

Oakwood Hills is pleased to present to our customers its 2023 Annual Water Quality Report. This report is designed to inform you about the quality water and service we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. If you have any questions about this report or concerning your water, please contact Betty O. McDuffie (Town Clerk) or Mayor Ronald L. McDonald at 910-281-3124. The monthly Town meetings are held on the 3rd Thursday of every month at 6:30 pm at the Pinebluff Town Hall. If you would like to learn more about your community, please attend any of the regularly scheduled meetings.

Source of Your Drinking Water

Your water comes is purchased from the Town of Southern Pines, which draws surface water from Drowning Creek.

EPA Wants You To Know

The sources of drinking water (both tap water and bottled water) includes 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.

In order 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 Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

All 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.

Special notice from EPA for the elderly, infants, cancer patients and people with HIV/AIDS or other immune system problems

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised person such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune systems 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)

Information Concerning Lead In Drinking Water

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. Oakwood Hills 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>.

Source Water Assessment

The North Carolina Department of Environmental Quality (DEQ). Public Water Supply (PWS) Section, Source Water Assessment Program (SWAP) conducted a source water assessment

Source Name	Susceptibility Rating	SWAP Report Date
Drowning Creek	Moderate	9/10/2020

for all drinking water sources across North Carolina. The purpose of the assessments are 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 Oakwood Hills and the Town of Southern Pines 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.

The complete SWAP Assessment report for Oakwood Hills may be viewed on the Web at: https://www.ncwater.org/?page=600&Action=Swap_Search. Note that because SWAP results and reports are periodically updated by the PWS Section, the results available on this web site may differ from the results that were available at the time this Water Quality Report 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 the water system name and 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 systems’ potential to become contaminated by PCS’s in the assessment area.

Water Conservation

Water is a limited resource and we all need water for life. Water conservation provides us all with a way to manage and maintain this valuable resource. North Carolina legislative passed a bill which requires the Environmental Management Commission to develop and implement rules governing water conservation and water reuse during drought and water emergency situations. Please be reminded that our water systems in North Carolina are always in some stage of either voluntary or mandatory water conservation restriction. The following websites are good resources to help with water conservation tips:

<https://www.deq.nc.gov/about/divisions/water-resources/water-planning/water-supply-planning/water-conservation/save-water-1>

Understanding This Report In order to help you understand this report, we want you to understand a few terms and abbreviations that are contained in it

AL	The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.
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 “goal” is 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 Goal (MRDLG)	The level of disinfectant in drinking water below which there is no known or expected risk to health.
Maximum Residual Disinfection Level (MRDL)	The highest level of a disinfectant allowed in drinking water.
Not Detected (ND)	This means not detected and indicates that the substance was not found by laboratory analysis
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.
Parts per billion (ppb) or Micrograms per liter	One part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.
Parts per trillion (ppt) or nanograms per liter (ng/l)	One part per trillion corresponds to one minute in 2,000,000 years, or a single penny in \$10,000,000,000.
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)	Calculated running annual average of all contaminated levels detected.

Monitoring Your Water

We routinely monitor for over 150 contaminants in your drinking water according to Federal and State laws. The following table 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.

WATER QUALITY TEST RESULTS							
Disinfectant Residuals Summary							
Contaminant (units)	Year Sampled	MCL Violation Y/N	Your Water (RAA)	Range Low High	MCLG	MCL	Likely Source of Contamination
Chlorine (ppm)	2023	N	0.08	0.03 - 0.1	4	4	Water additives used to control microbes
Chloramines (ppm)	2023	N	2.4	2.0 - 2.9	4	4	Water additives used to control microbes
Stage 2 Disinfection Byproduct Compliance – Based upon Locational Running Annual Average (LRAA)							
Contaminant (units)	Year Sampled	MCL Violation Y/N	Your Water	Range Low High	MCLG	MCL	Likely Source of Contamination
TTHM (ppb) B01	2023	N	3.3	2.5 - 21.6	N/A	80	Byproduct of drinking water disinfection
TTHM (ppb) B02	2023	N	22.8	1.8 - 47.3			
HAA5 (ppb) B01	2023	N	26.6	8.8 - 77.1	N/A	60	Byproduct of drinking water disinfection
HAA5 (ppb) B02	2023	N	33.7	10.1 - 87			

Violations: In 2023, all of the required monitoring and reporting was completed to meet State and Federal regulations. During the first quarter of 2023, the Maximum Contaminant Level for Haloacetic Acids was exceeded. Measures were taken to improve the water quality by the addition of an oxidizing agent to reduce the formation of the HAAs. Follow-up sampling collected on March 13, 2023 indicated a return to compliance.

Water Quality Test Results – Town of Southern Pines

Compound & Unit	Highest Level Allowed by Regulation (MCL)	Maximum Contaminant Level Goal (MGLG)	Maximum Detected by Southern Pines	Range		Major Source of Compound
				High	Low	
Microbiological Contaminants January through December 2023						
Turbidity, NTU*	TT = 1 NTU	N/A	0.12	0.12	0.04	Soil run off
	TT = percentage of samples <0.3 NTU	N/A	100%			
Turbidity is the measure of the cloudiness of the water. The Town monitors Turbidity because it is a good indicator of the effectiveness of our filter treatment system. The turbidity rule requires that 95% or more of the monthly samples must be below 0.3 NTU.						
Inorganic Contaminants January through December 2023						
Fluoride, mg/l	4.0	4.0	1.0	1.0	0.6	Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories
Copper, mg/l (Sampled: July 2022)	AL = 1.3	1.3	<0.050 90 th Percentile	<0.05	<0.05	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead, mg/l (Sampled: July 2022)	AL = 0.015	0	<0.003 90 th Percentile	0.027	<0.003	Corrosion of household plumbing systems; erosion of natural deposits
Total Organic Carbon (TOC) January through December, 2023 *** Running Annual Average						
Total Organic Carbon (TOC) Removal Ratio – Treated Water**	TT	N/A	1.24***	1.47	1.06	Naturally present in the environment
The water system used the removal of Total Organic Carbon (TOC) as the method used to comply with disinfectants/disinfection by-product treatment technique requirements. The TOC removal ratio is required to be greater than 1.0.						
Disinfectant Residual Summary January through December, 2023						
Chlorine, mg/l	MRDLG = 4.0	MRDL = 4.0	2.48***	3.23	0.98	Water additive used to control microbes
Disinfectants/Disinfection By-Products January through December, 2023						

Water Quality Test Results – Town of Southern Pines

Compound & Unit	Highest Level Allowed by Regulation (MCL)	Maximum Contaminant Level Goal (MGLG)	Maximum Detected by Southern Pines	Range		Major Source of Compound
				High	Low	
Total Trihalomethane, ppb						By product of drinking water chlorination.
US Hwy 1 (B01)	80	N/A	4.8***	17.5	2.2	
East Rhode Island Ave Ext (B02)	80	N/A	7.6***	16.6	3.0	
US Hwy 1 (B03)	80	N/A	4.5***	17.0	1.6	
Hwy 22 (B04)	80	N/A	7.6***	26.2	2.4	
Total Haloacetic Acid, ppb						By product of drinking water chlorination.
US Hwy 1 (B01)	60	N/A	26.2***	65.6	16.3	
East Rhode Island Ave Ext (B02)	60	N/A	35.8***	80.0	17.6	
US Hwy 1 (B03)	60	N/A	25.5***	64.0	7.4	
Hwy 22 (B04)	60	N/A	34.9***	85.6	14.5	

- AL = Action Level is the concentration of a contaminant which triggers a treatment or other requirement which a water system must follow.
- MCL = Maximum Contaminant Level
- MCLG = Maximum Contaminant Level Goal is the level of a contaminant in drinking water below which there is no known or expected risk to health.
- MRDLG = Maximum Residual Disinfectant Level Goal is the level of disinfectant in drinking water below which there is no known or expected risk to health
- MRDL = Maximum Residual Disinfection Level is the highest level of a disinfectant allowed in drinking water.
- mg/l = milligram per liter, or parts per million - One part per million corresponds to one minute in two years or a single penny in \$10,000.
- ng.l = nanograms per liter (nanograms/L) or parts per trillion - One part per trillion corresponds to one minute in 2,000,000 years, or a single penny in \$10,000,000,000.
- NTU = Nephelometric Turbidity Units is a measure for water clarity
- ppb = Part per billion or Micrograms per liter (ug/L) - One part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.
- TT = Treatment Technique is a required process intended to reduce the level of a contaminant in drinking water.
- * Turbidity is the measure of the cloudiness of the water. The Town monitors Turbidity because it is a good indicator of the effectiveness of our filter treatment system. The turbidity rule requires that 95% or more of the monthly samples must be below 0.3 NTU.
- ** Our water system used the removal of Total Organic Carbon (TOC) as the method used to comply with disinfectants/disinfection by-product treatment technique requirements. The TOC removal ratio is required to be greater than 1.0.
- *** Running Annual Average

UNREGULATED CONTAMINANTS

Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulations are warranted. During the year 2023, the Southern Pines Water Treatment Plant participated in EPA's Unregulated Contaminant Monitoring (UCMR5) program. The UCMR5 included a group of compounds called per- and polyfluoroalkyl (PFAS). PFAS are man-made chemicals that have been in use since 1940 and are found in many different consumer, commercial, and industrial products. They have been used to make nonstick cookware, water-repellent clothing, stain resistant fabrics and carpets, some cosmetics, some firefighting foams, and products that resist grease, water, and oil. PFAS are very persistent in the environment because they break down very slowly. Following are the compounds that were detected during the monitoring program.

Contaminant, units	Sample Date	Your Water (average)	Range	
			Low	High
Perfluorobutanesulfonic acid (PFBS), ng/l	Quarterly	0.275	<0.94	1.1
Perfluorooctanoic acid (PFOA), ng/l	Quarterly	1.375	<1.3	3.9
Perfluorohexanoic acid (PFHxA), ng/l	Quarterly	0.275	<0.94	1.1
Perfluoropentanoic acid (PFPeA), ng/l	Quarterly	0.275	<0.94	1.1