKING WATER QUALITY REPORT

McDonald Observatory

Fort Davis, Texas 79734
432-426-3263
TX 1220003

SPECIAL NOTICE

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. You should seek advice about drinking water your physician or health care provider. Additional guidelines on appropriate means to lessen the risk of infection by Cryptosporidium are available from the Safe Drinking Water Hotline at (800) 426-4791.

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 attached pages. We hope this information helps you become more knowledgeable about what's in your drinking water.

Source of Drinking Water

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 pickup 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.

Fluoride

Many public water systems are required by federal regulations to routinely analyze the fluoride levels in the drinking water they provide to consumers. Analyses of the drinking water at McDonald has found a level of 1.68 mg/l of fluoride. The U S Environmental Protection Agency (EPA) has set a standard for fluoride at 2.0 mg/l to minimize the occurrence of objectionable dental fluorosis.

Fluoride at the appropriate levels in the drinking water of children up to the age of nine, reduces cavities. However, children exposed to levels of fluoride greater than 1.0 to 2.0 mg/l may develop dental fluorosis in their permanent teeth. Dental fluorosis, in its moderate and sever forms, is a discoloration (brown staining) and pitting of teeth.

Because fluoride affects only developing teeth, households without children would not be expected to be affected by this level of fluoride. Individuals with children under the age of nine are encouraged to seek other sources of drinking water for their children.

The EPA Maximum Contaminant Level (mcl) for fluoride is 4.0 mg/l. That standard is based upon crippling skeletal fluorosis, which may result from levels of 4.0 mg/l or more. The MCL is an enforceable standard and has been set to protect public health.

Your water supplier can lower the concentration of fluoride to the level where beneficial effects still occur (cavity prevention) and where the occurrence of dental fluorosis is minimal. Treatment systems for the removal of fluoride from drinking water are also available for home use. Information on such systems is available at the above address. Low fluoride bottled drinking water that would meet all standards is also available.

Public Participation Opportunities

None Scheduled

Phone: 432-426-3263

Where do we get our drinking water?

Our drinking water is obtained from Ground water sources. We have 2 wells and all our water comes out of the Igneous Aquifer.

Source Water Name

- 1) 4 MI S of Mcd. Obs, Ground Water, Active, Location (Long)104.028066(Lat)30.637024
- 2) 2500' W of 1 Ground Water, Active, Location (Long) 104.023397(Lat)30.635252

The TCEQ completed an assessment of your source water and results indicate that some of your 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 Consumer Confident Report. For more information on source water assessments and protection efforts at our system, contact **Danny Spencer, 432-426-3263**

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 reasonable 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. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

Secondary Constituents

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 causes for health concerns. Therefore, secondaries are not required to be reported in this document but they may greatly affect the appearance and taste of your water.

About the Following page

The pages that follow list all the federally regulated or monitored constituents, which have been found in your drinking water. U.S. EPA requires water systems to test up to 97 constituents.

DEFINITIONS

Maximum Contaminant Level (MCL)

The highest permissible level of a contaminant in drinking water. MCL's are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal (MCLG)

The level of a contaminant in drinking water below which there is no known or expected health risk. MCLGs allow for a margin of safety.

Maximum Residual Disinfectant Level (MRDL)

The highest level of 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 contamination.

Treatment Technique (TT)

A required process intended to reduce the level of a contaminant in drinking water.

Action Level (AL)

The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

mrem: millirems per year (a measure of radiation absorbed by the body)

ppb: micrograms per liter or parts per billion - or one ounce in 7,350,000 gallons of water.

na: not applicable.

Avg: Regulatory compliance with some MCLs are based on running annual average of monthly samples.

ppm: milligrams per liter or parts per million - or one ounce in 7,350 gallons of water.

Abbreviations

NTU – Nephelometric Turbidity Units

MFL – million fibers per liter (a measure of asbestos)

pCi/l – Pico curies per liter (a measure of radioactivity)

ppm – parts per million or milligrams per liter (mg/l)

ppb – parts per billion or micrograms per liter (ug/l)

ppt – parts per trillion or nanograms per liter

ppq – parts per quadrillion or picograms per liter

Inorganic Contaminants

Date	Contaminant	Highest Single Sample	Range of Levels Detected	MCLG	MCL	Unit of Measure	Violation	Likely Source of Contamination
2016	Arsenic	1.3	1.3-1.3	0	10	ppb	N	Erosion of natural deposits; runoff From orchards; runoff from glass and electronics production wastes.
2016	Barium	0.0075	0.0075 - 0.0075	2	2	ppm	N	Discharge of drilling waste; discharge from metal refineries; erosion of natural deposits
2016	Fluoride	1.84	1.84 – 1.84	4	4.0	ppm	N	Erosion of natural deposits; Water additives, which promotes strong teeth; Discharge from fertilizers and aluminum factories.
2016	Nitrates (measured as Nitrogen)	1	0.527 - 0.527	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
2016	Beryllium	0.37	0.37 – 0.37	4	4	ppb	N	Discharge from metal refineries and coal-burning factories; Discharge from electrical ,aerospace and defense industries.
2016	Chromium	1.3	1.3 – 1.3	100	100	ppb	N	Discharge form steel and pulp mills; Erosion of natural deposits.

Radioactive Contaminants

Date	Contaminant	Highest Single Sample	Range of Levels Detected	MCLG	MCL	Unit of Measure	Violation	Likely Source of Contamination
2013	Gross Alpha Compliance	7.5	7.5-7.5	0	15	pCi/L	N	Erosion of natural deposits.

2016 Regulated Contaminants Detected

Lead and Copper

Definitions:

Action Level Goal (ALG): The level of a contaminant in drinking water below which there is no known or expected risk to health. ALGs allow for a margin of safety.

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

Lead and Copper

Date	Contaminant	MCLG	Action Level (AL)	90 th Percentile	# Sites Over AL	Unit	Viol	Likely Source of Constituent
2016	Copper	1.3	1.3	0.0934	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
2016	Lead	0	15	10.3	0	ppb	N	Corrosion of household plumbing systems. Erosion of natural deposits.

Violations Table

Lead and Copper Rule			
The Lead and Copper Rule protects public health by minimizing lead and copper levels in drinking water, primarily by reducing water corrosivity. Lead and copper enter drinking water mainly from corrosion of lead and copper containing plumbing materials.			
Violation Type	Violation Begin	Violation End	Violation Explanation
FOLLOW-UP OR ROUTINE TAP M/R (LCR)	10/01/2015	07/22/2016	We failed to test our drinking water for the contaminant and period indicated. Because of this failure, we cannot be sure of the quality of our drinking water during the period indicated.

Public Notification Rule

The Public Notification Rule helps to ensure that consumers will always know if there is a problem with their drinking water. These notices immediately alert consumers if there is a serious problem with drinking water (e.g. a boil water emergency)

Violation Type	Violation Begin	Violation End	Violation Explanation
PUBLIC NOTICE RULE LINKED TO VIOLATION	02/08/2016	07/27/2016	We failed to adequately notify you, our drinking consumers, about a violation of the drinking water regulations.

“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>.”

Year	Disinfectant	Average Level	Min Level	Max Level	MRDL	MRDLG	Unit of Measure	Source of Chemical
2015	Gas Chlorine	0.6125	0.23	1.35	4.0	<4.0	ppm	Disinfectant used to control microbes