

2022 WATER QUALITY REPORT

The management and staff of the Manatee County Utilities Department are committed to providing the highest quality drinking water to the residents of Manatee County, Sarasota County, and the cities we serve-every day. This report reflects that commitment and represents a summary of the drinking water quality during 2022.

PROTECTING MANATEE COUNTY'S WATER SOURCES

Drinking water for the customers of Manatee County Utilities Department is a blend of purified groundwater and purified surface water. In 2022, an average of 16.59 million gallons per day of deep ground water and 31.11 million gallons per day of surface water was used.

The groundwater is pumped from the Floridan Aquifer from seven, 1200-foot deep wells located in eastern Manatee County. This water is pumped through a 36-inch pipe approximately 13 miles to the Purification Plant. Surface water is taken from the Lake Manatee Reservoir located in central Manatee County.

In 2022 the Florida Department of Environmental Protection (FDEP) performed a Source Water Assessment on our system. The assessment was conducted to provide information about any potential sources of contamination in the vicinity of our wells or surface water intakes. 12 potential sources of contamination were identified with low levels of susceptibility. The assessment results are available on the FDEP Source Water Assessment and Protection Program website <http://prodapps.dep.state.fl.us/swapp/> or they can be obtained from the Manatee County Water Purification Plant at (941) 746-3020.

The County has taken stringent measures to protect these water sources. In the late 1980s Manatee County voters approved the purchase of 20,500 acres of the 82,000-acre watershed area, which drains into and includes the Reservoir and Wellfield. County and State agencies have continued to purchase additional watershed acreage, and today approximately 35,000 acres are in public ownership. This ownership ensures that activities detrimental to water quality or quantity will not occur on these public lands.

HEALTH AND SAFETY STANDARDS

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 stormwater 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 stormwater 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 stormwater 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, EPA prescribes regulations, which limit the amounts 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.

HOW YOUR WATER IS PURIFIED

The Manatee County Water Purification Plant, located on the shore of Lake Manatee, purifies both groundwater and surface water. The groundwater is purified by aeration, lime-softening and filtration. These processes remove odor, a portion of the hardness, and undesirable elements such as suspended matter and microbiological organisms.

The surface water is purified by carbon adsorption, biological filtration, coagulation, sedimentation and filtration. These processes remove odor, color, and undesirable elements such as suspended matter and microbiological organisms. The filtered water from the two sources is then combined. The combined water is further enhanced before leaving the plant.

The water is disinfected to destroy microbes and provide protection against microbial regrowth in the distribution system and your plumbing. The water is also made less corrosive, thus prolonging your home plumbing and fixtures. Natural fluoride levels are slightly increased to optimal levels as a public health measure to help develop decay resistant teeth and strong bones.

The purification plant is staffed with dedicated, professionally trained, State certified operational, laboratory and maintenance personnel. This staff operates and maintains the advanced water purification facility as well as monitors and researches water quality issues.

2022 WATER QUALITY SUMMARY

MICROBIOLOGICAL

Contaminant and Unit of Measurement	Dates of Sampling	MCL Violation Y/N	Total Number of Positive Samples for the Year	MCLG	MCL		Likely Source of Contamination
<i>E. coli</i> in the distribution system	01/22–12/22	No	1 ^A	0	Routine and repeat samples are total coliform positive and either is <i>E. coli</i> positive or system fails to take repeat samples following <i>E. coli</i> positive routine sample or system fails to analyze total coliform positive repeat sample for <i>E. coli</i>		Human and animal fecal waste
Contaminant and Unit of Measurement	Dates of Sampling	MCL Violation Y/N	Highest Single Measurement	Lowest Monthly Percentage of Samples Meeting Regulatory Limits	MCLG	MCL	Likely Source of Contamination
Filter turbidity (NTU)	01/22–12/22	No	0.47	99.4% ^B	N/A	TT ^B	Soil runoff

INORGANIC

Contaminant and Unit of Measurement	Dates of Sampling	MCL Violation Y/N	Max. Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Arsenic (ppb)	01/22–12/22	No	1	ND – 1	0	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production water.
Barium (ppb)	01/22–12/22	No	29	12– 29	2000	2000	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Cadmium (ppb)	01/22–12/22	No	0.92	ND – 0.92	5	5	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints
Fluoride (ppm)	01/22-12/22	No	0.29	0.23 – 0.29	4	4	Water additive which promotes strong teeth
Mercury (inorganic) (ppb)	01/22-12/22	No	0.09	ND – 0.09	2	2	Erosion of natural deposits; discharge from refineries and factories; runoff from cropland.
Nickel (ppb)	01/22-12/22	No	20	ND – 20	N/A	100	Pollution from mining and refining operations. Natural occurrence in soil.

Contaminant and Unit of Measurement	Dates of Sampling	MCL Violation Y/N	Max. Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Nitrate (as Nitrogen) (ppm)	01/22–12/22	No	0.22	0.04 – 0.22	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium (ppm)	01/22–12/22	No	27.5	12.2 – 27.5	N/A	160	Salt water intrusion, leaching from soil

RADIOLOGICAL CONTAMINANTS

Contaminant and Unit of Measurement	Dates of Sampling	MCL Violation Y/N	Max. Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Gross Alpha (pCi/L)	01/22–12/22	No	5.52	ND –5.52	0	15	Erosion of natural deposits
Radium 226 (pCi/L)	01/22–12/22	No	1.29	ND –1.29	0	5 ^C	Erosion of natural deposits
Radium 228 (pCi/L)	01/22–12/22	No	0.937	ND –0.937	0	5 ^C	Erosion of natural deposits

Contaminant and Unit of Measurement	Dates of Sampling	MCL Violation Y/N	Max. Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Uranium, combined (ppb)	01/22–12/22	No	0.591	ND –3.37	0	30	Erosion of natural deposits

STAGE 2 DISINFECTANT AND DISINFECTION BY-PRODUCTS (D/DBP) PARAMETERS

Disinfectant or Contaminant and Unit of Measurement	Dates of Sampling	MCL or TT Violation Y/N	Level Detected	Range of Results	MCLG or MRDLG	MCL or MRDL	Likely Source of Contamination
Chloramines (ppm)	01/22–12/22	No	3.3 ^D	ND – 5.5 ^E	MRDLG = 4	MRDL = 4 ^F	Water additive used to control microbes
Haloacetic acids (ppb)	01/22–12/22	No	37.2 ^G	1.3 – 41.5 ^E	N/A	MCL = 60 ^H	By-product of drinking water disinfection
Total trihalomethanes (ppb)	01/22–12/22	No	45.0 ^G	16.2 – 39.6 ^E	N/A	MCL = 80 ^H	By-product of drinking water disinfection
Total organic carbon (ratio) ^I	01/22–12/22	No	1.36 ^J	1.12 – 1.59	N/A	TT	Naturally present in the environment

LEAD AND COPPER (TAP WATER)

Contaminant and Unit of Measurement	Dates of Sampling	AL Violation Y/N	90th Percentile Result	No. of Sampling Sites Exceeding the AL	MCLG	AL (Action Level)	Likely Source of Contamination
Lead (ppb)	2022	No	1.7	0	0	15	Corrosion of household plumbing systems; erosion of natural deposits
Copper (ppm)	2022	No	0.15	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

TABLE KEY & DEFINITIONS

AL: Action Level

MCL: Maximum Contaminant Level

MCLG: Maximum Contaminant Level Goal

N/A: not applicable

ND: not detected

NTU: Nephelometric Turbidity Units

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

ppb: parts per billion, or micrograms per liter (ug/L)

ppm: parts per million, or milligrams per liter (mg/L)

TT: Treatment Technique

FOOTNOTES

[A] when E. coli is detected, the utility is required by rule to report the result and collect repeat samples in the immediate area within 24 hours and analyze them for bacteria. The results of the repeat samples collected showed no presence of E. coli or total coliform bacteria, thus no MCL violation occurred.

[B] filter turbidity must not exceed 0.3 NTU in 95% of daily samples in any month.

[C] MCL limit of Radium-226 and Radium-228 combined.

[D] the value is the highest running annual average, computed quarterly.

[E] these values represent values at individual sample sites.

[F] a public water system (PWS) is in compliance with the MRDL when the running annual average of monthly averages of samples taken in the distribution system, computed quarterly, is less than or equal to the MRDL.

[G] the value is the highest locational running annual average, computed quarterly.

[H] a PWS is in compliance with the MCL when the locational running annual average, computed quarterly, is less than or equal to the MCL.

[I] these values represent the % total organic carbon removal achieved at the treatment plant divided by the % removal required.

[J] this value is the lowest running annual average, computed quarterly, of monthly removal ratio. This value must be above 1.0 for compliance.

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

Filter Turbidity (NTU): Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. High turbidity can hinder the effectiveness of disinfectants.

Locational Running Annual Average (LRAA): The average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters.

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.

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.

Total trihalomethanes: Disinfection by-products expressed as the sum of chloroform, dibromochloromethane, bromodichloromethane and tribromomethane.

Not Detected or ND: Indicates the substance was not found by laboratory analysis.

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

RADON

We constantly monitor the water supply for various contaminants. Radon was detected in the finished water supply in one out of four samples tested. Radon was detected in the April quarterly sample in the amount of 117 pCi/L. There is no federal regulation for radon levels in drinking water; proposed MCL for radon is 300 pCi/L. Exposure to air-transmitted radon over a long period may cause adverse health effects.

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. The Manatee County Water Purification Plant 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 at 800-426-4791 or at <http://www.epa.gov/safewater/lead>.

IMMUNO-COMPROMISED INDIVIDUALS

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. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791). These precautions apply to publicly supplied water, bottled water, private well water or water from home treatment devices.

FIND OUT THE FACTS

Concerns about drinking water quality have caused many residents to use bottled water or to install home treatment devices. Be sure to learn about the quality of the alternate water or the expected water quality from home treatment devices. If you need help in understanding water quality issues or have questions about this report or have a water quality concern, please give us a call at 941-746-3020.

Additional information can be found on the Manatee County website at www.mymanatee.org/water. Just click on the "Water Quality Report" link.

GET INVOLVED

Please get involved with discussions regarding drinking water quality. The Manatee County Board of County Commissioners welcomes written comments or public input at regularly scheduled Board Meetings concerning issues related to drinking water. Agenda information can be obtained on the Manatee County website or by calling 941-745-3724.

ATTENTION PROPERTY MANAGERS

If you are a property owner or manager, please provide this water quality report to your tenants. This report may be photocopied or posted in a prominent location at your facility. More copies are available by calling 941-746-3020.

THE BOTTOM LINE

Last year, as in years past, Manatee County met all EPA and State drinking water health standards. The Manatee County Water Purification Plant uses what is known as the multiple barrier approach to ensure the safety of the water. This approach includes source protection, optimized particle removal at the purification plant and appropriate disinfection.

If you need help in understanding water quality issues, have questions about this report, or have a water quality concern, please call us at 941-746-3020.