2021 Annual Drinking Water Quality Report
Town of Ossipee

Water System Number: **NC 0201123**

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

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 Tabitha Whitman at 336-584-4258. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled meetings. They are held at AO fire dept. bi-monthly.**

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. 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. The Town of Ossipee 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.

When You Turn on Your Tap, Consider the Source

The water that is used by this system is surface water from Lake Mackintosh and Stony Creek Reservoir, treated by and purchased from the City of Burlington.

Source Water Assessment Program (SWAP) Results

The North Carolina Department of Environmental Quality (DEQ), 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 Ossipee/Burlington 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
Lake Mackintosh	Higher	September 2020
Stony Creek Res.	Moderate	September 2020

The complete SWAP Assessment report for Ossipee/Burlington may be viewed on the Web at: https://www.ncwater.org/?page=600 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.

Help Protect Your Source Water

Protection of drinking water is everyone's responsibility. We have implemented the following source water protection actions: You can help protect your community's drinking water source(s) in several ways: (examples: dispose of chemicals properly; take used motor oil to a recycling center, volunteer in your community to participate in group efforts to protect your source, etc.).

Violations that Your Water System Received for the Report Year

During 2021, or during any compliance period that ended in 2021, we received a *monitoring* violation that covered the time period of *10/1/21-12/31/21*. We have reviewed our sample plan to assure this does not happen again.

City of Burlington:
The results of routine sample collected on 7/13 and repeat sample collected on 7/14 from an outdoor spigot confirmed the presence of E. coli after 24 hours incubation. Per 15A NCAC 18C Section .1539, the City of Burlington issued a boil water advisory for its residents and other communities connected to the City water system on 7/15. The boil water notice was lifted on 7/16 after completion of appropriate corrective actions and subsequent test results that were negative for E. coli and Total Coliform. Also, as required by the rules, the City conducted and submitted a level 2 assessment, which was later approved by DEQ/Public Water Supply Section. Although the City was required to issue a system-wide boil water notice, a positive sample only occurred at this one location in Burlington, not in Ossipee.

NOTICE TO THE PUBLIC

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Violation Awareness Date: 2/2/22

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 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./ SAMPLE POINT ID	COMPLIANCE PERIOD BEGIN DATE	NUMBER OF SAMPLES/ SAMPLING FREQUENCY	WHEN SAMPLES WERE TAKEN (Returned to Compliance)
DISINFECTION BY-PRODUCTS- TTHM/HAA5	D01/B01	10/1/21	1 RT/ QT	2/9/22

(HAA5)- Haloacetic Acids - include Monochloroacetic Acid, Dichloroacetic Acid, Trichloroacetic Acid, Monobromoacetic Acid, Dibromoacetic Acid.
(TTHM) - Total Trihalomethanes - include Chloroform, Bromoform, Bromodichloromethane, and Dibromochloromethane.

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

What is being done? We have reviewed our sample plan to insure this does not happen again.

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.

Water Quality Data Tables of Detected Contaminants

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, (2021).** 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.

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

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 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

REVISED TOTAL COLIFORM RULE:

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/A	N/A	N/A	TT*	Naturally present in the environment
E. coli (presence or absence)	N	Absent	0	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.	Human and animal fecal waste

* If a system collecting fewer than 40 samples per month has two or more positive samples in one month, an assessment is required.

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)	June 2020	0.054 ppm	0	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb) (90^{th} percentile)	June 2020	ND	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	Range High	MRDLG	MRDL	Likely Source of Contamination
Chloramines (ppm)	2021	N	1.48 ppm	0.2 – 2.63 ppm		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	Range High	MCLG	MCL	Likely Source of Contamination
TTHM (ppb)						N/A	80	Byproduct of drinking water disinfection
Location B01	2021	N	56 ppb	20 – 57 ppb				
Location B02	2021	N	54 ppb	18 – 51 ppb				
HAA5 (ppb)						N/A	60	Byproduct of drinking water disinfection
Location B01	2021	N	46 ppb	21 – 45 ppb				
Location B02	2021	N	48 ppb	23 – 49 ppb				

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.*

Data from the City of Burlington's CCR

Total Organic Carbon (TOC)

Contaminant (units)	TT Violation Y/N	Your Water (RAA Removal Ratio)	Range Monthly Removal Ratio Low - High	MCLG	TT	Likely Source of Contamination	Compliance Method (Step 1 or ACC#__)
Total Organic Carbon (removal ratio) (TOC)-TREATED	N	1.18	1.18 -1.71	N/A	TT	Naturally present in the environment	Step 1

Contaminant (units)	Sample Date	MCL Violation Y/N	Your Water	Range Low High	MCLG	MCL	Likely Source of Contamination
Chlorine (ppm)	2021	N	<4	NA	4	4.0	Water additive used to control microbes
Chloramine (ppm)	2021	N	<4	NA	4	4.0	Water additive used to control microbes
Fluoride (ppm)	2021	N	0.75 ppm	0.6 – 1.0 ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories

Unregulated Contaminant Monitoring Rule Sampling (UCMR4)

The UCMR requires water systems to collect and analyze water samples for 28 chemicals and 2 viruses that are **currently not regulated**. The results of these samples help to guide EPA in setting future drinking water regulations. The results of the most recent UCMR4 data are included in the table below. This table only includes data for UCMR4 parameters that were ***detected***. The UCMR4 list was developed by EPA and includes compounds for potential regulation to determine their relative occurrence around the country.

UCMR4 parameter	JD Mackintosh WTP		Ed Thomas WTP		Distribution System		
	average	range	average	range	average	range	Year Tested
Managanese, ug/L	16.8	2.22 – 49.8	17.3	7.7 – 35.5	NA	NA	2018
Quinoline, ug/L	ND	ND	23.7	20.2 – 27.0	NA	NA	2018
Source Water TOC, ppb	6,428	5,530 – 7,950	7,525	6,320 – 8,720	NA	NA	2018
Source Water Bromide, ppb	20.9	20 – 21.8	ND	ND	NA	NA	2018
Haloacetic Acids-9, ppb	NA	NA	NA	NA	44.8	28.8 – 55.9	2018
Anatoxin-a*, ppt	38.6	41.7 – 74.1	39.1	35.8 – 40.8	NA	NA	2019

* **Anatoxin-a:** 3 of 8 samples from the Ed Thomas plant had detectable levels and 2 of 8 samples from the JD Mackintosh plant had detectable levels of Anatoxin-a.

Individuals may obtain the analytical results and health information for UCMR4 data by contacting the City of Burlington Water Resources Department at (336) 222-5133.
For more information on the UCMR4, please visit the EPA website at: https://www.epa.gov/sites/production/files/2018-10/documents/ucmr4-data-summary.pdf

Cryptosporidium

Burlington monitored for *Cryptosporidium* in 2017 and found levels of *0*.

Microbiological

Microbial contaminants in the source water, such as viruses and bacteria, may come from sewage treatment plants, septic systems, agricultural livestock and wildlife. The physical processes and disinfection chemicals used during the treatment process effectively eliminate harmful organisms that may be in the untreated water. Microbiological testing is performed daily to assure the absence of these organisms and to monitor the efficiency of these treatment techniques. Total Coliform and E. coli tests are performed on samples taken from the treatment plants, homes and businesses throughout the city.
Total coliform samples are water samples that are taken from homes and businesses in the distribution system. There were 736 samples collected in 2021. 9 samples were tested positive for total coliform and 3 samples were tested positive for E. coli. The City took all proper corrective actions and rectified the problems within 30 hours.

Parameter	MCLG	Federal MCL	Burlington Water System Average	JDMWTP	ETWTP	Major sources in Drinking Water
Total Coliform* (see note)	0	<5.0 % of samples	<0.5%	NA	NA	Naturally present in the environment
E. Coli	0	0	0.0%	NA	NA	Human and animal fecal waste
Average CFE Turbidity **	NA	TT	NA	0.04	0.05	Soil runoff
Maximum Turbidity**	NA	TT	NA	0.09	0.16	Soil runoff

100% of Combined Filter Effluent (CFE) water samples tested for turbidity in 2021 were below 0.3 NTU.