



ANNUAL WATER QUALITY REPORT

Reporting Year 2023

Presented By
Nueces County WCID #4

Este reporte incluye información importante sobre el agua para tomar. Para asistencia en español, favor de llamar al teléfono (361) 749-5201.

PWS ID#: TX1780006

Our Commitment

We are pleased to present to you this year's annual water quality report. This report is a snapshot of last year's water quality covering all testing performed between January 1 and December 31, 2023. Included are details about your sources of water, what it contains, and how it compares to standards set by regulatory agencies. 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 and providing you with this information because informed customers are our best allies.

Where Does My Water Come From?

All the drinking water supplied by Nueces County Water Control and Improvement District No. 4 comes from a surface water system consisting of Lake Corpus Christi, Choke Canyon Reservoir, and Lake Texana. Water stored in Lake Corpus Christi and Choke Canyon makes its way down the Nueces River to intake pumps at Calallen. The untreated river water is moved by pipeline either to the O. N. Stevens Water Treatment Plant near Calallen or the San Patricio Municipal Water District treatment plant near Ingleside. Lake Texana water is pumped through the 101-mile Mary Rhodes Pipeline directly to the O. N. Stevens treatment plant, where it is blended with water from the Nueces River.

Nueces County Water Control and Improvement District No. 4 purchases treated water from San Patricio Municipal Water District through our pumping station located in Aransas Pass and from Corpus Christi through the pumping station located just north of Mustang Island State Park on Highway 361. Both treatment plants purify water through a process of chemical treatment, settling, filtration, and disinfection. Water treatment chemicals are added to remove impurities, kill harmful bacteria, eliminate tastes and odors, and help prevent tooth decay. The same quality drinking water is delivered to all residential, commercial, and industrial customers. For more information, visit Drinking Water Watch at dww2.tceq.texas.gov/DWWW/.



Source Water Assessment

The Texas Commission on Environmental Quality completed a source water assessment for all drinking water systems that own their sources. The report describes the susceptibility and types of constituents that may come into contact with your drinking water source based on human activities and natural conditions. The system from which we purchase our water received the assessment report. For more information on source water assessments and protection efforts at our system, contact Scott Mack, District Manager, at (361) 749-5201. To view the source water assessment report, visit tceq.texas.gov/gis/swaview.

Water Conservation Tips

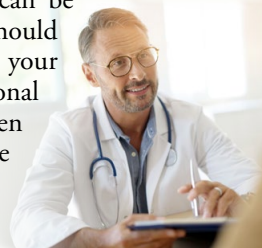
You can play a role in conserving water and save yourself money in the process by becoming conscious of the amount of water your household is using and looking for ways to use less whenever you can. It is not hard to conserve water. Here are a few tips:



- Automatic dishwashers use four to six gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.
- Turn off the tap when brushing your teeth.
- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.
- Check your toilets for leaks by putting a few drops of food coloring in the tank. Watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from an invisible toilet leak. Fix it and you save more than 30,000 gallons a year.
- Use your water meter to detect hidden leaks. Simply turn off all taps and water-using appliances. Then check the meter after 15 minutes. If it moved, you have a leak.

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. 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.



What's a Cross-Connection?

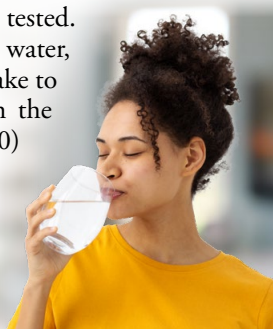
Cross-connections that contaminate drinking water distribution lines are a major concern. A cross-connection is formed at any point where a drinking water line connects to equipment (boilers), systems containing chemicals (air-conditioning systems, fire sprinkler systems, irrigation systems), or water sources of questionable quality. Cross-connection contamination can occur when the pressure in the equipment or system is greater than the pressure inside the drinking water line (backpressure). Contamination can also occur when the pressure in the drinking water line drops due to fairly routine occurrences (main breaks, heavy water demand), causing contaminants to be sucked out from the equipment and into the drinking water line (backsiphonage).

Outside water taps and garden hoses tend to be the most common sources of cross-connection contamination at home. The garden hose creates a hazard when submerged in a swimming pool or attached to a chemical sprayer for weed killing. Garden hoses that are left lying on the ground may be contaminated by fertilizers, cesspools, or garden chemicals. Improperly installed valves in your toilet could also be a source of cross-connection contamination.

Community water supplies are continuously jeopardized by cross-connections unless appropriate valves, known as backflow prevention devices, are installed and maintained. We have surveyed industrial, commercial, and institutional facilities in the service area to make sure that potential cross-connections are identified and eliminated or protected by a backflow preventer. We also inspect and test backflow preventers to make sure that they provide maximum protection. For more information on backflow prevention, contact the Safe Drinking Water Hotline at (800) 426-4791.

Lead in Home Plumbing

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 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 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 at (800) 426-4791 or epa.gov/safewater/lead.



Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (U.S. EPA) prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration 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 these contaminants does not necessarily indicate that the water poses a health risk.

“When the well is dry, we know the worth of water.”

—Benjamin Franklin

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 can acquire naturally occurring minerals, in some cases radioactive

material, and substances resulting from the presence of animals or from human activity. Substances 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, or wildlife;

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may result from urban stormwater 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 stormwater runoff, and residential uses;

Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production and which may also come from gas stations, urban stormwater runoff, and septic systems;

Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

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 our business office. For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please call Scott Mack, District Manager, at (361) 749-5201.

Sampling Results

Our water is monitored for many different types of substances on a very strict sampling schedule, and the water we deliver must meet specific health standards. Here, we only show those substances that were detected in our water (a complete list of all our analytical results is available upon request). Remember that detecting a substance does not mean the water is unsafe to drink; our goal is to keep all detects below their respective maximum allowed levels.

The state recommends monitoring for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

The percentage of total organic carbon (TOC) removal was measured each month, and the system met all TOC removal requirements set (unless a TOC violation is noted in the Violation column).

REGULATED SUBSTANCES											
				Nueces County WCID #4		Corpus Christi		San Patricio MWD			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Atrazine (ppb)	2022	3	3	NA	NA	NA	NA	0.12 ¹	NA	No	Runoff from herbicide used on row crops
Barium (ppm)	2023	2	2	NA	NA	0.118	NA	0.1140	NA	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Beta/Photon Emitters (pCi/L)	2023	50 ²	0	NA	NA	11	NA	9.7 ³	NA	No	Decay of natural and human-made deposits
Chloramines (ppm)	2023	[4]	[4]	2.60	2.30–2.80	NA	NA	NA	NA	No	Water additive used to control microbes
Cyanide (ppb)	2023	200	200	NA	NA	45	ND–97.7	NA	NA	No	Discharge from steel/metal factories; Discharge from plastic and fertilizer factories
Fluoride (ppm)	2023	4	4	NA	NA	0.34	NA	0.718	0.30–1.035	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAAs]–Stage 1 (ppb)	2023	60	NA	28	12.6–44.6	NA	NA	23.9	16.6–38.0	No	By-product of drinking water disinfection
Nitrate (ppm)	2023	10	10	1	0.47–0.74	1.24	NA	2.8	2.6–3.0	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
TTHMs [total trihalomethanes]–Stage 1 (ppb)	2023	80	NA	57	21.2–98.6	NA	NA	27.7	22.3–31.5	No	By-product of drinking water disinfection
Turbidity ⁴ (NTU)	2022	TT	NA	NA	NA	NA	NA	0.15 ¹	NA	No	Soil runoff
Tap water samples were collected for lead and copper analyses from sample sites throughout the community											
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH %ILE)	SITES ABOVE AL/ TOTAL SITES	VIOLATION	TYPICAL SOURCE				
Copper (ppm)	2023	1.3	1.3	0.294	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits				
Lead (ppb)	2023	15	0	3.44	0/30	No	Lead service lines; Corrosion of household plumbing systems, including fittings and fixtures; Erosion of natural deposits				

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SCL	MCLG	Nueces County WCID #4		Corpus Christi		San Patricio MWD		VIOLATION	TYPICAL SOURCE
				AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH		
Aluminum (ppb)	2023	200	NA	NA	NA	0.167	NA	0.0520	NA	No	Erosion of natural deposits; Residual from some surface water treatment processes
Chloride (ppm)	2023	300	NA	NA	NA	135	117–153	127	82–180	No	Runoff/leaching from natural deposits
Manganese (ppb)	2023	50	NA	NA	NA	6	1.3–11	0.0010	NA	No	Leaching from natural deposits
pH (units)	2023	>7.0	NA	NA	NA	NA	NA	7.88	6.5–8.3	No	Naturally occurring
Sulfate (ppm)	2023	300	NA	NA	NA	80	66–93	50	33–68	No	Runoff/leaching from natural deposits; Industrial wastes
Total Dissolved Solids [TDS] (ppm)	2023	1,000	NA	NA	NA	490	386–593	398	290–545	No	Runoff/leaching from natural deposits
Zinc (ppm)	2023	5	NA	NA	NA	NA	NA	0.0440	NA	No	Runoff/leaching from natural deposits; Industrial wastes

UNREGULATED SUBSTANCES ⁵

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	Nueces County WCID #4		Corpus Christi		San Patricio MWD		TYPICAL SOURCE
		AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	
Bromodichloromethane (ppb)	2023	NA	NA	6.7	NA	NA	NA	By-product of drinking water disinfection
Bromoform (ppb)	2023	NA	NA	2.2	NA	NA	NA	By-product of drinking water disinfection
Chloroform (ppb)	2023	NA	NA	3.8	NA	NA	NA	By-product of drinking water disinfection
Dibromochloromethane (ppb)	2023	NA	NA	5.5	NA	NA	NA	By-product of drinking water disinfection
Hardness (ppm)	2023	NA	NA	213	208–217	179	136–244	Naturally occurring calcium and magnesium

¹ Sampled in 2023.
² The MCL for beta particles is 4 millirems per year. U.S. EPA considers 50 pCi/L to be the level of concern for beta particles.
³ Sampled in 2018.
⁴ Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of water quality and the effectiveness of disinfectants.
⁵ Unregulated contaminants are those for which the U.S. EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist the U.S. EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.

UNREGULATED CONTAMINANT	COLLECTION DATE	AVERAGE LEVEL (µG/L)	RANGE OF LEVELS DETECTED (µG/L)
Lithium	2023	12	10-26
UNREGULATED CONTAMINANT	COLLECTION DATE	AVERAGE LEVEL (µG/L)	RANGE OF LEVELS DETECTED (µG/L)
PFBA	2023	0.00872	0.0066-0.012

Definitions

90th %ile: The levels reported for lead and copper represent the 90th percentile of the total number of sites tested. The 90th percentile is equal to or greater than 90% of our lead and copper detections.

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.

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.

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

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).

SCL (Secondary Contaminant Level): These standards are developed to protect aesthetic qualities of drinking water and are not health based.

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