CHARLOTTE

CHARLOTTE-MECKLENBURG
UTILITY DEPARTMENT

CLEAN WATER

For a Healthy Community

PROTECTING THE ENVIRONMENT AND PROVIDING

CLEAN DRINKING WATER

IS A RESPONSIBILITY THAT THE CHARLOTTE-MECKLENBURG UTILITY DEPARTMENT

TAKES VERY SERIOUSLY.

WE SEND THIS REPORT ANNUALLY, AS REQUIRED BY THE EPA, TO HELP CUSTOMERS LEARN MORE ABOUT OUR CRITICAL WATER RESOURCES. READ ON TO LEARN MORE ABOUT MECKLENBURG COUNTY'S DRINKING WATER SUPPLY AND HOW IT ARRIVES TO YOUR HOME OR BUSINESS.

OUR (VERY GOOD) RESULTS

Drinking water provided by CMUD meets and exceeds all state and federal drinking water standards.

Our state-certified water treatment operators and lab staff conducted more than 150,000 drinking water tests in 2011. Even the highest contaminant levels detected were well below federal limits.

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.

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, and some elderly and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers.

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.

OUR SHARED WATER SUPPLY

Mountain Island Lake and Lake Norman are the source waters for CMUD. These surface waters are part of the Catawba River basin, which provides water for more than 1.5 million people in our region. CMUD operates three water treatment plants that collectively clean an average of 110 million gallons a day for 788,000 people in Charlotte, Cornelius, Davidson, Huntersville, Pineville, Matthews and Mint Hill.

OUR TREATMENT PROCESS

CMUD employees work 24 hours a day, 7 days a week, and 365 days a year to provide safe, high quality drinking water. Water from Mountain Island Lake and Lake Norman feeds three water treatment plants – Franklin, Vest or Dukes.

We add aluminum sulfate (alum) to the water to make dirt particles clump together for easy removal. The water then flows through filters that trap smaller particles and chlorine is added to prevent bacterial growth. Fluoride is also added at this stage to promote dental health and lime is added to adjust the water's pH and prevent pipe corrosion. Water is then pumped through more than 4,000 miles of water distribution mains.

SOURCE WATER ASSESSMENT PROGRAM RESULTS

The state's Source Water Assessment Program(SWAP) conducts periodic evaluations of all drinking water sources across North Carolina to determine their susceptibility to potential contaminant sources. A rating of "higher" does not indicate poor water quality–only the system's vulnerability to become contaminated in the future by potential sources.

The susceptibility rating for each water source was determined by considering the number and location of potential contaminants, along with the conditions of your water source and watershed.

FOR MORE INFORMATION OR QUESTIONS

CHARLOTTE/MECKLENBURG

For a complete list of substances monitored but not detected, please call 311 or visit www.cmutilities.com

ENVIRONMENTAL PROTECTION AGENCY

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
http://www.Epa.Gov/safewater/lead

STATE OF NORTH CAROLINA

To obtain a printed copy of the SWAP report, please mail a written request to:

Source Water Assessment Program – Report Request
1634 Mail Service Center
Raleigh, NC 27699-1634

You can also email your request to swap@ncmail.net or visit www.ncwater.org/pws/. If you have any questions about the SWAP report, please contact the Source Water Assessment staff by phone at 919-715-2633.

SPANISH

La información contenida en este folleto es de gran importancia. Converse con una persona que la comprenda o llame por teléfono al número 311 para pedir una copia de estefolleto en español.

VIETNAMESE

Tài liệu này có tin tức quan trọng về nước uống của quý vị. Hãy nhờ người dịch cho quý vị hoặc hỏi người nào hiểu tài liệu này.

Source	Inherent Vulnerability Rating	Contaminant Rating	Susceptibility Rating	Date
Mt. Island Lake/ Catawba River	Moderate	Moderate	Moderate	March 2010
Lake Norman	Higher	Higher	Higher	March 2010

Source Water

Treatment

Assessment

Storage and Distribution

Q AND A

Why does CMUD add chlorine and fluoride to our drinking water?
Chlorine is added to kill bacteria and prevent waterborne illness, and fluoride provides a defense against tooth decay. Both of these substances are added to water during the water treatment process.

Fluoride has been proven to promote oral health and CMUD has added fluoride to our water since 1949. At such low levels, chlorine and fluoride do not pose a health risk but provide a significant health benefit.

Is our water hard or soft?
Hardness is primarily a measurement of calcium and magnesium concentration. Water is considered hard if it measures more than 125 parts per million, or 7.5 grains per gallon of trace minerals. Our water has a hardness measure of 30 parts per million, or 1.8 grains per gallon, which is considered soft.

How does CMUD take care of our water and sewer system?
Since its creation in 1972, CMUD has made strategic infrastructure investments that have served our growing community while protecting public health, supplying high-quality drinking water and ensuring fire protection.

Building and maintaining this countywide system to the safest standards requires key capital investments that, in turn, drive the overall budget for the department. Funded solely from rates and fees paid by customers, CMUD invests 63 cents of every dollar into infrastructure maintenance and improvements.

For more information:
To report a water quality or billing issue, please call Charlotte-Mecklenburg Customer Service at 311 or 704.336.7600. Visit www.cmutilities.com for details on water treatment, conservation, customer service, rates and more.

TERMS

Action Level (AL) – the concentration of a contaminant, which if exceeded, triggers treatment or other requirements.

EPA Goal/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.

EPA Limit/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 technology.

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 controlling microbial contaminants.

Maximum Residual Disinfection Level Goal (MRDLG) – the level of a drinking water disinfectant below which there is no known or expected health risk. This goal does not reflect the benefits of using disinfectants to control microbial contaminants.

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

Non-Applicable (N/A) – information not applicable or required.

Parts per billion (ppb) – one part per billion (micrograms per liter) corresponds to one minute in 2,000 years, or one penny in $10 million.

Parts per million (ppm) – one part per million (milligrams per liter) corresponds to one minute in two years, or a single penny in $10,000.

Nephelometric Turbidity Unit (NTU) – a measure of the cloudiness of the water. Turbidity over 5 NTU is just noticeable to the average person. Low turbidity is a good indicator of the effectiveness of our filtration system.

Total Organic Carbon (TOC) – has no health effects; however, organics provide a medium for the formation of disinfection by-products. The TOC compliance criteria applies only to treated water.

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

Turbidity % – low percentages are a goal for all substances except turbidity. The turbidity rule requires that 95% or more of the monthly samples be less than or equal to 0.3 NTU.

EPA limits are set at very stringent levels. To understand the possible health effects described for many regulated contaminants, a person would have to drink two liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

CHARLOTTE-MECKLENBURG UTILITY DEPARTMENT ANNUAL COMPLIANCE RESULTS AND AVERAGES OF 2011

*mg/L = ppm & ug/L = ppb

CONTAMINANT	LOCATION	MEETS STANDARD	YOUR WATER	EPA LIMIT MCL	EPA GOAL MCLG	LIKELY SOURCE
MICROBIAL CONTAMINANTS Total coliform (% positive)	Water Distribution System	✓	0.05% - Monthly Average 0.3% - Highest monthly average	Results of no more than 5% positive/month	0	Naturally Present In The Environment
TURBIDITY Turbidity (ntu)	 Franklin Vest Lee Dukes	 ✓ ✓ ✓	 0.06/100% 0.06/100% 0.05/100%	TT = 0.3 ntu TT = % of samples≤0.3	N/A	Soil Runoff
INORGANIC CONTAMINANTS Fluoride (mg/L)	Franklin Vest Lee Dukes	✓ ✓ ✓	0.79 0.88 0.80	4	4	Erosion Of Natural Deposits; Water Additive That Promotes Strong Teeth
COPPER AND LEAD CONTAMINANTS Copper (ppm) Lead (ppb) 1 Of 54 Sites Exceeded Action Levels (AL) Chlorine (mg/L	 Water Distribution System Water Distribution System Franklin Vest Lees Dukes	 ✓ ✓ ✓ ✓ ✓	 None Detected @ 90th Percentile None Detected @90th Percentile 1.35 1.36 1.20	 AL = 1.3 AL = 15	 1.3 0	 Corrosion Of Household Plumbing; Erosion Of Natural Deposits Corrosion Of Household Plumbing; Erosion Of Natural Deposits
*DISINFECTION BYPRODUCTS CONTAMINANTS THM(ppb) Trihalomethanes HAA5(ppb) Haloacetic Acids	 Water Distribution System Water Distribution System	 ✓ ✓	 45.8 12.2	 80 60	 N/A	 By-product Of Drinking Water Disinfection By-product Of Drinking Water Disinfection
TOC REMOVAL Total Organic Carbon (ppm)	LOCATION Franklin Vest Lee Dukes	MEETS STANDARD ✓ ✓ ✓	RAW AVERAGE(MIN-MAX) 1.39 (0.69-1.70) 1.47 (1.21 - 1.59) 1.38 (1.25 - 1.55)	TREATED AVERAGE(MIN-MAX) 0.90 (0.64-1.22) 0.89 (0.69-1.06) 0.87 (0.62-1.04)	COMPLIANCE CRITERIA < 2.0	LIKELY SOURCE Naturally Present In The Environment

* Non-detected substances not listed. For full list, call 311 or visit www. cmutilites.com