

2023 Annual Drinking Water Quality Report

"SAPPHIRE LAKES"

Water System Number: "01-88-127"

We are pleased to present to you this year's Annual Drinking Water Quality Report. This report is a snapshot of last year's water quality. Included are details about your source(s) 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 to providing you with this information because informed customers are our best allies. **If you have any questions about this report or concerning your water, please contact [WESLEY ROYAL] at [(28) 506-5572]. We want 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 at [TOWN HALL].**

What EPA Wants You to Know

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 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).

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).

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. [Name of Utility] 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>.

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 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 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 can also come from gas stations, urban stormwater runoff, and septic systems; and radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

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 protection for public health.

When You Turn on Your Tap, Consider the Source

The water that is used by this system is **GROUND**

and is located at **WELL #1 LOCATED NEXT PARK, #4 LOCATED AT THE CURVE OF HWY 64, #5 OFF LEANING TREE**

Source Water Assessment Program (SWAP) Results

The North Carolina Department of Environmental Quality (DEQ), Public Water Supply (PWS) Section, Source Water Assessment Program (SWAP) conducted assessments for all drinking water sources across North Carolina. The purpose of the assessments was to determine the susceptibility of each drinking water source (well or surface water intake) to Potential Contaminant Sources (PCSs). The results of the assessment are available in SWAP Assessment Reports that include maps, background information and a relative susceptibility rating of Higher, Moderate or Lower.

The relative susceptibility rating of each source for [SAPPHIRE LAKES] was determined by combining the contaminant rating (number and location of PCSs within the assessment area) and the inherent vulnerability rating (i.e., characteristics or existing conditions of the well or watershed and its delineated assessment area). The assessment findings are summarized in the table below:

Susceptibility of Sources to Potential Contaminant Sources (PCSs)		
Source Name	Susceptibility Rating	SWAP Report Date
Well # 1	Lower	September 2023
Well #4	Lower	September 2023
Well #5	Lower	September 2023

The complete SWAP Assessment report for [SAPPHIRE LAKES] may be viewed on the Web at:

<https://www.ncwater.org/?page=600> Note that because SWAP results and reports are periodically updated by the PWS Section, the results available on this website may differ from the results that were available at the time this CCR was prepared. If you are unable to access your SWAP report on the web, you may mail a written request for a printed copy to: Source Water Assessment Program – Report Request, 1634 Mail Service Center, Raleigh, NC 27699-1634, or email requests to swap@deq.nc.gov. Please indicate your system name, number, and provide your name, mailing address and phone number. If you have any questions about the SWAP report, please contact the Source Water Assessment staff by phone at (919) 707-9098.

It is important to understand that a susceptibility rating of “higher” does not imply poor water quality, only the system’s potential to become contaminated by PCSs in the assessment area.

Help Protect Your Source Water

Protection of drinking water is everyone’s responsibility. We have implemented the following source water protection actions: You can help protect your community’s drinking water source(s) in several ways: (examples: dispose of chemicals properly; take used motor oil to a recycling center, volunteer in your community to participate in group efforts to protect your source, etc.).

Violations that Your Water System Received for the Report Year 2023

WE HAD NO VIOLATIONS

Important Drinking Water Definitions:

- **Not-Applicable (N/A)** – Information not applicable/not required for that particular water system or for that particular rule.
- **Non-Detects (ND)** - Laboratory analysis indicates that the contaminant is not present at the level of detection set for the particular methodology used.
- **Parts per million (ppm) or Milligrams per liter (mg/L)** - One part per million corresponds to one minute in two years or a single penny in \$10,000.
- **Picocuries per liter (pCi/L)** - Picocuries per liter is a measure of the radioactivity in water.
- **Action Level (AL)** - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- **Treatment Technique (TT)** - A required process intended to reduce the level of a contaminant in drinking water.
- **Maximum Residual Disinfection Level (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 Disinfection 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 contaminants.
- **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 under the Stage 2 Disinfectants and Disinfection Byproducts Rule.
- **Running Annual Average (RAA)** – The average of sample analytical results for samples taken during the previous four calendar quarters.
- **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.
- **Maximum Contaminant Level (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 (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.

Water Quality Data Tables of Detected Contaminants

We routinely monitor for over 150 contaminants in your drinking water according to Federal and State laws. The tables below list all the drinking water contaminants that we detected in the last round of sampling for each particular contaminant group. The presence of contaminants does not necessarily indicate that water poses a health risk. **Unless otherwise noted, the data presented in this table is from testing done January 1 through December 31, 2023.** The EPA and the State allow us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, is more than one year old.

REVISED TOTAL COLIFORM RULE:

12 SAMPLES TAKEN ALL NON DETECT

Microbiological Contaminants in the Distribution System

Inorganic Contaminants

Contaminant (units)	Sample Date	MCL Violation Y/N	Your Water	Range		MCLG	MCL	Likely Source of Contamination
				Low	High			
Fluoride (ppm)	4-2023	NO	.367 mg/l	low		4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories

Arsenic: While your drinking water meets EPA's standard for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

Nitrate/Nitrite Contaminants

3 samples taken from well !, #4, #5 RESULTS ALL NON DETECT

Nitrate: Nitrate in drinking water at levels above 10 ppm is a health risk for infants of 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.

Synthetic Organic Chemical (SOC) Contaminants Including Pesticides and Herbicides
SAMPLE TAKEN 4-2023 RESULTS NON DETECT

Volatile Organic Chemical (VOC) Contaminants

TEST TAKEN FOR WELL #4 AND #5 RESULTS NON DETECT

Radiological Contaminants
NO SAMPLES TAKEN IN 2023

Lead and Copper Contaminants
Lead and Copper Contaminants
NO SAMPLES TAKEN IN 2022
Lead and Copper Contaminants
10 SAMPLES TAKEN IN 8/2021

CODE	LOCATION	DATE	LEAD	COPPER
100	29 LEANING TREE	8/23/2021	NON DETECT	NON DETECT
110	185 ROUNDTOP	8/23/2021	.004 MG/L	.136 MG/L
120	651 WINDING CREEK RD	8/23/2021	NON DETECT	NON DETECT
130	45 UPPER WHITEWATER RD	8/23/2021	NON DETECT	.106 MG/L
140	746 CLUB DR	8/23/2021	NON DETECT	.086 MG/L
150	456 WINDING CREEK RD	8/23/2021	NON DETECT	.218 MG/L
160	98 FAIRWAY VILLAS	8/23/2021	NON DETECT	NON DETECT
170	69 RIVER PIKE VILLAS	8/23/2021	.004 MG/L	.064 MG/L
180	180 ROCKY RIDGE	8/23/2021	NON DETECT	.057 MG/L
190	30 RACKET CLUB	8/23/2021	NON DETECT	.081 MG/L

Contaminant (units)	Sample Date	Your Water	Number of sites found above the AL	MCLG	AL	Likely Source of Contamination
Copper (ppm) (90 th percentile)	8/2021	.075	0	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb) (90 th percentile)	8/2021	.004	0	0	AL=15	Corrosion of household plumbing systems; erosion of natural deposits

Disinfectant Residuals Summary

CHLORINE IN THE SYSTEM

MAX MIN AVG
.6 mg/l .4 mg/l .49 mg/l

Total Trihalomethanes (TTHM) and Haloacetic Acids (five) (HAA5)

TEST TAKEN 8-2023 RESULTS ALL NON DETECT

Contaminant (units)	Year Sampled	MCL Violation Y/N	Your Water (highest LRAA)	Range Low High	MCLG	MCL	Likely Source of Contamination
TTHM (ppb)	8/2023	NO			N/A	80	Byproduct of drinking water disinfection
Location (Ex. B01)			N/D				
B10							
HAA5 (ppb)	8/2023	NO			N/A	60	Byproduct of drinking water disinfection
Location (Ex. B01)			N/D				
B10							

Other Miscellaneous Water Characteristics Contaminants
WELL # 1 4/2023

Contaminant (units)	Sample Date	Your Water	Range		SMCL
			Low	High	
Iron (ppm)	4/2023	# 1.099 mg/l #4 n/d	low		0.3
Sodium (ppm)	4/2023	#1 6.9 su #4 7.33			N/A
Sulfate (ppm)	4/2023	#1 n/d #4 20 mg/l	low		250
pH	4/2023	#1 6.9 su #4 7.33 su			6.5 to 8.5