Annual Water Quality Report For 2015

City of Sanford WTP, PWS ID NC 03-53-010

We are pleased to present our annual water quality report covering all testing performed between January 1 and December 31, 2015. This report is developed to keep you informed about your water quality, what it contains, and how it compares to standards set by regulatory agencies. To that end, we remain vigilant in meeting the challenges of new regulations, source water protection, water conservation, and community outreach and education while continuing to serve the needs of all our water customers. Thank you for allowing us to continue providing you and your family with high quality drinking water.

If you have any questions about this report or concerning your water, please contact Scott Christiansen at 919-777-1804. If you are interested in attending a City Council meeting, the Council meets the first and third Tuesdays of each month at 7 p.m. in the Council Chambers in the Municipal Building at 225 East Weatherspoon Street in Sanford. Meetings are open to the public.

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

When You Turn On Your Tap, Consider the Source

The City of Sanford's customers are fortunate because they enjoy an abundant water supply from a single surface water source, the Cape Fear River. The Deep River, Haw River, and Rocky River form the headwaters of the Cape Fear River Basin.

Source Water Assessment

The North Carolina Department of Environment and Natural Resources (DENR), Public Water Supply (PWS), Source Water Assessment Program (SWAP) conducted assessments for all drinking water sources across North Carolina. The purpose of assessments was to determine the susceptibility of each drinking water source (well or surface water intake) to potential contaminant sources (PCSs). The relative susceptibility rating of the water source for the City of Sanford was determined by combining the contaminant rating (number and location of PCSs with the assessment area) and the inherent vulnerability rating (i.e., characteristics or existing conditions of the watershed and its delineated assessment area). The assessment findings are summarized in the table below:

Source Name	Susceptibility Rating	Report Date
Cape Fear River	Moderate	August 2015

The complete SWAP report for the City of Sanford may be viewed on the Web at http://swap.ncwater.org/swap_app/pdfreports/0353010_2_19_2010_17_22.pdf. 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 Annual 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@ncdenr.gov. Please indicate your system name (City of Sanford), system number (03-53-010), 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 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 PCSs in the assessment area.

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. Immunocompromised 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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. 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. The City of Sanford 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 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 water runoff, and septic systems; and 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 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.

Water Quality Data of Detected Contaminants

We routinely monitor for over 150 contaminants in your drinking water according to Federal and State laws. The table below lists all the drinking water contaminants that we detected in the last round of sampling for the particular contaminant group. The presence of contaminants does not necessarily indicate that the water poses a health risk**. Unless otherwise noted, the data presented in this table is from testing done January 1 through December 31, 2015.**

CITY OF SANFORD WATER QUALITY TESTING FOR 2015

TURBIDITY

CONTAMINANT (UNIT OF MEASURE)	TT VIOLATION Y/N	YOUR WATER	TREATMENT TECHNIQUE (TT) VIOLATION IF:	LIKELY SOURCE OF CONTAMINATION
Turbidity (NTU)-Highest single turbidity measurement	**No**	**0.20**	**Turbidity > 1 NTU**	**Soil runoff**
Turbidity (NTU)-Lowest monthly percentage (%) of samples meeting turbidity limits	**No**	**100%**	**Less than 95% of monthly turbidity measurements are ≤ 0.3 NTU**	

INORGANIC CONTAMINANTS

CONTAMINANT (UNIT OF MEASURE)	MCL VIOLATION	YOUR WATER	RANGE LOW-HIGH	MCLG	MCL	LIKELY SOURCE OF CONTAMINATION
Fluoride (ppm)	**No**	**0.66**	**NA**	**4**	**4**	**Erosion of natural deposits. Water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.**

COPPER AND LEAD CONTAMINANTS SAMPLED IN 2013 (Tap water samples were collected for copper and lead analysis from sample sites throughout the community)

CONTAMINANT (UNIT OF MEASURE)	YOUR WATER	SITES ABOVE AL/TOTAL SITES	MCLG	AL	LIKELY SOURCE OF CONTAMINATION
Copper (ppm) (90th percentile)	**0.11**	**0/30**	**1.3**	**AL=1.3**	**Corrosion of household plumbing systems; erosion of natural deposits.**
Lead (ppb) (90th percentile)	**1.1**	**0/30**	**0**	**AL=15**	**Corrosion of household plumbing systems; erosion of natural deposits.**

TOTAL ORGANIC CARBON (TOC)

CONTAMINANT (UNIT OF MEASURE)	TT VIOLATION Y/N	YOUR WATER (RAA Removal Ratio)	RANGE MONTHLY REMOVAL RATIO LOW-HIGH	MCLG	TT	LIKELY SOURCE OF CONTAMINATION	COMPLIANCE METHOD
Total Organic Carbon (removal ratio) (TOC)-TREATED	**NO**	**1.29**	**1.13-1.41**	**NA**	**TT**	**Naturally present in environment**	**Step 1**

STEP 1 TOC REMOVAL REQUIREMENTS

SOURCE WATER TOC (mg/L)	SOURCE WATER ALKALINITY mg/L as CaCO3 (in percentages)		
	0-60	**>60-120**	**>120**
>2.0-4.0	**35.0**	**25.0**	**15.0**
>4.0-8.0	**45.0**	**35.0**	**25.0**
>8.0	**50.0**	**40.0**	**30.0**

DISINFECTION AND DISINFECTION BY-PRODUCTS (Stage 2 Disinfection and Disinfection By-products Rule)

CONTAMINANT (UNIT OF MEASURE)	MCL/MRDL VIOLATION Y/N	YOUR WATER LRAA	RANGE LOW-HIGH	MCLG	MCL	LIKELY SOURCE OF CONTAMINATION

HAA5 (ppb) [Total Haloacetic Acids]	**NO**	**36.78** (Site 4)	**24.0-40.3**	**NA**	**60**	**By-product of drinking water disinfection.**
TTHM (ppb) [Total Trihalomethanes]	**NO**	**47.25** (Site 3)	**35.0-85.0**	**NA**	**80**	**By-product of drinking water disinfection.**
Chloramines (ppm)	**NO**	**3.14**	**1.20-3.65**	**MRDLG=4**	**MRDL=4**	**Water additive used to control microbes.**
Chlorine (ppm) [March only]	**NO**	**2.68**	**2.47-2.79**	**MRDLG=4**	**MRDL=4**	**Water additive used to control microbes.**

- Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.
- Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer.

DISINFECTION AND DISINFECTION BY-PRODUCTS SAMPLED IN 2013 (Stage 1 Disinfection and Disinfection By-products Rule)						
CONTAMINANT (UNIT OF MEASURE)	**MCL/MRDL VIOLATION Y/N**	**YOUR WATER RAA**	**RANGE LOW-HIGH**	**MCLG**	**MCL**	**LIKELY SOURCE OF CONTAMINATION**
HAA5 (ppb) [Total Haloacetic Acids]	**NO**	**22.5**	**20.9-32.0**	**NA**	**60**	**By-product of drinking water disinfection.**
TTHM (ppb) [Total Trihalomethanes]	**NO**	**44.1**	**25.0-72.0**	**NA**	**80**	**By-product of drinking water disinfection.**
Chloramines (ppm)	**NO**	**3.09**	**1.87-4.06**	**MRDLG=4**	**MRDL=4**	**Water additive used to control microbes.**
Chlorine (ppm) [March only}	**NO**	**3.06**	**2.85-3.29**	**MRDLG=4**	**MRDL=4**	**Water additive used to control microbes.**

Definitions

- Al (Action level): The concentration of the contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.
- LRAA (Locational Running Annual Average): The average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters under the Stage 2 Disinfection and Disinfection By-products Rule.
- 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.
- NA: Information not applicable/ not required for that particular water system or for that particular rule.
- ppb (parts per billion): One part substance per billion parts water (or microgram per liter). One ppb is equivalent of half a teaspoon of water in an Olympic sized swimming pool.
- ppm (parts per million): One part substance per million parts water (or milligrams per liter). One ppm is equivalent of one drop of water in sixteen gallons.
- RAA (Running Annual Average): Compliance based on a running annual average of quarterly samples.
- TT (Treatment Technique): A required process intended to reduce the level of a contaminant in drinking water.

- Extra Note: Turbidity is a measure of the cloudiness of water. We monitor it because it is a good indicator of the effectiveness of our filtration system. The turbidity rule requires that 95% or more of the monthly samples must be less than or equal to 0.3 NTU.