# *"2016" Annual Drinking Water Quality Report*
# *"Duplin County"*

Water System Number: "**04-31-085**"

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 Donna Brown at 910-296-2123. We want our valued customers to be informed about their water utility.**

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. Duplin County 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.

The water that is used by this system is ground water and is located throughout the Duplin County Water District.

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 Duplin County Water 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 # A1 | Lower | March 2010 |
| Well #A2 | Lower | March 2010 |
| Well #B1 | Lower | March 2010 |
| Well # B2 | Lower | March 2010 |
| Well # C1 | Moderate | March 2010 |
| Well #D1 | Lower | March 2010 |
| Well #D2 | Lower | March 2010 |
| Well #E2 | Lower | March 2010 |
| Well #F1 | Lower | March 2010 |
| Well #F2 | Lower | March 2010 |
| Well #F3 | Lower | March 2010 |
| Well #G1 | Lower | March 2010 |
| Well #G2 | Lower | March 2010 |
| Well #G3 | Lower | March 2010 |

The complete SWAP Assessment report for Duplin County may be viewed on the Web at: www.ncwater.org/pws/swap. 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 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@ncdenr.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.
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, 2016**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.

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.

# NOTICE TO THE PUBLIC – Reporting Violation

## IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

We are required to report the results of monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During the monthly compliance period beginning August 1, 2016, we did not report the results of monitoring for Total Coliform. (routine sample)

Our system failed to notify the state drinking water program as required by September 10, 2016. Although public health was not impacted, as our customers, you have the right to know what happened and what we did to correct the situation.

**What should I do?** There is nothing you need to do at this time**.** You do not need to boil your water or take other action.

**What is being done?** While we did not notify the state as quickly as we should have, we are working with lab to ensure sample results are reported to state on time. We are no longer in violation.

***Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.***

For more information about this violation, please contact the responsible person listed in the first paragraph of this report.

**Important Drinking Water Definitions:**

***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.

***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.

## Tables of Detected Contaminants

**Inorganic Contaminants**

| Contaminant (units) | Sample Date | MCL Violation Y/N | Your Water | Range Low High | MCLG | MCL | Likely Source of Contamination |
|---|---|---|---|---|---|---|---|
| Fluoride (ppm) | 4/5/16 | N | 0.133 | 0.10 - 0.20 | 4 | 4 | Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories |

**Unregulated Inorganic Contaminants**

| Contaminant (units) | Sample Date | Your Water (average) | Range Low High |
|---|---|---|---|
| Chloride | 9/16/16 | **3.14** | 0.0 – 9.0 |

**Lead and Copper Contaminants**

| Contaminant (units) | Sample Date | Your Water | Number of sites found above the AL | MCLG | AL | Likely Source of Contamination |
|---|---|---|---|---|---|---|
| Copper (ppm) (90th percentile) | 9/11/14 | 0.799 | 0 | 1.3 | AL=1.3 | Corrosion of household plumbing systems; erosion of natural deposits |
| Lead (ppb) (90th percentile) | 9/11/14 | 0.037 | 0 | 0 | AL=15 | Corrosion of household plumbing systems; erosion of natural deposits |

**Disinfectant Residuals Summary**

| | Year Sampled | MRDL Violation Y/N | Your Water (highest RAA) | Range Low High | MRDLG | MRDL | Likely Source of Contamination |
|---|---|---|---|---|---|---|---|
| Chlorine (ppm) | 2016 | N | 0.99 | .02 – 2.0 | 4 | 4.0 | Water additive used to control microbes |

**For TTHM:** ***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 systems, and may have an increased risk of getting cancer.***

**For HAA5:** ***Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer***

**Stage 2 Disinfection Byproduct Compliance -** Based upon Locational Running Annual Average (LRAA)

| Disinfection Byproduct | Year Sampled | MCL Violation Y/N | Your Water (highest LRAA) | Range Low High | MCLG | MCL | Likely Source of Contamination |
|---|---|---|---|---|---|---|---|
| TTHM (ppb) | | | | | N/A | 80 | Byproduct of drinking water disinfection |
| Location B01 | 2016 | N | 32.0 | N/A | | | |
| Location B02 | 2016 | N | 60.0 | N/A | | | |
| HAA5 (ppb) | | | | | N/A | 60 | Byproduct of drinking water disinfection |
| Location B01 | 2016 | N | 8.0 | N/A | | | |
| Location B02 | 2016 | N | 23.0 | N/A | | | |

**Other Miscellaneous Water Characteristics Contaminants**

| Contaminant (units) | Sample Date | Your Water | Range Low High | SMCL |
|---|---|---|---|---|
| Iron (ppm) | 4/5/16 | 0.111 | 0.086 – 0.156 | 0.3 mg/L |
| Sodium (ppm) | 4/5/16 | 33.43 | 18.1 – 44.2 | N/A |
| Manganese (ppm) | 4/5/16 | 0.014 | 0.0 – 0.024 | 250 mg/L |
| pH | 4/5/16 | 8.25 | 8.15 – 8.32 | 6.5 to 8.5 |

# Consumer Confidence Report Certification Form

**Water System Name: Duplin County _____**

**Water System No.: _0_4_-_3_1_-_0_8_5_ Report Year: 2016 Population Served: _17000__**

The Community Water System (CWS) named above hereby confirms that all provisions under 40 CFR parts 141 and 142 requiring the development of, distribution of, and notification of a consumer confidence report have been executed. Further, the CWS certifies the information contained in the report is correct and consistent with the compliance monitoring data previously submitted to the primacy agency by their NC certified laboratory. In addition, if this report is being used to meet Tier 3 Public Notification requirements, as denoted by the checked box below, the CWS certifies that public notification has been provided to its consumers in accordance with the requirements of 40 CFR 141.204(d).

**Certified by: Name: Donna Brown ____ Title: Utility Director_____**

**Signature: __Donna Brown_____ Phone #: 910-296-2123**

**Delivery Achieved Date 3/3/17_____ Date Reported to State: __3/3/17_____**

**X The CCR includes text which provides mandated Public Notice for a monitoring violation (check box, if yes)**

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Check **all** methods used for distribution (see instructions on back for delivery requirements and methods):

- ☐ Paper copy to all
- ☐ Notification of Availability of Paper Copy (other than in the CCR itself)
  Notification Method _____ (i.e. US Mail, door hanger)
- X Notification of CCR URL: www.duplincountync.com_____
  Notification Method _____(i.e. on bill, bill stuffer, separate mailing, email)
- ☐ Direct email delivery of CCR (attached? ___ or embedded? ____)
- X Notification Method Put on water bills and copies in office (i.e. on bill, bill stuffer, separate mailing)
  Newspaper (attach copy) What Paper? _____Date Published: _____
  Notification Method _____ (i.e. US Mail, on bill, bill stuffer, door hanger, a postcard dedicated to the CCR, or email)
- ☐ **"Good faith" efforts** (in addition to the above required methods) were used to reach non-bill paying consumers such as industry employees, apartment tenants, etc. Extra efforts included the following methods:
  - ☐ posting the CCR on the Internet at URL: _____
  - ☐ mailing the CCR to postal patrons within the service area
  - ☐ advertising the availability of the CCR in news media (attach copy of announcement)
    publication of the CCR in local newspaper (attach copy)
  - ☐ posting the CCR in public places such as: (attach list if needed) _____
  - ☐ delivery of multiple copies to single bill addresses serving several persons such as: apartments, businesses, and large private employers
  - ☐ delivery to community organizations such as: (attach list if needed)

**Note:** Use of social media (e.g., Twitter or Facebook) or automated phone calls do not meet existing CCR distribution methods under the Rule.