



TOWN OF LILLINGTON

2017 Annual Drinking Water Quality Report

Water System Number: 03-43-025

The 2017 Lillington Annual Drinking Water Quality Report is a summary of the last year's water quality. Included are details about:

- Source(s) of water,
- What it contains, and
- How it compares to the standards set by regulatory agencies.

Our goal is to provide our customers with safe and dependable drinking water. Town staff continually seeks to improve the water treatment process and to protect our water resources. We are committed to ensuring the quality of our customer's water. We want our valued customers to be fully informed about their water utility.

If you have questions about this report or concerning your water, please contact Brian Hyde Public Works Supervisor at (910) 893-2654 or at byhde@lillingtonnc.org

When you turn on your tap, please consider the source

Lillington's drinking water is purchased from Harnett County Public Utilities. The water plant is located at 310 W Duncan St Lillington NC 27546

Violations that your water system received for 2017

We received 1 violation during 2017 for failure to notify customers and report to State.

2018-2497413	11-13-2017	4B	REPORT SAMPLE RESULT/FAIL MONITOR RTCR	8000	REVISED TOTAL COLIFORM RULE (RTCR)
------------------------------	------------	----	--	------	---------------------------------------

Tables of Detected Contaminants

Below are a summary of tables identifying any non-treatable contaminants in the potable water source for Lillington.

Microbiological Contaminants in the Distribution System - For systems that collect *less than 40* samples per month

Contaminant (units)	MCL Violation Y/N	Your Water	MCLG	MCL	Likely Source of Contamination
Total Coliform Bacteria (presence or absence)	N	0	0	2 positive samples Note: if either an original routine sample and or its repeat sample(s) are fecal Coliform or E Coli positive, a Tier 1 violation exists.	Naturally present in the environment
Fecal Coliform or <i>E. coli</i> (presence or absence)	N	N/A	0		Human error and or animal fecal waste

Asbestos Contaminant

Contaminant (units)	Sample Date	MCL Violation Y/N	Your Water	Range Low High	MCLG	MCL	Likely Source of Contamination
Total Asbestos (MFL)	03/08/2012	N	ND	0.00 – 0.60	.16	.60	Decay of asbestos cement water mains; erosion of natural deposits

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) (90 th percentile)	09/20/2016	20	0	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb) (90 th percentile)	09/20/2016	20	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)	2017	N	1.06	0.00 2.80	4	4.0	Water additive used to control microbes
Chloramines (ppm)	2017	N	2.58	1.10 3.70	4	4.0	Water additive used to control microbes

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)	2017	N	0.049	0.029 0.048	N/A	80	Byproduct of drinking water disinfection
Location (B01)	2017	N	0.048	0.0138 0.0719	N/A	80	Byproduct of drinking water disinfection
Location (B02)	2017	N	0.092	0.0191 0.0725	N/A	80	Byproduct of drinking water disinfection
HAA5 (ppb)	2017	N	0.017	0.0097 0.0287	N/A	60	Byproduct of drinking water disinfection
Location (B01)	2017	N	0.017	.0097 0.0287	N/A	60	Byproduct of drinking water disinfection
Location (B02)	2017	N	0.016	.0100 0.0242	N/A	60	Byproduct of drinking water disinfection

Important Drinking Water Definitions:

****Suggested definitions for the report - remove the definitions that are not needed.**

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 (ug/L) - One part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

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

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.

Turbidity				
Turbidity (NTU)	Treatment Technique (TT) Violation Y/N	Your Water	Treatment Technique (TT) Violation if :	Likely Source
Highest single measurement	N	.08	Turbidity > 1 NTU	Soil runoff
Lowest monthly percentage of samples meeting turbidity limits	N	100%	Less than 95% of monthly Turbidity measurements are ≤ 0.3 NTU	

Turbidity is a measure of the cloudiness of the 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

Microbiological Contaminants							
Contaminant [code] (units)	MCL		MCLG	Your Water	Range	Date of Sample	Likely Source of Contamination
Total Coliform Bacteria (presence or absence)	> 5 % triggers level 1 assessment		0	4.4%	N/A	N/A	Naturally present in the environment
Fecal Coliform or E. coli (presence or absence)	Routine and repeat samples are total coliform-positive and either is E. coli-positive or system fails to take repeat samples following E. coli-positive routine sample or system fails to analyze total coliform-positive repeat sample for E. coli Note: If either an original routine sample and/or its repeat samples(s) are E. coli positive, a Tier 1 violation exists.		0	0%	N/A	N/A	Human and Animal Fecal Waste

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system.

Regulated Inorganic Contaminants							Likely Source of Contamination
Contaminant [code] (units)	MCL	MCLG	Your Water	Range	Date of Sample	Violation	
Fluoride (ppm)	4	4	0.64	N/A	1/4/17	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories

Lead and Copper Contaminants							Likely Source of Contamination
Contaminant [code] (units)	MCL	MCLG	Your Water	Range	Date of Sample	Violation	
Copper (ppm) 90 th Percentile	AL=1.3	1.3	0.155	N/A	8/2016	N	Corrosion of household plumbing systems; erosion of natural deposits, leaching from wood preservatives
Lead (ppb) 90 th Percentile	AL=15	0	N/D	N/A	8/2016	N	Corrosion of household plumbing systems; erosion of natural deposits

Disinfection By-Product Precursors Contaminants							
Contaminant (units)	TT Violation Y/N	Your Water Ratio	Range Ratio	MCLG	MCL	Likely Source of Contamination	Compliance Method
Total Organic Carbon (Ratio)	N	1.29	1.10-1.50	N/A	TT	Naturally present in the environment	Step 1

Step 1 TOC Removal Requirements			
Source Water	Source Water Alkalinity Mg/L as CaCO ₃ (in Percentages)		
TOC (Mg/L)	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

Additional Terms and Abbreviations

MCLG – Maximum Contaminant Level Goal – The level of a contaminant in drinking water below which there is no known or expected health risk. MCLGs allow for a margin of safety.
MCL – Maximum Contaminant Level – The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to MCLGs as feasible using the best available treatment technology.
TT – Treatment Technique – is a required process intended to reduce the level of contaminant in drinking water.
AL – Action Level – The concentration of a contaminant which, if exceeded triggers treatment or other requirements which a water system must follow.
MFL – Million Fibers per Liter – A measurement of the presence of asbestos fibers that are longer than 10 micrometers
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 Disinfectants and Disinfection Byproducts Rule.

Disinfection By-Product Contaminants							
Contaminant	YEAR	MCL	MCLG	Your Water Highest LRAA	Range Individual Results	Violation	Likely Source of Contamination
TTHM (ppb)	2017	80	N/A	55.9		N	By-product of chlorination
TTHM (ppb) B01	2017	80	N/A		22.3 – 77.6	N	By-product of chlorination
TTHM (ppb) B02	2017	80	N/A		22.1 – 70.8	N	By-product of chlorination
TTHM (ppb) B03	2017	80	N/A		12.5 – 64.9	N	By-product of chlorination
TTHM (ppb) B04	2017	80	N/A		26.1 – 87.2	N	By-product of chlorination
TTHM (ppb) B05	2017	80	N/A		22.6 – 78.6	N	By-product of chlorination
TTHM (ppb) B06	2017	80	N/A		20.3 – 65.4	N	By-product of chlorination
TTHM (ppb) B07	2017	80	N/A		18.1 – 91.1	N	By-product of chlorination
TTHM (ppb) B08	2017	80	N/A		14.9 – 88.3	N	By-product of chlorination
HAA5 (ppb)	2017	60	N/A	17.7		N	By-product of chlorination
HAA5 (ppb) B01	2017	60	N/A		11.7 – 17.8	N	By-product of chlorination
HAA5 (ppb) B02	2017	60	N/A		11.4 – 15.5	N	By-product of chlorination
HAA5 (ppb) B03	2017	60	N/A		9.5 – 14.5	N	By-product of chlorination
HAA5 (ppb) B04	2017	60	N/A		12.5 – 18.8	N	By-product of chlorination
HAA5 (ppb) B05	2017	60	N/A		11.3 – 19.1	N	By-product of chlorination
HAA5 (ppb) B06	2017	60	N/A		14.6 – 23.8	N	By-product of chlorination
HAA5 (ppb) B07	2017	60	N/A		9.9 – 15.2	N	By-product of chlorination
HAA5 (ppb) B08	2017	60	N/A		9.7 – 17.1	N	By-product of chlorination
CHLORITE (ppm)	2017	1	.8	.263	.14 - .30	N	By-product of drinking water disinfection

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

Disinfection Residuals Summary

Contaminant	YEAR	MCL	MCLG	Your Water LRAA	Range Individual Results	Violation	Likely Source of Contamination
<u>Chlorine Dioxide (ppb)</u>	2017	800	800	35	0 - 331	N	Water additive used to control microbes
<u>Chloramines (ppm)</u>	2017	4	4	2.85	1.03 - 3.99	N	Water additive used to control microbes
<u>Chlorine (only month of March)(ppm)</u>	2017	4	4	1.68	.76 - 3.29	N	Water additive used to control microbes

SWAP Result Summary

Source Name	Susceptibility Rating	SWAP Report Date
CAPE FEAR RIVER	Moderate	Aug 31, 2017
DUNN/CAPE FEAR RIVER	Higher	Aug 31, 2017

Misc. Water Characteristics Contaminants

Contaminant (units)	Sample Date	Your Water	Secondary MCL
pH	1-4-17	7.0	6.5 to 8.5
Sulfate (ppm)	1-4-17	45.4	250
Sodium (ppm)	1-4-17	34.6	NA