

2016

City of Lowell

Year Annual Drinking Water Quality Report for

PWS ID # 01-36-060

We at the City of Lowell 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 from where your water comes from, 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.

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. Immune-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 has set forth the appropriate guidelines to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the 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, 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; 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; 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.

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 City of Lowell purchases all water used in Lowell from Two Rivers Utilities. Two Rivers Utilities are supplied by surface water they pull from Mountain Island Lake. Mountain Island Lake is located off N.C. Hwy.273 in northeastern Gaston County near Mt. Holly North Carolina. All water treatment is done by the Two Rivers Utilities and distributed by the City of Lowell.

We routinely monitor for over 120 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 water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done January 1 through December 31 last year. The EPA or the State requires 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 regulation is warranted.

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.

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 (nanograms/l) - one part per trillion corresponds to one minute in 2,000,000 years, or a single penny in \$10,000,000,000.

Parts per quadrillion (ppq) or Picograms per liter (picograms/l) - one part per quadrillion corresponds to one minute in 2,000,000,000 years or one penny in \$10,000,000,000,000.

Picocuries per liter (pCi/L) - picocuries per liter is a measure of the radioactivity in water.

Million Fibers per Liter (MFL) - million fibers per liter is a measure of the presence of asbestos fibers that are longer than 10 micrometers.

Nephelometric Turbidity Unit (NTU) - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

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 treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

Maximum Residual Disinfection Level Goal The "Level" (JVIRDLG) 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.

Maximum Residual Disinfection Level — the "Highest Level" (MRDL) of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Contaminant Level - The "Maximum Allowed" (MCL) is 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 - The "Goal" (MCLG) 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.

The City of Lowell had no contaminant violations in 2016.

The City of Lowell had no variances or exemptions in 2016.

The City of Lowell had one monitoring violation in 2016

Two Rivers Utilities had no contaminant violations in 2016.

Two Rivers Utilities had no variances or exemptions in 2016.

Volatile Organic Contaminants

TTHM	MCL Violations	Our Water	MCL limit	Range	Likely Source
Total Trihalomethanes	NO	.043	.080	.032 -.067	By-Product of drinking water disinfection.
HAA5					
Haloacetic Acids	NO	.021	.060	.009-.034	By-Product of drinking water disinfection.

Inorganic Contaminants	Sample date	Results	Violation	Range	MCL/MCLG	Likely source
Fluoride (ppm)	1 st Quarter	.60	NO	0.02-0.65	4/4	Erosion of natural deposits; Water additive which support strong teeth; discharge from fertilizer and aluminum factories.
Turbidity	2016		NO	MCL TT=1	N/A	Soil Runoff
Disinfection By-Product Contaminants						
Contaminant (units)	Our Water (avg)	Violation	Range	MCL/MCLG	Likely Source	
Chlorine (ppm)	1.18	NO	0.51-1.66	MRDL-4/MRDLG-4	Water additive used to control microbes.	

Disinfection By-Product Precursors Contaminants	Sample date	Our Water	Violation	Monthly Removal ratio	MCL/MCLG	Likely source
Total Organic Carbon (TOC)-treated Removal ratio	2016	50.1	NO	18-100	NA/TT	Naturally present in the environment

Depending on the TOC in our source water, the system must have a certain % removal of TOC or must achieve alternative compliance criteria.

Lead and Copper contaminants	Sample Date	Results	Violation	Range	MCL/MCLG	Likely source
Copper (ppm)	06-15-2016	0.018	NO	0.0013-0.45	AL-1.3/1.3	Corrosion of household plumbing systems Erosion of natural deposits.
Lead (ppm)	06-15-2016	0.0015	NO	0.000-0.0013	AL-15/0	

Footnotes:

1. Copper and Lead are in the 90th percentile for samples collected.
 2. Our source for fluoride has been tested, and meets all state standards.
 3. We met the turbidity standards 100% of the year.
 4. This represents a four quarter running average.
- Although we ran many tests, only the listed substances were found. They were below the state EPA limits.

A very small percentage of water is available to the population for drinking, cooking and other uses.

Please help to conserve water.

If you have any questions concerning this report, please contact city hall at 704-824-3518.

NOTICE TO THE PUBLIC

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

LOWELL, CITY OF HAS NOT MET MONITORING REQUIREMENTS

We are required to 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 compliance period specified in the table below, we ['did not monitor or test' or 'did not complete all monitoring or testing'] for the contaminants listed and therefore cannot be sure of the quality of your drinking water during that time.

CONTAMINANT GROUP**	FACILITY ID NO.	COMPLIANCE PERIOD BEGIN DATE	SAMPLING FREQUENCY	WHEN SAMPLES WERE OR WILL BE TAKEN (Water System to Complete)
Disinfection Byproducts (DBPs)	D01	January 1, 2016	Quarterly (month of January)	FEBRUARY 10, 2016

** See back of this notice for further information on contaminants.

What should I do? There is nothing you need to do at this time.

What is being done? [Describe corrective action.] *REQUIRED SAMPLES TAKEN ON 2/10/2016*

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, please contact:

Responsible Person <i>THOMAS E. SHREWSBURY</i>	System Name LOWELL, CITY OF	System Address (Street) <i>101 W. FIRST ST.</i>
Phone Number <i>704-824-1072</i>	System Number NC0136060	System Address (City/State/Zip) <i>LOWELL NC 28098</i>

Violation Awareness Date: April 19, 2016

Date Notice Distributed: _____ Method of Distribution: _____

Public Notification Certification:

The public water system named above hereby affirms that public notification has been provided to its consumers in accordance with all delivery, content, format, and deadline requirements specified in 15A NCAC 18C .1523.

Owner/Operator: *Thomas E. Shrewsbury* (Signature) THOMAS E. SHREWSBURY (Print Name) _____ (Date)

Contaminant Group List

- (AS) Asbestos** - includes testing for Chrysotile, Amphibole and Total Asbestos.
- (BA) Total Coliform Bacteria** - includes testing for Total Coliform bacteria and Fecal/*E.coli* bacteria. Testing for Fecal/*E.coli* bacteria is required if total coliform is present in the sample.
- (BB) Bromate/Bromide** - includes testing for Bromate and/or Bromide.
- (CD) Chlorine Dioxide/Chlorite** - includes testing for Chlorine Dioxide and/or Chlorite.
- (DI) Disinfectant Residual** must be tested with the collection of each compliance bacteriological sample, at the same time and site.
- Fecal Indicators** - includes *E.coli*, enterococci or coliphage.
- (HAA5)- Haloacetic Acids** - include Monochloroacetic Acid, Dichloroacetic Acid, Trichloroacetic Acid, Monobromoacetic Acid, Dibromoacetic Acid.
- (IOC) Inorganic chemicals** - include Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cyanide, Fluoride, Iron, Manganese, Mercury, Nickel, pH, Selenium, Sodium, Sulfate, and Thallium.
- (LC) Lead and Copper** are tested by collecting the required number of samples and testing each of the samples for both lead and copper.
- (NT) Nitrate/ (NI) Nitrite** - includes testing for nitrate and/or nitrite.
- (RA) Radionuclides** - includes Gross Alpha, Radon, Uranium, Combined Radium, Radium 226, Radium 228, Potassium 40 (Total), Gross Beta, Tritium, Strontium 89, Strontium 90, Iodine 131, and Cesium 134.
- (SOC) - Synthetic Organic Chemicals/Pesticides** - include 2,4-D, 2,4,5-TP (Silvex), Alachlor, Atrazine, Benzo(a)pyrene, Carbofuran, Chlordane, Dalapon, Di(2-ethylhexyl)adipate, Di(2-ethylhexyl)phthalate, Dibromochloropropane (DBCP), Dinoseb, Endrin, Ethylene dibromide (EDB), Heptachlor, Heptachlor Epoxide, Hexachlorobenzene, Hexachlorocyclopentadiene, Lindane, Methoxychlor, Oxamyl(vydate), PCBs, Pentachlorophenol, Picloram, Simazine, Toxaphene.
- (TOC) - Total Organic Carbon** - includes testing for Alkalinity, Dissolved Organic Carbon (DOC), Total Organic Carbon (TOC) and Ultraviolet Absorption 254 (UV254). Source water samples must be tested for both TOC and Alkalinity. Treated water samples must be tested for TOC. Source water samples and treated water samples must be collected on the same day.
- (TTHM) - Total Trihalomethanes** - include Chloroform, Bromoform, Bromodichloromethane, and Dibromochloromethane.
- (VOC) - Volatile Organic Chemicals** - include 1,2,4-Trichlorobenzene, Cis-1,2-Dichloroethylene, Xylenes (Total), Dichloromethane, o-Dichlorobenzene, p-Dichlorobenzene, Vinyl Chloride, 1,1,-Dichloroethylene, Trans-1,2,-Dichloroethylene, 1,2-Dichloroethane, 1,1,1-Trichloroethane, Carbon Tetrachloride, 1,2-Dichloropropane, Trichloroethylene, 1,1,2-Trichloroethane, Tetrachloroethylene, Chlorobenzene, Benzene, Toluene, Ethylbenzene, and Styrene.
- (WQP) Water Quality Parameters** (for Lead and Copper Rule) - includes Calcium, Orthophosphate (as PO₄), Silica, Conductivity, pH, Alkalinity and Water Temperature.

Instructions for Completing the Notice/Certification Form & for Performing Public Notice for Tier 3 Monitoring Violations

- Complete **ALL** the missing information on the "Notice to the Public." (Note: Under the section of the notice entitled "What is being done?" describe corrective actions you took or are taking. You may choose the appropriate language below, or develop your own:
 - We have since taken the required samples, as described in the last column of the table above. The sample results showed we are meeting drinking water standards.
 - We have since taken the required samples, as described in the last column of the table above. The sample for TTHM or HAA5 exceeded the limit. [Describe corrective action; use information from public notice prepared for violating the limit.]
 - We plan to take the required samples soon, as described in the last column of the table above.)
- Provide public notification to your customers as soon as reasonably possible after you learn of the violation as follows:

<p>Community systems must use one of the following:</p> <ul style="list-style-type: none"> Hand or direct delivery Mail, as a separate notice or included with the bill <p>For community systems, this notice is appropriate for insertion in an annual notice or the Consumer Confidence Report (CCR), as long as public notification timing and delivery requirements are met [CFR 141.204(d)].</p>	<p>Non-community systems must use one of the following:</p> <ul style="list-style-type: none"> Posting in conspicuous locations Hand delivery Mail <p>For non-community systems, if you post the notice, it must remain posted as long as the violation or situation persists; in no case should the notice be posted less than 7 days, even if the violation is resolved. [CFR 141.204(b)].</p>
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(Note: **Both** community and non-community systems must use *another* method reasonably calculated to reach others **IF** they would not be reached by one of the required methods listed above [CFR 141.204(c)]. Such methods could include newspapers, e-mail, or delivery to community organizations.

- Both sides of this public notice/certification MUST be delivered to the persons served by the water system** in order for your customers to have access to the required **Contaminant Group List**.
 - If you mail, post, or hand deliver, print your notice on letterhead, if available.
 - Notify new billing customers or units prior to or at the time their service begins.
 - Provide multi-lingual notifications if 30% of the residents served are non-English speaking.
 - Should you decide not to use this enclosed notice and develop your own version instead, the mandatory language in ***bold italics*** may not be altered and you **MUST** include the ten required elements listed in CFR 141.205. A separate Public Notification Certification Form that is available on our web site or the certification located at the bottom of the sample notice provided **MUST** also be submitted.
- After issuing the "Notice to the Public" to your customers, **sign and date** the "Public Notification Certification" at the bottom of the notice. **Mail the completed public notice/certification form to the Public Water Supply Section, ATTN: Public Notification Rule Manager, 1634 Mail Service Center, Raleigh, NC 27699-1634 within ten days after issuing the notice [CFR 141.31(d)]. Keep a copy for your files.**