



2021 Annual Drinking Water Quality Report

DeSoto Correction Institution PWS #6140451



APRIL 20, 2022
DESOTO COUNTY UTILITIES
2170 N.E. Roan Street

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Water Source, Source Water Plans and Treatment

We're pleased to present to you this year's 2021 Annual Drinking Water Quality Report. This report is designed to inform you about the quality water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water. Our source is a ground water supply from both Sacrificial and Floridian aquifer. The water is treated for drinking by the reverse osmosis process, and is disinfected by chlorine.

In 2021 the "Florida Department of Environmental Protection performed a source Water Assessment for PRMRWSA. The assessment results are available on the FDEP Source Water Assessment and Protection Program website at www.dep.stat.fl.us/swapp or they can be obtained from the supplier www.regionalwat

Basic Statement of Compliance

This report shows our water quality results and what they mean.

Contact Information

If you have any questions about this report or concerning your water utility, please contact the Utility Office at 863-491-7500. We encourage our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled meetings. They are held on the second and fourth Tuesday of every month.

Period Covered by Report

DeSoto Correctional Institution routinely monitors for contaminants in your drinking water according to Federal and State laws, rules, and regulations. Except where indicated otherwise, this report is based on the results of our lab results for the period of January 1 to December 31, 2021. Data obtained before January 1, 2022 and presented in this report are from the most recent testing done in accordance with the laws, rules, and regulations.

Terms and Abbreviations

"In the table below, you may find unfamiliar terms and abbreviations. To help you better understand these terms we've provided the following definitions: ..."

"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."

"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. MCLGs allow for a margin of safety.

“Million fibers per liter (MFL): measure of the presence of asbestos fibers that are longer than 10 micrometers.”

“Millirem per year (mrem/yr.): measure of radiation absorbed by the body.”

“Nephelometric Turbidity Unit (NTU): measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.”

“‘ND’ means not detected and indicates that the substance was not found by laboratory analysis.”

“Parts per billion (ppb) or micrograms per liter (µg/l): one part by weight of analyte to 1 billion parts by weight of the water sample.”

“Parts per million (ppm) or milligrams per liter (mg/l): one part by weight of analyte to 1 million parts by weight of the water sample.”

“Parts per quadrillion (ppq) or picograms per liter (picograms/l): one part by weight of analyte to 1 quadrillion parts by weight of the water sample.”

“Parts per trillion (ppt) or nanograms per liter (nanograms/l): one part by weight of analyte to 1 trillion parts by weight of the water sample.”

“Picocurie per liter (pCi/L): measure of the radioactivity in water.”

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

“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.”

“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.”

Water Quality Test Result

Radioactive Contaminants

Contaminant and Unit of Measurement	Dates of sampling (mo/yr)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Alpha emitters (pCi/L)	8/2021	N	9.09	N/A	0	15	Decay of natural and man-made deposits
Radium 226 (pCi/L)	8/2021	Y	9.01	N/A	0	5	Erosion of natural deposits
Radium 228 (pCi/L)	8/2021	N	N/D	N/A	0	5	Erosion of natural deposits

Contaminant and Unit of Measurement	Dates of sampling (mo/yr)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Uranium (µg/L)	8/2021	N	0	N/A	0	30	Erosion of natural deposits

Results in the Level Detected column for radioactive contaminants are the highest average at any of the sampling points or the highest detected level at any sampling point, depending on the sampling frequency.

Inorganic Contaminants

Contaminant and Unit of Measurement	Dates of sampling (mo/yr)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Antimony (ppb)	8/2021	N	N/D	N/A	6	6	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
Arsenic (ppb)	8/2021	N	N/D	N/A	0	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium (ppm)	8/2021	N	0.022	N/A	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Beryllium (ppb)	8/2021	N	N/D	N/A	4	4	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries

Contaminant and Unit of Measurement	Dates of sampling (mo/yr)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Cadmium (ppb)	8/2021	N	N/D	N/A	5	5	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints
Chromium (ppb)	8/2021	N	N/D	N/A	100	100	Discharge from steel and pulp mills; erosion of natural deposits
Cyanide (ppb)	8/2021	N	N/D	N/A	200	200	Discharge from steel/metal factories; discharge from plastic and fertilizer factories
Fluoride (ppm)	8/2021	N	1.1	N/A	4	4.0	Erosion of natural deposits; discharge from fertilizer and aluminum factories. Water additive which promotes strong teeth when at the optimum level of 0.7 ppm
Lead (point of entry) (ppb)	8/2021	N	N/D	N/A	0	15	Residue from man-made pollution such as auto emissions and paint; lead pipe, casing, and solder

Contaminant and Unit of Measurement	Dates of sampling (mo/yr)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Mercury (inorganic) (ppb)	8/2021	N	N/D	N/A	2	2	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills; runoff from cropland
Nickel (ppb)	8/2021	N	N/D	N/A	N/A	100	Pollution from mining and refining operations. Natural occurrence in soil
Nitrate (as Nitrogen) (ppm)	8/2021	N	0.038	N/A	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nitrite (as Nitrogen) (ppm)	8/2021	N	N/D	N/A	1	1	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium (ppb)	8/2021	N	N/D	N/A	50	50	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Sodium (ppm)	8/2021	N	59.2	N/A	N/A	160	Saltwater intrusion, leaching from soil
Thallium (ppb)	8/2021	N	N/D	N/A	0.5	2	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories

Results in the Level Detected column for inorganic contaminants are the highest average at any of the sampling points or the highest detected level at any sampling point, depending on the sampling frequency.

Synthetic Organic Contaminants including Pesticides and Herbicides

Contaminant and Unit of Measurement	Dates of sampling (mo/yr)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
2,4-D (ppb)	8/2021	N	N/D	N/A	70	70	Runoff from herbicide used on row crops
2,4,5-TP (Silvex) (ppb)	8/2021	N	N/D	N/A	50	50	Residue of banned herbicide
Alachlor (ppb)	8/2021	N	N/D	N/A	0	2	Runoff from herbicide used on row crops
Atrazine (ppb)	8/2021	N	N/D	N/A	3	3	Runoff from herbicide used on row crops
Benzo(a)pyrene (PAH) (nanograms/l)	8/2021	N	N/D	N/A	0	200	Leaching from linings of water storage tanks and distribution lines
Carbofuran (ppb)	8/2021	N	N/D	N/A	40	40	Leaching of soil fumigant used on rice and alfalfa
Chlordane (ppb)	8/2021	N	N/D	N/A	0	2	Residue of banned termiticide
Dalapon (ppb)	8/2021	N	0.49	N/A	200	200	Runoff from herbicide used on rights of way
3. Di(2-ethylhexyl) adipate (ppb)	8/2021	N	N/D	N/A	400	400	Discharge from chemical factories
Di(2-ethylhexyl) phthalate (ppb)	8/2021	N	N/D	N/A	0	6	Discharge from rubber and chemical factories
Dibromochloropropane (DBCP) (nanograms/l)	8/2021	N	N/D	N/A	0	200	Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards
Dinoseb (ppb)	8/2021	N	N/D	N/A	7	7	Runoff from herbicide used on soybeans and vegetables
Diquat (ppb)	8/2021	N	N/D	N/A	20	20	Runoff from herbicide use
Endothall (ppb)	8/2021	N	N/D	N/A	100	100	Runoff from herbicide use
Endrin (ppb)	8/2021	N	N/D	N/A	2	2	Residue of banned insecticide
Ethylene dibromide (nanograms/l)	8/2021	N	N/D	N/A	0	20	Discharge from petroleum refineries

Contaminant and Unit of Measurement	Dates of sampling (mo/yr)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Glyphosate (ppb)	8/2021	N	N/D	N/A	700	700	Runoff from herbicide use
Heptachlor (nanograms/l)	8/2021	N	N/D	N/A	0	400	Residue of banned termiticide
Heptachlor epoxide (nanograms/l)	8/2021	N	N/D	N/A	0	200	Breakdown of heptachlor
Hexachlorobenzene (ppb)	8/2021	N	N/D	N/A	0	1	Discharge from metal refineries and agricultural chemical factories
Hexachlorocyclopentadiene (ppb)	8/2021	N	N/D	N/A	50	50	Discharge from chemical factories
Lindane (nanograms/l)	8/2021	N	N/D	N/A	200	200	Runoff/leaching from insecticide used on cattle, lumber, gardens
Methoxychlor (ppb)	8/2021	N	N/D	N/A	40	40	Runoff/leaching from insecticide used on fruits, vegetables, alfalfa, livestock
Oxamyl [Vydate] (ppb)	8/2021	N	N/D	N/A	200	200	Runoff/leaching from insecticide used on apples, potatoes and tomatoes
PCBs [Polychlorinated biphenyls] (nanograms/l)	8/2021	N	N/D	N/A	0	500	Runoff from landfills; discharge of waste chemicals
Pentachlorophenol (ppb)	8/2021	N	N/D	N/A	0	1	Discharge from wood preserving factories
Picloram (ppb)	8/2021	N	N/D	N/A	500	500	Herbicide runoff
Simazine (ppb)	8/2021	N	N/D	N/A	4	4	Herbicide runoff
Toxaphene (ppb)	8/2021	N	N/D	N/A	0	3	Runoff/leaching from insecticide used on cotton and cattle

Results in the Level Detected column for synthetic organic contaminants are the highest average at any of the sampling points or the highest detected level at any sampling point, depending on the sampling frequency.

Stage 2 Disinfectants and Disinfection By-Products

Contaminant and Unit of Measurement	Dates of sampling (mo/yr)	MCL Violation (Y/N)	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Haloacetic Acids (HAA5) (ppb)	1/2021-12/2021	N	15.25	13.0-18.0	N/A	60	By-product of drinking water disinfection
Total Trihalomethanes (TTHM) (ppb)	1/2021-12/2021	Y	101.75(Highest LRAA)	44.0-101.75	N/A	80	By-product of drinking water disinfection
Total Trihalomethanes (TTHM) (ppb)	1/2021-12/2021	Y	101.75	79.25-101.75	N/A	80	By-product of drinking water disinfection
Total Trihalomethanes (TTHM) (ppb)	1/2021-12/2021	Y	84.75	44.0-84.75	N/A	80	By-product of drinking water disinfection

Example #2: TTHM Monitoring Results (ppb)	1st quarter 2021	2nd quarter 2021	3rd quarter 2021	4th quarter 2021
Site 1** Quarterly Results	100.0	90.0	79.0	81.0
Site 1** – LRAA*	79.25	101.75	91.5	87.5
Site 2** Quarterly Results	110.0	67.0	81.0	81.0
Site 2** – LRAA*	44.0	60.75	64.5	84.75

Lead and Copper (Tap Water)

Contaminant and Unit of Measurement	Dates of sampling (mo/yr)	AL Exceeded (Y/N)	90 th Percentile Result	No. of sampling sites exceeding the AL	MCLG	AL (Action Level)	Likely Source of Contamination
Copper (tap water) (ppm)	6/2021	N	0.0089	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (tap water) (ppb)	6/2021	N	0.22	0	0	15	Corrosion of household plumbing systems; erosion of natural deposits

SECONDARY CONTAMINANTS TABLE

Secondary Contaminants

Contaminant and Unit of Measurement	Dates of sampling (mo/yr)	MCL Violation Y/N	Highest Result	Range of Results	MCLG	MCL	Likely Source of Contamination
Aluminum (ppm)	8/2021	N	N/D	N/A		0.2	Natural occurrence from soil leaching
Chloride (ppm)	8/2021	N	87.0	N/A		250	Natural occurrence from soil leaching
Color (color units)	8/2021	N	5	N/A		15	Naturally occurring organics
Copper (ppm)	8/2021	N	0.0043	N/A		1	Corrosion byproduct and natural occurrence from soil leaching

Contaminant and Unit of Measurement	Dates of sampling (mo/yr)	MCL Violation Y/N	Highest Result	Range of Results	MCLG	MCL	Likely Source of Contamination
Fluoride (ppm)	8/2021	N	1.1	N/A		2.0	Erosion of natural deposits; discharge from fertilizer and aluminum factories. Water additive which promotes strong teeth when at the optimum level of 0.7 ppm
Foaming Agents (ppm)	8/2021	N	N/D	N/A		0.5	Pollution from soaps and detergents
Iron (ppm)	8/2021	N	N/D	N/A		0.3	Natural occurrence from soil leaching
Manganese (ppm)	8/2021	N	N/D	N/A		0.05	Natural occurrence from soil leaching
Odor (threshold odor number)	8/2021	N	1	N/A		3	Naturally occurring organics
Silver (ppm)	8/2021	N	N/D	N/A		0.1	Natural occurrence from soil leaching
Zinc (ppm)	8/2021	N	0.00550	N/A		5	Natural occurrence from soil leaching
Sulfate (ppm)	8/2021	N	93.4	N/A		250	Natural occurrence from soil leaching
Total Dissolved Solids (ppm)	8/2021	N	472	N/A		500	Natural occurrence from soil leaching

Reporting Violations

SITUATION

The Department of Environmental Protection requires disinfection of drinking water to inactivate possible pathogens, because the health benefits of disinfection far outweigh its risks. However, When used in the treatment of drinking water, some disinfectants combine with organic and inorganic matter present in the water to form chemicals called disinfection byproducts (DBPs). A number of DBPs such as Total Trihalomethanes (TTHMs) and Haloacetic Acids (HAA5s) may be a health concern at certain levels of exposure.

The laboratory analyses results for the four most recent sets of consecutive quarterly samples for TTHMs collected on October 20, July 21, April 15, and January 20, 2021, from the Desoto Correctional Institution public drinking water system indicates running annual average TTHM concentrations of 87.5, and 84.75 micrograms per liter (ug/L) at each of the two locations that were sampled. Therefore, the Department has determined that this water system has generated Maximum Contaminant Level (MCL) violations for TTHMs at both locations, since Table 3 of Rule 62-550.310, Florida Administrative Code (F.A.C.), identifies the MCL for TTHMs as 80 ug/L.

HEALTH EFFECTS

Some people who drink water containing Trihalomethanes in excess of the Maximum Contaminant Level over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer.

Haloacetic acids (five) (HAA5): Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

TTHM [Total Trihalomethanes]. 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.

WHAT SHOULD CUSTOMERS DO?

This is not an emergency. If it had been an emergency, you would have been notified within 24 Hours. There is nothing you need to do. You do not need to boil your water or take other corrective Actions. If a situation arises where the water is no longer safe to drink, you will be notified within 24 Hours.

If you have a severely compromised immune system, have an infant, are pregnant, or are elderly, You may be at increased risk and should seek advice from your health care providers about Drinking this water.

WHAT IS BEING DONE?

In an effort to reduce THM formation our water system has taken the following corrective actions: on July 22, 2021, we installed a mixer in our ground storage tank, on June 24, 2021, we had both our elevated storage tank and our clear well cleaned and inspected, on January 22, 2021, we had our ground storage tank cleaned and inspected, and a flushing program has been implemented in the distribution system to reduce water age.

SITUATION

The Desoto Correctional Institution public drinking water system failed to perform quarterly Compliance monitoring for the Radiological Contaminants of Radium 226 and Radium 228 During the fourth calendar quarter of 2021, and also failed

to report a valid sample result for the Synthetic Organic Contaminant (SOC) of Diquat for the 2021 calendar year. These are monitoring and reporting violations of Rules 62-550.519, and 62-550.516, Florida Administrative Code (F.A.C.).

HEALTH EFFECTS

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets Health standards. We did not perform monitoring for the Radiological contaminants of Radium 226 and Radium 228 during the fourth calendar quarter of 2021, and did not provide the Department with a valid result for the SOC of Diquat for the 2021 calendar year. Therefore we Cannot be sure of the quality of your drinking water (with respect to these contaminants) during Those times.

Combined Radium. Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.

Diquat. Some people who drink water containing diquat in excess of the MCL over many years could get cataracts.

WHAT IS BEING DONE?

In order to verify the current quality of the drinking water with respect to Radium 226 and Radium 228, and Diquat our water system is now required to collect samples for these Contaminants as soon as possible, but by no later January 31, 2022. Please note that at this time Our water system is not in violation of any Maximum Contaminant Levels with respect to Radium 226 and Radium 228, or Diquat.

Required Language

“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. Desoto County 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 two 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>.”

“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:

- (A) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- (B) 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.
- (C) Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff and residential uses.
- (D) 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.

(E) Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

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

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 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 at 1-800-426-4791."

Vulnerable Population Language

"Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. U.S. Environmental Protection Agency/Center for Disease Control 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)."

Closing

"Please DO NOT FLUSH your unused/unwanted medications down toilets or sink drains. More information is available at <http://www.dep.state.fl.us/waste/categories/medications/pages/disposal.htm>."

"We at Desoto County Utilities would like you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water. If you have any questions or concerns about the information provided, please feel free to call any of the numbers listed."

