2018 Annual Drinking Water Quality Report

(Consumer Confidence Report)

Grand Harbor/Gemstone

PWS # TX1700643

936-756-7400

Annual Water Quality Report for the period of January 1 to December 31, 2018

This report is intended to provide you with important information about your drinking water and the efforts made by the water system to provide safe drinking water.

For more information regarding this report contact:

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Phone: **936-756-7400**

En Español : Este informe incluye información importante sobre el agua potable. Si tiene preguntas o comentarios sobre éste informe en español, favor de llamar al tel. **936-756-7400** para hablar con una persona bilingüe en español.

SPECIAL NOTICE

Required language for ALL community public water supplies:

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.

Drinking water, including bottle 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 EPAs Safe Drinking Water Hotline at (800) 426-4791.

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 which must provide the same protections for public health.

Contaminants may be found in drinking water that may cause taste, color, or odor problems. These types of problems are not necessarily causes for health concerns. For more information on taste, odor, or color of drinking water, please contact the system's business office.

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; persons 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 from 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).

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. We are 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 http://www.epa.gov/safewater/lead.

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
- 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.

Information about 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 concern. Therefore, secondaries are not required to be reported in this document but they may greatly affect the appearance and taste of your water.

Information about Source Water: 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 is based on this susceptibility and previous sample data. Any detections of these contaminants will be found in this Consumer Confidence Report. For more information on source water assessments and protection efforts at our system contact Ron Payne at 936-756-7400.

Our ground water source is from the Gulf Coast Aquifers.

For more information about your sources of water, please refer to the Source Water Assessment Viewer available at the following URL: https://www.tceq.texas.gov/gis/swaview

Further details about sources and source water, assessments are available in Drinking Water Watch at the following URL: http://dww2.tceq.texas.gov/DWW/

Water Quality Test Results

Definitions:	**The following tables contain scientific terms and measures, some of which may require explanation**.
Action Level:	The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
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.
Avg:	Regulatory compliance with some MCLs are based on running annual average of monthly samples.
Maximum Contaminant Level or MCL:	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.
Level 1 Assessment:	A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.
Maximum Contaminant Level Goal or MCLG:	The level of a contaminant in drinking water below which there is no known or expected risk to health. MGLGs allow for a margin of safety.
Level 2 Assessment:	A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.
Maximum residual disinfectant level or 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 or 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.
MFL:	Million fibers per liter (a measure of asbestos)
na:	not applicable
mrem:	millirems per year (a measure of radiation absorbed by the body)
NTU:	Nephelometric turbidity units (a measure of turbidity)
pCi/L	Picocuries per liter (a measure of radioactivity)
ppb:	micrograms per liter or parts per billion – or one ounce in 7,350,000 gallons of water

ppm: Treatment Technique or TT: ppt: ppq:		milligrams per liter or parts per million – or one ounce in 7,350 gallons of water A required process intended to reduce the level of a contaminant in drinking water. parts per trillion, or nanograms per liter (ng/L) parts per quadrillion, or pictograms per liter (pg/L)

Coliform Bacteria

Maximum Contaminant Level Goal	Total Coliform Maximum Contaminant Level	Highest No. of Positive	Fecal Coliform or E. Coli Maximum Contaminant Level	Total No. of Positive E.Coli or Fecal Coliform Samples	Violation	Likely Source of Contamination
0	1 positive monthly sample	There were no TCR detections for this system in this CCR period	0	0	N	Naturally present in the environment.

Regulated Contaminants

Collection Date	Disinfectants and Disinfection ByProducts	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units of Measure	Violations	Likely Source of Contaminant
08/05/2010	Haloacetic Acids (HAAS)*	1	0 -1	No goal for the total	60	ppb	N	By-product of drinking water chlorination.
Not all sample results may have been used for calculating the Highest Level Detected because some results may be part of an evaluation to determine where compliance sampling should occur in the future								
2017	Total Trihalomethanes (TThm)	22	21.7 – 21.7	No goal for the total	80	ppb	N	By-product of drinking water disinfection.
Not all sample results may have been used for calculating the Highest Level Detected because some results may be part of an evaluation to determine where compliance sampling should occur in the future								

Inorganic Contaminants

Collection Date	Disinfectants and Disinfection ByProducts	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units of Measure	Violations	Likely Source of Contaminant
03/12/2009	Antimony	Levels lower than detect level	0 - 0	6	6	ppb	N	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder; test addition.
03/12/2009	Arsenic	Levels lower than detect level	0 - 0	0	10	ppb	N	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
2018	Barium	0.146	0.122 – 0.146	2	2	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
03/12/2009	Beryllium	Levels lower than detect level	0 - 0	4	4	ppb	N	Discharge from metal refineries and coal-burning factories; Discharge from electrical, aerospace and defense.
03/12/2009	Cadmium	Levels lower than detect level	0 - 0	5	5	ppb	N	Corrosion of galvanized pipes; Erosion of natural deposits; Discharge from metal refineries; runoff from waste batteries.
03/12/2009	Chromium	Levels lower than detect level	0 - 0	100	100	ppb	N	Discharge from steel and pulp mills; Erosion of natural deposits.
2018	Fluoride	0.14	0.14 – 0.14	4	4.0	ppm	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
03/12/2009	Mercury	Levels lower than detect level	0 - 0	2	2	ppb	N	Erosion of natural deposits; Discharge from refineries and factories; Runoff from landfills; Runoff from cropland.
2015	Nitrate (measured as Nitrogen)	0.04	0.01 – 0.04	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Nitrate Advisory – Nitrate in drinking water at levels above 10 ppm is a health risk for infants or less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant you should ask advice from your health care provider.								
03/12/2009	Selenium	Levels lower than detect level	0 – 0	50	50	ppb	N	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.
03/12/2009	Thallium	Levels lower than detect level	0 - 0	0.5	2	ppb	N	Discharge from electronics, glass, and Leaching from ore-processing sites; drug factories.

Radioactive Contaminants

Collection Date	Disinfectants and Disinfection ByProducts	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units of Measure	Violations	Likely Source of Contaminant
12/15/2016	Beta/photon emitters	7.5	7.5 – 7.5	0	50	pCi/L*	N	Decay of natural and man-made deposits.
9/9/2015	Combined Radium 226/228	3	3 - 3	0	5	pCi/L	N	Erosion of natural deposits.
12/15/2016	Gross alpha excluding radon and uranium	3.5	3.5 – 3.5	0	15	pCi/L	N	Erosion of natural deposits.

***EPA considers 50 pCi/L to be the level of concern for beta particles**

Synthetic Organic Contaminants including pesticides

Collection Date	Disinfectants and Disinfection ByProducts	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units of Measure	Violations	Likely Source of Contaminant
2012	2,4 D	.4	0 – 0.4	70	70	ppb	N	Runoff from herbicide used on row crops.
03/24/2010	Alachlor	Levels lower than detect level	0 – 0	0	2	ppb	N	Runoff from herbicide used on row crops.
03/24/2010	Atrazine	Levels lower than detect level	0 – 0	3	3	ppb	N	Runoff from herbicide used on row crops.
03/24/2010	Benzo (a) pyrene	Levels lower than detect level	0 – 0	0	200	ppt	N	Leaching from linings of water storage tanks and distribution lines.
03/24/2010	Chlordane	Levels lower than detect level	0 – 0	0	2	ppb	N	Residue of banned termiticide.
08/05/2010	Dalapon	Levels lower	0 – 0	200	200	ppb	N	Runoff from herbicide used on rights

		than detect level						of way.
03/24/2010	Di (2-ethylhexyl) adipate	Levels lower than detect level	0 – 0	400	400	ppb	N	Discharge from chemical factories.
03/24/2010	Di (2-ethylhexyl) phthalate	Levels lower than detect level	0 – 0	0	6	ppb	N	Discharge from rubber and chemical factories..
11/27/2006	Dibromochloropropane (DBCP)	Levels lower than detect level	0 – 0	0	0	ppt	N	Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards.
03/24/2010	Endrin	Levels lower than detect level	0 – 0	2	2	ppb	N	Residue of banned insecticide.
11/27/2006	Ethylene dibromide	Levels lower than detect level	0 – 0	0	50	ppt	N	Discharge from petroleum refineries.
03/24/2010	Heptachlor	Levels lower than detect level	0 – 0	0	400	ppt	N	Residue of banned termiticide.
03/24/2010	Heptachlor epoxide	Levels lower than detect level	0 – 0	0	200	ppt	N	Breakdown of heptachlor.
03/24/2010	Hexachlorobenzene	Levels lower than detect level	0 – 0	0	1	ppb	N	Discharge from metal refineries and agricultural chemical factories.
03/24/2010	Hexachlorocyclopentadiene	Levels lower than detect level	0 – 0	50	50	ppb	N	Discharge from chemical factories.
03/24/2010	Lindane	Levels lower than detect level	0 – 0	200	200	ppt	N	Runoff/leaching from insecticide used on cattle, lumber, gardens.
03/24/2010	Methoxychlor	Levels lower than detect level	0 – 0	40	40	ppb	N	Runoff/leaching from insecticide used on fruits, vegetables, alfalfa, livestock.
03/24/2010	Pentachlorophenol	Levels lower than detect level	0 – 0	0	1	ppb	N	Discharge from wood preserving factories.
03/24/2010	Simazine	Levels lower than detect level	0 – 0	4	4	ppb	N	Herbicide runoff.
03/24/2010	Toxaphene	Levels lower than detect level	0 – 0	0	3	ppb	N	Runoff/leaching from insecticide used on cotton and cattle.

Volatile Organic Contaminants

Collection Date	Disinfectants and Disinfection ByProducts	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units of Measure	Violations	Likely Source of Contaminant
2010	1,1,1 – Trichloroethane	Levels lower than detect level	0 – 0	200	200	ppb	N	Discharge from metal degreasing sites and other factories.
2010	1,1,2 - Trichloroethane	Levels lower than detect level	0 – 0	3	5	ppb	N	Discharge from industrial chemical factories.
2010	1,1 - Dichloroethylene	Levels lower than detect level	0 – 0	7	7	ppb	N	Discharge from industrial chemical factories.
2010	1,2,4 - Trichlorobenzene	Levels lower than detect level	0 – 0	70	70	ppb	N	Discharge from textile-finishing factories.
2010	1,2 - Dichloroethane	Levels lower than detect level	0 – 0	0	5	ppb	N	Discharge from industrial chemical factories.
2010	1,2 - Dichloropropane	Levels lower than detect level	0 – 0	0	5	ppb	N	Discharge from industrial chemical factories.
2010	Benzene	Levels lower than detect level	0 – 0	0	5	ppb	N	Discharge from factories; Leaching from gas storage tanks and landfills.
2010	Carbon Tetrachloride	Levels lower than detect level	0 – 0	0	5	ppb	N	Discharge from chemical plants and other industrial activities.
2010	Chlorobenzene	Levels lower than detect level	0 – 0	100	100	ppb	N	Discharge from chemical and agricultural chemical factories.
2010	Dichloromethane	Levels lower than detect level	0 – 0	0	5	ppb	N	Discharge from pharmaceutical and chemical factories.
2010	Ethylbenzene	Levels lower than detect level	0 – 0	700	700	ppb	N	Discharge from petroleum refineries.
2010	Styrene	Levels lower than detect level	0 – 0	100	100	ppb	N	Discharge from rubber and plastic factories; Leaching from landfills.
2010	Tetrachloroethylene	Levels lower than detect level	0 – 0	0	5	ppb	N	Discharge from factories and dry cleaners.
2010	Toluene	Levels lower than detect level	0 – 0	1	1	ppm	N	Discharge from petroleum factories.
2010	Trichloroethylene	Levels lower than detect level	0 – 0	0	5	ppb	N	Discharge from metal degreasing sites and other factories.
2010	Vinyl Chloride	Levels lower than detect level	0 – 0	0	2	ppb	N	Leaching from PVC piping; Discharge from plastics factories.
2010	Xylenes	Levels lower than detect level	0 – 0	10	10	ppm	N	Discharge from petroleum factories; Discharge from chemical factories.
2010	Cis – 1,2 - Dichloroethylene	Levels lower than detect level	0 – 0	70	70	ppb	N	Discharge from industrial chemical factories.
2010	o – Dichlorobenzene	Levels lower than detect level	0 – 0	600	600	ppb	N	Discharge from industrial chemical factories.
2010	p – Dichlorobenzene	Levels lower than detect level	0 – 0	75	75	ppb	N	Discharge from industrial chemical factories.
2010	trans – 1,2 - Dicholoroethylene	Levels lower than detect level	0 – 0	100	100	ppb	N	Discharge from industrial chemical factories.

Lead & Copper

Collection Date		MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Units of Measure	Violations	Likely Source of Contaminant
2018	Copper	1.3	1.3	0.607	1	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
2018	Lead	0	15	0.7	0	ppb	N	Corrosion of household plumbing systems; Erosion of natural deposits.

Disinfectant Residual Table

Disinfectant	Year	Average Level	Minimum Level	Maximum Level	MRDL	MRDLG	Unit of Measure	Violation (Y/N)	Likely Source of Contamination
Chlorine	2018	1.06	0.55	1.60	4.0	4.0	ppm	N	Water additive used to control microbes.

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
LEAD CONSUMER NOTICE (LCR)	12/30/2018	2018	We failed to provide the results of lead tap water monitoring to the consumers at the location water was tested. These were supposed to be provided no later than 30 days after learning the results.

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 their drinking water (e.g., a boil water emergency).

Violation Type	Violation Begin	Violation End	Violation Explanation
PUBLIC NOTICE RULE LINKED TO VIOLATION	02/03/2017	10/19/2018	We failed to adequately notify you, our drinking water consumers, about a violation of the drinking water regulations.