

Report

Annual Drinking Water



HOW CAN I GET INVOLVED? Page 4

Growth Drives Need for Water Treatment Plant Upgrade

The growth of Lancaster County continues to explode and with growth requires LCWSD to keep up with water demands especially during the high demand summer months. Construction is nearing completion on a 4 million gallon per day (MGD) upgrade of LCWSD’s Catawba River Water Treatment Plant. The treatment plant has been expanded to 40 MGD.

Construction began last fall and will be completed this summer. “Part of the construction was the addition of a membrane filtration system. This is a new treatment technology for us at the plant and one where we will be better prepared for most contaminants required for treatment in the future,” said Randy Hawkins, Chief Administrative Staff Person at the plant. The membrane technology provides an ultrafiltration barrier to provide consistent high quality effluent exceeding stringent regulatory requirements.

Other construction activities were focused on rehabilitation needs with the plant infrastructure. For example, each filter was taken out of service and rehabilitated. Sludge handling infrastructure was added to provide more storage capacity and greater efficiency to thicken and land apply the residuals on-site. A larger mixing chamber was constructed to accommodate the additional flow to the plant.

“This project comes with a price tag of \$16.5 million dollars, half of which is paid for by our co-owner of the facility, Union County, NC. This upgrade will give us the ability to provide more water for the immediate future as well as a footprint for future expansions as we continue to grow and expand our customer base for years to come,” said Stephen White, LCWSD Manager.

Is My Water Safe?

We are pleased to provide this year’s Annual Water Quality Report (*Consumer Confidence Report*) as required by the Safe Drinking Water Act (*SDWA*). This report is designed to provide details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. This report is a snapshot of last year’s water quality. We are committed to providing you with information because informed customers are our best allies.

1,095 miles
of waterlines
Equals the distance from
Lancaster, SC to Ft. Worth, TX

356 miles
of gravity sewer & force main
Equals the distance from
Lancaster, SC to Jacksonville, FL

30,000+
WATER
CUSTOMERS

17,000+
SEWER
CUSTOMERS

LCWSD
Lancaster County
Water & Sewer District

181694

Questions? Call 803-285-6919 or 1-800-832-2126 OR go to our website - www.lcwasd.org

Behind the lines



Stephen White

Manager
28 years with the district



C. F. Truesdale

Office Manager
23 years with the district



Robbie Peagler

Utilities Coordinator
22 years with the district



Paul Rickenbaker

Water Superintendent
13 years with the district



Gerald Cauthen

Sewer Superintendent
14 years with the district



Chris Richardson

IL Wastewater Treatment Facility Director
19 years with the district



Randy Hawkins

Catawba River Water Treatment Plant Director
5 years with the district



James Hawthorne

Development Engineer
14 years with the district

Not in violation

Chlorine

Typical source:

Water additive used to control microbes/control microbes

- Maximum residual disinfection level (MRDL) is the highest level of disinfectant allowed in drinking water. Maximum residual disinfection level goal (MRDLG) is the level of drinking water disinfectant below which there is no known or expected risk to health.

(MRDL & MRDLG)
Maximum Allowed
4
parts per million

Annual average

1.08

- The annual average was for water we purchased from the Catawba River Water Treatment Plant and ranged from a high of 1.87 to a low of .088.

Not in violation

Chlorite

Typical source:

Water additive used to control microbes

- Parts per million corresponds to 1 minute in 2 years or a single penny in \$10,000

(MRDL & MRDLG)
Maximum Allowed
1.0 MRDL & 0.8 MRDLG
parts per million

Annual average

0.43

- Annual average was for water we purchased from Catawba River Water Treatment Plant & ranged from a high of 0.52 to a low of 0.32.

Not in violation

Chlorine Dioxide

Typical source:

Water additive used to control microbes

- Parts per billion corresponds to 1 minute in 2,000 years or 1 penny in \$10,000,000

(MRDL & MRDLG)
Maximum Allowed
80
parts per billion

Annual average

Below detectable limits

- Annual average was for water we purchased from Catawba River Water Treatment Plant & ranged below detectable limits.

Not in violation

Turbidity

TT: A treatment technique that is a required process intended to reduce the level of a contaminant in drinking water

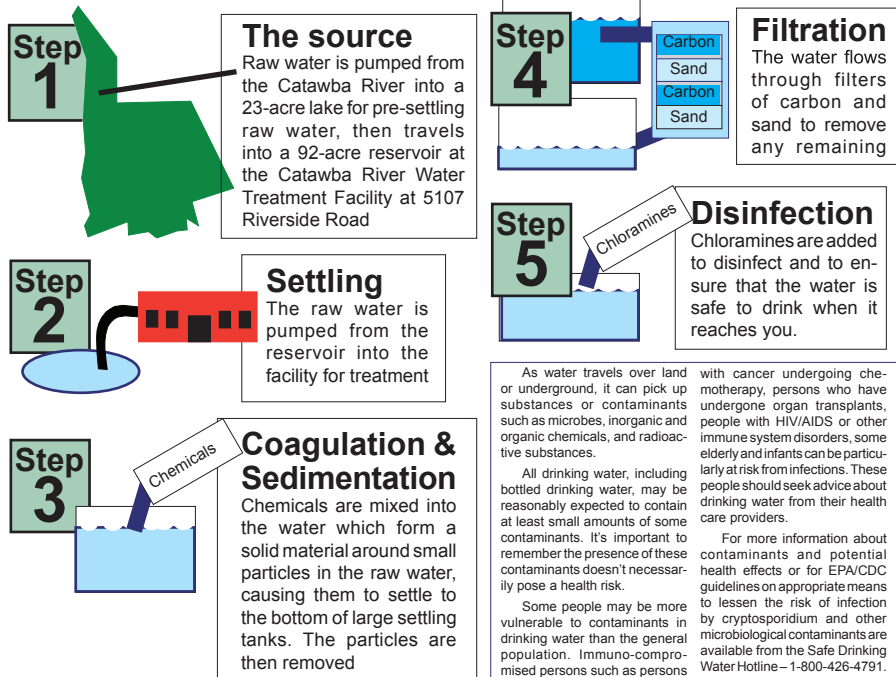
(MCL = 1.0)
Maximum Allowed
TT

High level detected

0.50

- Highest level detected was for water we purchased from Catawba River Water Treatment Plant

Where we get our water & how it's treated



Brad Bucy

Interim Manager
8 years with the district



Harold Collins

Quality Control Coordinator
27 years with the district



English Henderson

Human Resources Director
1 year with the district



David Lee

IT Director
22 years with the district



Margaret Flow

Business Manager
21 years with the district



Michael Marcus

GIS Director
7 years with the district



Wes Carter

Operations Manager
6 years with the district



Quincy Reed

Route Tech Supervisor
12 years with the district



Tim Kiser

Professional Engineer
1 year with the district

Not in violation

Nitrate

Typical source of nitrate:

Runoff from fertilizer use, leaching from septic tanks or sewage, erosion of natural deposits.

- The Maximum Contaminant Level is set by DHEC and is the highest level of contaminant allowed in drinking water.
- Parts per million corresponds to one minute in two years or a single penny in \$10,000.
- The "goal" (MCLG) is the level of a contaminant in drinking water below which no known or expected risk to health exists. MCLGs allow for a margin of safety.

(MCL & MCLG)
Maximum Allowed
10
parts per million

Annual average
0.79
Catawba

- Annual average was 0.79 for water purchased from Catawba River Water Treatment Plant.

Not in violation

Fluoride

Typical source:

Erosion of natural deposits, water additive to promote strong teeth, discharge from fertilizer and aluminum factories.

- Maximum Contaminant Level is set by DHEC and is the highest level of contaminant allowed in drinking water.
- Parts per million corresponds to one minute in two years or a single penny in \$10,000.
- The "goal" (MCLG) is the level of a contaminant in drinking water below which no known or expected risk to health exists. MCLGs allow for a margin of safety.

(MCL & MCLG)
Maximum Allowed
4
parts per million

Annual average
0.59
Catawba

- Annual average was 0.59 for water purchased from Catawba River Water Treatment Plant.

Not in violation

Total Trihalomethanes

Typical source:

By-product of drinking water disinfectant

- Parts per billion corresponds to one minute in 2,000 years or a single penny in \$10,000,000.
- 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.

(MCL)
Maximum Allowed (Action level)
80
parts per billion

Annual average
27.4

- Annual average was 27.4 for water purchased from Catawba River Water Treatment Plant and ranged from a high of 52.6 to a low of 16.5.

Important lead & copper information

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 household plumbing.
- Lancaster County Water & Sewer District is responsible for providing high quality drinking water but cannot control the variety of materials used in plumbing components.
- When your water sits 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 drinking water, you may wish to have yours 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>.

Not in violation

Lead

Typical source:

- Corrosion of materials containing lead in household plumbing.
- Parts per billion corresponds to one minute in 2,000 years or a single penny in \$10,000,000.

(MCL)
Maximum Allowed (Action level)
15
parts per billion

Highest amount detected in our water
(90th percentile value)
8.0
2019 results

- Laboratory analysis indicates that lead is not present above the limit.
- Not required to sample again until September 2022.
- See important information below about lead and copper.

Not in violation

Copper

Typical source:

- Corrosion of materials containing copper in household plumbing, erosion of natural deposits.
- Action Level is concentration of contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.
- Parts per million corresponds to 1 minute in 2 years or 1 penny in \$10,000.

(MCL)
Maximum Allowed (Action level)
1.3
parts per million

Highest amount detected in our water
(90th percentile value)
0.22
2019 results

- Not required to sample again until Sept. 2022

Not in violation

Haloacetic acids (HAAs)

Typical source:

- By-product of drinking water disinfectant
- Parts per billion corresponds to one minute in 2,000 years or a single penny in \$10,000,000.

(MCL)
Maximum Allowed (Action level)
60
parts per billion

Annual average
13.8

- Annual average was 13.8 for water purchased from Catawba River Water Treatment Plant and ranged from a high of 21.4 to a low of 9.4.

Not in violation

Total Organic Carbon

Typical source:

Naturally present in environment

- TT is defined as a treatment technique that is a required process intended to reduce the level of contaminant in drinking water. Running Annual Average, RRA must be more than 1.0 to meet compliance.

Maximum Allowed
TT

Level detected
1.23 - RRA

- The range met the requirement. Sample frequency was monthly.

Regulatory Controls



- To ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems.
- Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for health.

A Source Water Assessment Plan (SWAP) has been completed for LCWSD's water system. SWAPs, among other things, identify potential sources of contamination to drinking water supplies. For a copy, please call LCWSD at 285-6919 or 1-800-832-2126 during normal business hours.

Compliance with Other Drinking Water Regulations

Unregulated Contaminants Drives Future Water Treatment Needs

Unregulated contaminants do not yet have a drinking water standard set by USEPA. LCWSD is required to monitor these contaminants within our distribution system and the purpose of monitoring for these contaminants is to help USEPA decide whether the contaminants should have a standard. The following Additional Monitoring table charts detections of unregulated contaminants.

Contaminants from UCMR4 Sampled during 2019	Average of Results (ppb)	Range (ppb)
HAA5	8.29	0.64 - 25.58
HAA6Br	3.29	0.00 - 6.42
HAA9	11.36	0.64 - 30.42

Reference doses and health effects language can be found at: <https://www.epa.gov/dwucmr/fact-sheets-about-fourth-unregulated-contaminant-monitoringrule-ucmr-4>

LEVEL 2 ASSESSMENT: Detailed Engineering Study of Water System

In February, 2019, we had an *E. coli* violation during our sampling for total coliform bacteria. We had a total coliform repeat sample following an *E. coli* positive routine sample. The health effects for *E. coli* are: *E. coli* are bacteria whose presence indicates the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely compromised immune systems. We found *E. coli* bacteria, indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems found during these assessments.

In March, 2019, a Level 2 assessment was completed by an engineering firm because we found the above mentioned *E. coli* in our water system. A Level 2

assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an *E. coli* violation has occurred and/or why total coliform bacteria have been found in our water system.

The assessment found no loss of power, pressure or other unusual event that would have resulted in issues related to water quality. We were required to take corrective actions by SC DHEC to include updating our sample siting plan to remove and replace residential units with unsanitary surrounding conditions; updating our Standard Operating Procedures for collecting bacteriological samples; and complete the aforementioned Level 2 assessment which concluded no apparent sanitary defects associated with the operation and maintenance of the system during or prior to the *E. coli* positive readings.

HOW CAN I GET INVOLVED?

- Water Conservation Tips -

Did you know that the average U.S. household uses approximately 400 gallons of water per day or 100 gallons per person per day? Luckily, there are many low-cost and no-cost ways to conserve water. Small changes can make a big difference – try one today and soon it will become second nature.

- ➔ **Take short showers** - a 5-minute shower uses 4 to 5 gallons of water compared to up to 50 gallons for a bath.
- ➔ **Shut off water while brushing your teeth, washing your hair and shaving and save up to 500 gallons a month.**
- ➔ **Use a water-efficient shower head.** They're inexpensive, easy to install, and can save you up to 750 gallons a month.
- ➔ **Run your clothes washer and dishwasher only when they are full.** You can save up to 1,000 gallons a month.
- ➔ **Water plants only when necessary.**
- ➔ **Fix leaky toilets and faucets.** Faucet washers are inexpensive and take only a few minutes to replace. To check your toilet for a leak, place a few drops of food coloring in the tank and wait. If it seeps into toilet bowl without flushing, you have a leak. Fixing it or replacing it with a new, more efficient model can save up to 1,000 gallons a month.
- ➔ **Adjust sprinklers so only your lawn is watered.** Apply water only as fast as the soil can absorb it and during the cooler parts of the day to reduce evaporation.
- ➔ **Teach your kids about the water conservation** to ensure a future generation that uses water wisely. Make it a family effort to reduce next month's water bill.
- ➔ **Visit www.epa.gov/watersense for more information.**

Source Water Protection Tips

Protection of drinking water is everyone's responsibility. You can help protect your community's drinking water source in several ways:

- ◆ Eliminate excess use of lawn and garden fertilizers and pesticides – they contain hazardous chemicals that can reach your drinking water source.
- ◆ Pick up after your pets.
- ◆ If you have your own septic system, properly maintain your system to reduce leaching to water sources or consider connecting to a public water system.
- ◆ Dispose of chemicals properly; take used motor oil to a recycling center.

Commission:

This report is provided as a service. Please share your comments with us, so we can improve our efforts to get you information you need.

The Commission meets at 6:30 p.m. the 2nd Tuesday of each month at LCWSD's office unless otherwise announced.

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