Town of Southern Pines
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North Carolina
The Mid South Resort
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2012 WATER QUALITY REPORT

It's time for Our Annual
Water Quality Check-Up

The Town of Southern Pines is pleased to provide you with this water quality report. Currently, the Town has over 8,000 water connections, which provide water to more than 12,000 people. We are committed to providing you with a safe and dependable supply of drinking water. More than 100 compounds are tested to determine the quality of our water. The table shown inside will provide you with the results of our tests.

What EPA Wants You to Know

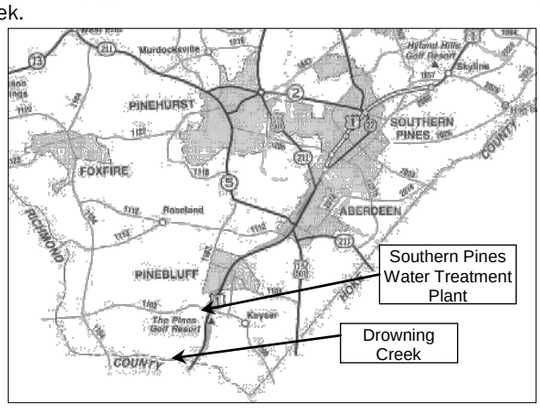
Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

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 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 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 storm water 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 storm water 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 storm runoff, and septic systems; and radioactive contaminant, which can be naturally-occurring or be the result of oil and gas production and mining activities.

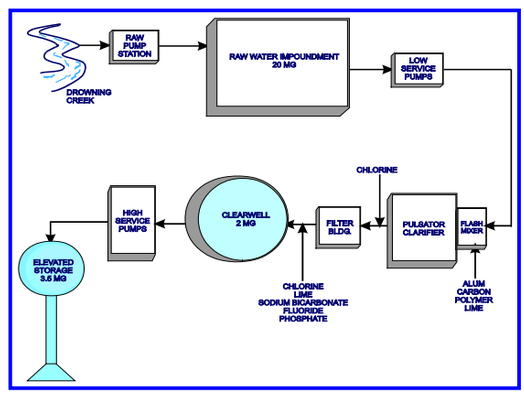
The U. S. Environmental Protection Agency (EPA) regulates the amounts of contaminants that are acceptable in public drinking water through the Safe Drinking Water Act of 1974 and its amendments. FDA regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

When You Turn on Your Tap, Consider the Source

Did you know that 70 percent of the earth is water? It is found in the forms of rivers, lakes, streams, ponds, reservoirs, springs, and wells. Our water supply is a surface water source located at Drowning Creek.



The Town of Southern Pines Water Plant was put into operation in 1986 and is an 8.0 million gallons per day (MGD) treatment facility. The average daily production in 2012 was 2.97 MGD and the maximum day was 5.22 MGD on August 30, 2012. The diagram below describes the treatment process at the water plant.



Source Water Assessment Program (SWAP) Results

The North Carolina Department of Environment and Natural Resources (DENR), 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 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 below:

Susceptibility of Sources to
Potential Contaminant Sources (PCSs)

Source Name	Susceptibility Rating	SWAP Report Date
Drowning Creek	Moderate	February 19, 2010

The complete SWAP Assessment report for the Town of Southern Pines may be viewed on the Web at: http://www.deh.enr.state.nc.us/pws/swap . The SWAP results and reports are periodically updated, therefore the results available on this web site may differ from the results that were available at the time this CCR was prepared. To obtain a printed copy of this report, please mail a written request to: Source Water Assessment Program – Report Request, 1634 Mail Service Center, Raleigh NC 27699-1634, or email request to swap@ncmail.net. Please indicate our system name, PWSID #03-63-010, 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 at 919-715-2633.

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.

COMPLIANCE CORNER

	Yes	No
All required monitoring completed?	☒	☐
Any violations of contaminant levels?	☐	☒

2012 WATER QUALITY REPORT

The Town of Southern Pines monitors over 100 different constituents in the water to ensure it is safe for you to use. Following is a summary of those regulated constituents that were detected in the water during 2010 and the last test results of contaminants that were not due to be tested in 2012.

Compound & Unit	Highest Level Allowed by Regulation (MCL)	Maximum Contaminant Level Goal (MGLG)	Maximum Detected by Southern Pines	Range High	Range Low	Major Source of Compound
Microbiological Contaminants						**January through December 2012**
Turbidity, NTU*	TT = 1 NTU	N/A	0.19	0.19	0.01	Soil run off
	TT = percentage of samples <0.3 NTU	N/A	100%			
Inorganic Contaminants						January through December 2012
Fluoride, mg/l	4.0	4.0	1.00	1.00	0.5	Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories
Copper, mg/l (Sampled: August 2012)	AL = 1.3	1.3	0.107 90th Percentile	0.346	<0.050	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead, mg/l (Sampled: September & December 2009)	AL = 0.015	0	0.007 90th Percentile	0.029	<0.003	Corrosion of household plumbing systems; erosion of natural deposits
Disinfectants/Disinfection By-Products						**January through December, 2012**
Total Organic Carbon (TOC) – Raw Water, mg/l**	TT	N/A	9.40	9.40	6.50	Naturally present in the environment
Total Organic Carbon (TOC) – Treated Water, mg/l**	TT	N/A	4.80	4.80	2.60	Naturally present in the environment
TOC Removal Ratio**	TT	N/A	1.17***	1.43	0.91	
Chlorine, mg/l	MRDLG = 4.0	MRDL = 4.0	2.45***	3.20	0.60	Water additive used to control microbes
Total Trihalomethane, ppb	80	N/A	38.8***	60.0	26.0	By product of drinking water chlorination.
Total Haloacetic Acid, ppb	60	N/A	48.7***	62.0	36.0	By product of drinking water chlorination.
Pesticides and Synthetic Organic Chemical						**January through December, 2012**
Hexachlorocyclo-pentadiene ,ppb	50	50	0.1	0.1	<0.1	Discharge from chemical factories
Volatile Organic Chemicals						**January through December, 2012**
Xylenes (Total), ppb	10000	10000	0.5	0.5	0.5	Discharge from petroleum factories; discharge from chemical factories

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
NTU = Nepholometric Turbidity Units is a measure for water clarity
ppb = Part per billion
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 City 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

In addition to the compounds listed above, the water is tested daily for the following constituents which are indicators for appearance, taste, and odor.

Compound	Annual Average
Alkalinity, mg/l	25.6
Color, mg/l	7.0
Carbon Dioxide, mg/l	8.3
Hardness, mg/l	28.8
Iron, mg/l	0.030
Manganese, mg/l	0.007
Chloride, mg/l	15.1
Orthophosphate, mg/l	1.19
pH, Standard Units	6.8 - 8.4

What Does All This Mean?

The water distributed by the Town of Southern Pines is perfectly safe for human consumption.

If you have any questions concerning this information, please call Mr. David McKew,
Southern Pines Water Treatment Plant
Manager, at (910) 281-4719.

Special Warning

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 microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

"If present, elevated levels of lead can cause serious health problems, especially pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Southern Pines 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 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."