2024 Annual Drinking Water Quality Report
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).

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 surface water 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 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 Macintosh	Higher	September 2020
Stoney Creek Res.	Moderate	September 2020

The complete SWAP Assessment report for Burlinton 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 website 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@deq.nc.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. 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 2024, or during any compliance period that ended in 2024, we received a monitoring violation for TTHM/HAA5 that covered the time period of 4/1/24-6/30/24. We are/have reviewed our monitoring plan.to assure this does not happen again.

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.
- ***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.
- ***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.
- ***Variances and Exceptions*** – State or EPA permission not to meet an MCL or Treatment Technique under certain conditions.
- ***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.

- ***Running Annual Average (RAA)*** – The average of sample analytical results for samples taken during the previous four calendar quarters.

- ***Level 1 Assessment*** – *A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.*

- ***Level 2 Assessment*** – *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 MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.*

➢ ***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.

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, 2024.** 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.

Results from Ossipee:

Lead and Copper Contaminants

Contaminant (units)	Sample Date	Your Water (90th Percentile)	Number of sites found above the AL	Range Low High	MCLG	AL	Likely Source of Contamination
Copper (ppm) (90th percentile)	6/2/23	0/ND	0	N/A	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb) (90th percentile)	6/2/23	0/ND	0	0/ND – 4 ppb	0	AL=15	Corrosion of household plumbing systems; erosion of natural deposits

The table above summarizes our most recent lead and copper tap sampling data. If you would like to review the complete lead tap sampling data, please email us at townofossipee@yahoo.com

We have been working to identify service line materials throughout the water system and prepared an inventory of all service lines in our water system. To access this inventory, please email us at townofossipee@yahoo.com

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 and removing lead pipes, but cannot control the variety of materials used in plumbing components in your home. You share the responsibility for protecting yourself and your family from the lead in your home plumbing. You can take responsibility by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Before drinking tap water, flush your pipes for several minutes by running your tap, taking a shower, doing laundry or a load of dishes. You can also use a filter certified by an American National Standards Institute accredited certifier to reduce lead in drinking water. If you are concerned about lead in your water and wish to have your water tested, contact the Town of Ossipee at please email us at townofossipee@yahoo.com, or call 336-584-4258. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at *http://www.epa.gov/safewater/lead.*

Total Trihalomethanes (TTHM) and Haloacetic Acids (five) (HAA5)

Disinfection Byproduct	Year Sampled	MCL Violation Y/N	Your Water	Range Low High	MCLG	MCL	Likely Source of Contamination
TTHM (ppb)	2024	N	70 ppb	39 – 113 ppb	N/A	80	Byproduct of drinking water disinfection
HAA5 (ppb)	2024	N	39 ppb	11 – 83 ppb	N/A	60	Byproduct 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.
Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

Disinfectant Residuals Summary

	MRDL Violation Y/N	Your Water (RAA)	Range Low High	MRDLG	MRDL	Likely Source of Contamination
Chlorine (ppm)	N	0.96 ppm	0.22 – 2.24 ppm	4	4.0	Water additive used to control microbes
Chloramines (ppm)	N	1.46 ppm	0.39 – 2.46 ppm	4	4.0	Water additive used to control microbes

Microbiological Contaminants in the Distribution System

Contaminant (units)	MCL Violation Y/N	Number of Positive/Present Samples	MCLG	MCL	Likely Source of Contamination
E. coli (presence or absence)	N	0/ 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

Results from Burlington:

Burlington's entire CCR can be found at :
https://www.burlingtonnc.gov/DocumentCenter/View/6734/Annual-Drinking-Water-Quality-Report?bidId=

Chloramines

In July of 2011, the City of Burlington made the transition from FREE CHLORINE as a secondary disinfectant to a combined form of chlorine called CHLORAMINES. This change resulted in better maintained chlorine residual in the City's distribution system, fewer taste and odor complaints and lower Disinfection By-Product (DBP) formation. There is a difference in the regulatory requirements for Chloramine versus Free Chlorine. The maximum allowable concentration of **free chlorine** is 0.2 mg/L. The minimum allowable concentration for **chloramines** is 1.0 mg/L. The maximum residual disinfectant level for both free chlorine and chloramine is 4.0 mg/L. The City of Burlington uses free chlorine as a primary disinfectant (at the plant) and chloramines as a secondary disinfectant (in the distribution system) to control microbial growth.

Inorganic Compounds

The USEPA has set standards for a number of inorganic chemicals that can affect our health. Inorganic contaminants in source water such as salts and metals, can be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

Contaminant	MCLG	Federal MCL	JDMWTP	ETWTP	Range	Major Sources in Drinking Water
Barium (mg/L)	2	2	< 0.4	< 0.4	NA	Erosion of natural deposits, Discharge from metal refineries
Fluoride	2	4	0.70	0.70	0.6 - 1.0	Added to water to promote strong teeth
Nitrate (mg/L)	10	10	< 1.0	< 1.0	NA	Runoff from fertilizer use, Leaching from septic tanks, sewage; erosion of natural deposits.
Cyanide (ug/L)	200	200	< 200	< 200	< 200	Discharge from steel, plastic and / or fertilizer factories
Free Chlorine (mg/L)	NA	NA	Free chlorine concentration did not exceed MRDL of 4.0 mg/L			Water additive used to control microbes
Chloramine (mg/L)	NA	NA	Chloramine concentration did not exceed MRDL of 4.0 mg/L			Water additive used to control microbes

Notes:

- Chlorine is used as a disinfectant in drinking water. The minimum acceptable free chlorine residual is 0.2 mg/L. The maximum allowable chlorine residual has been set at 4.0 mg/L. Chlorine is measured at several points in the treatment process. **The residuals reported in this table are Point-of-Entry samples, where the water is pumped into the distribution system.** The chlorine residual in the City of Burlington distribution system will fluctuate depending on the season of the year, location in the system, time of day or even which water plant is in operation at any given time.
- The concentrations of fluoride reported in the above table are results from a single sample collected on May 29, 2024. Also, the average fluoride concentrations from analyses performed at the treatment plants every 4 hours for process control purposes were 0.71 mg/L and 0.70 mg/L for JDMWTP and ETWTP respectively in 2024.

Organic Compounds

There are a number of organic compounds that are of potential concern in drinking water. This group includes Volatile Organic Compounds (VOC's), which vaporize easily, and Synthetic Organic Compounds (SOC's), which are manmade, such as some pesticides and herbicides. These contaminants may come from sources like agriculture, urban stormwater runoff, residential uses, industrial processes and petroleum production, gas stations, and septic systems. Trihalomethanes and Haloacetic acids are disinfection byproducts that are formed when organic compounds that are in water react with chlorine used to disinfect drinking water. These disinfection by-products are made up of several components. None of the individual components of these disinfection byproducts are regulated. However, the sum of these components is regulated and is included in the table below.

On April 1, 2012, The City of Burlington became subject to what are commonly referred to as the Stage 2 Disinfection Byproduct (DBP) Rules, or the Stage 2 DBP rules. **Under the new Stage 2 DBP rule**, compliance with the rule is calculated by averaging the four quarterly results for **each** of the 8 different sample locations. If the 4-quarter average for any of the 8 sample locations exceeds the compliance limit for any of the Disinfection By-Products, the entire water system is considered out of compliance with the Stage 2 DBP Rules and a public notification must be sent to customers.

Disinfection Byproduct	MCLG	MCL	Burlington Water	Major Sources in Drinking Water	Health Effects
TTHM, (µg/L) 4 Quarters RAA	NA	80	44	By-product of drinking water chlorination	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.
Range of TTHM for 2024 (ug/L)			6 - 77	This is the range (lowest and highest) of all compliance values for TTHM samples reported in 2024.	
HAA5, (µg/L) 4 Quarters RAA	NA	60	50	By-product of drinking water chlorination	Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.
Range of HAA5 for 2024 (µg/L)			36 - 67	This is the range (lowest and highest) of all compliance values for HAA5 samples reported in 2024.	

Note: **The LRAA of all sample locations were in compliance with the Stage 2 DBP rules in 2024.**

Pesticides & Synthetic Organic Compounds

These contaminants may come from sources like agriculture, urban stormwater runoff, residential uses, industrial processes and petroleum production, gas stations, and septic systems.

The City of Burlington is required to test for 26 Pesticides and Synthetic Organic Compounds at both water treatment plants every three years. The last test for these compounds was conducted on September 13, 2022. There were No Synthetic Organic Chemicals or Pesticides detected in the water collected at the JDMWTP, whereas the water collected at ETWTP indicated a trace of dalapon (0.001 mg/L). Although, per EPA drinking water standards, the allowable limit for dalapon is set to 0.2 mg/L, the City was required by the North Carolina Department of Environmental Quality (NCDEQ) to quarterly monitor dalapon at ETWTP for one year commencing November 2022. The results of November 2022 and January 2023 did not show any presence of dalapon in the drinking water from ETWTP, but the April 2023 and September 2023 tests showed a detectable level of dalapon (0.001 mg/L and 0.002 mg/L respectively). The November 2023 water test did not show a detectable level of dalapon. But, as instructed by the NCDEQ, the City tested the ETWTP finished water for dalapon in July 2024 and the result was 0.001 mg/L. **The next round of testing for Pesticides & Synthetic Organic Compounds for both plants will be in 2025.**

Turbidity

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. For systems that use conventional or direct filtration such as Burlington Water System, at no time can turbidity (cloudiness of water) go higher than 1 NTU. **Turbidity itself has no health effects.** However, turbidity can interfere with the disinfection process and provide a medium for microbial growth.

Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. In 2024, turbidity was measured at multiple locations throughout the treatment process and 100% of Combined Filter Effluent (CFE) water samples tested for turbidity were below 0.3 NTU. Also, the highest turbidity values recorded at JDMWTP was 0.19 NTU and at ETWTP was 0.15 NTU.

Parameter	MCLG	Federal MCL	JDMWTP	ETWTP	Major sources in Drinking Water
Average CFE Turbidity	NA	TT	0.06	0.04	Soil runoff
Maximum Turbidity	NA	TT	0.19	0.15	Soil runoff

Radiological Contaminants

Radioactive contaminants in source water may be naturally occurring or may be the result of oil and gas production and mining activities. The table is based on samples collected on September 27, 2017.

Contaminant	Last Test	MCLG	Federal MCL	Burlington Water System	Major Sources in Drinking Water
Gross Alpha (pCi/L)	2017	0	15	ND	Erosion of natural deposits
Uranium (pCi/L)	2017	0	20.1	ND	Erosion of natural deposits
Combined Radium (pCi/L)	2017	0	<1.0	NA	Erosion of natural deposits

Total Organic Carbon (TOC)

Location	TT Violation Y/N	Average Raw Water TOC mg/L	Average Finished Water TOC mg/L	Annual Average Removal Rate %	Range Monthly Removal Rate Lowest %	Range Monthly Removal Rate Highest %	MCLG	Likely Source of Contamination	Compliance Method (Step 1 or ACC#_)
JDMWTP	N	7.70	2.65	65.58	59.42	70.51	NA	Naturally present in the environment	Step 1
ETWTP	N	8.06	2.89	64.19	58.33	67.61	NA	Naturally present in the environment	Step 1

Unregulated Contaminant Monitoring Rule Sampling (UCMR5)

The Safe Drinking Water Act (SDWA) requires that once every five years the EPA issue a list of unregulated contaminants to be monitored by Public Water Systems (PWSs). The UCMR5 requires PWSs to collect and analyze water samples for 29 per- and polyfluoroalkyl substances (PFAS) and lithium using analytical methods developed by the EPA and consensus organizations. This action provides the agency and other interested parties with scientifically valid data on the national occurrence of these contaminants in drinking water. The UCMR5 will provide new data that will improve the agency's understanding of the frequency that 29 per- and polyfluoroalkyl substances (PFAS) and lithium are found in the nation's drinking water systems, and at what levels. The monitoring data on PFAS and lithium will help the EPA make determinations about future regulations and other actions to protect public health under SDWA. **On April 10, 2024, the EPA announced the final National Primary Drinking Water Regulation (NPDWR) for six PFAS that are among the 29 PFAS being monitored in UCMR5. PWSs will be required to comply with the PFAS NPDWR Maximum Contaminant Levels (MCLs) starting in April 2029; therefore, UCMR5 results for the regulated PFAS do not indicate compliance or noncompliance with the MCLs.** The table below summarizes detectable results of PFAS in the City's drinking water.

UCMR5 Parameters	Unit	JD Mackintosh WTP Average	JD Mackintosh WTP Range	Ed Thomas WTP Average	Ed Thomas WTP Range	Year Tested
PFOA	µg/L or ppb	0.0071	0.0048 - 0.0093	0.0103	0.0130 - 0.0075	2024
PFOS	µg/L or ppb	0.0057	0.0049 - 0.0065	0.0127	0.0170 - 0.0083	2024
PFHxS	µg/L or ppb	ND	ND - ND	0.0016	ND - 0.0032	2024
PFHpA	µg/L or ppb	ND	ND - ND	0.0021	ND - 0.0042	2024
PFPeA	µg/L or ppb	ND	ND - ND	0.0021	ND - 0.0041	2024
PFHxA	µg/L or ppb	ND	ND - ND	0.0022	ND - 0.0044	2024
6:2 FTS	µg/L or ppb	ND	ND - ND	0.0049	ND - 0.0097	2024

Individuals may obtain the analytical results and health information for UCMR5 data by contacting the City of Burlington Water Resources Department at (336) 222-5133. For more information on the UCMR5, please visit the EPA website at: https://www.epa.gov/system/files/documents/2023-08/ucmr5-data-summary_0.pdf

Additional Monitoring for Other Unregulated Contaminants

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 regulations are warranted. Health Advisory (HA) is an estimate of acceptable drinking water levels for a chemical substance based on health effects information; **a health advisory is not a legally enforceable Federal standard**, but serves as technical guidance to assist Federal, State, and local officials.

Other Unregulated Contaminants	Unit	MCL (Effective April 2029)	JD Mackintosh WTP Average	JD Mackintosh WTP Range	Ed Thomas WTP Average	Ed Thomas WTP Range
PFOA, Perfluorooctanoic Acid	ng/L or ppt	4.0	3.2	3.0 - 3.4	6.6	4.9 - 7.4
PFOS, Perfluorooctane Sulfonic	ng/L or ppt	4.0	5.8	4.4 - 6.5	8.3	6.3 - 12
PFHxS, Perfluorohexanesulfonic Acid	ng/L or ppt	10	1.0	0.0 - 1.5	1.3	0.0 - 2.5
PFNA, Perfluorononanoic Acid	ng/L or ppt	10	0.3	0.0 - 0.6	0.4	0.0 - 1.4
HFPO-DA (commonly known as GenX Chemicals)	ng/L or ppt	10	0.0	0.0 - 0.0	0.0	0.0 - 0.0
Mixtures containing two or more of PFHxS, PFNA, HFPO-DA, and PFBS	unitless	Hazard Index of 1	0.1	NA	0.2	NA
1,4-Dioxane	µg/L or ppb	NA	<0.2	<0.2 - <0.2	<0.2	<0.2 - <0.2

Notes:

- 1,4-Dioxane
  - The U.S. Environmental Protection Agency (EPA) has not yet established a federal MCL for 1,4-dioxane in drinking water.
  - In 2012, EPA established a lifetime Health Advisory (HA) of 0.2 mg/L for 1,4-dioxane in drinking water (Technical Fact Sheet – 1,4-Dioxane January 2014, https://semspub.epa.gov/work/01/570167.pdf). The U.S. EPA typically uses reference levels of 0.35–35 µg/L, which corresponds to 1:1,000,000 and 1:10,000 cancer risk, respectively, when communicating exposure risks associated with 1,4-dioxane in drinking water (https://14d-1.moweb.org/regulatory-framework/).
  - The Reporting Limit (RL) for 1,4-dioxane in the finished water using EPA analytical method 522 SW was 0.2 µg/L. The RL is the lowest concentration of a constituent that can be reliably measured with accuracy and precision and reported by a laboratory. If a laboratory is unable to detect a constituent in a sample, it does not necessarily mean that the constituent is absent from the sample. It could be that the constituent concentration in the sample is below the sensitivity of the testing instrument. Concentrations below the reporting limit are reported as not detectable at the RL or "less than" the reporting limit.
- PFAS
  - In May 2016, the EPA established an interim "Health Advisory Level" for PFOA and PFOS in drinking water at 70 parts per trillion (ppt), which served as a non-enforceable guideline for these PFAS chemicals, not a full Maximum Contaminant Level (MCL).
  - On June 15, 2022, EPA issued Health Advisories (HAs) for 4 PFAS. The final HAs for GenX chemicals and PFBS, and Interim Updated HAs for PFOA and PFOS were as follows: GenX Chemicals=10 ppt (final), PFBS=2,000 ppt (final), PFOA=0.004 ppt (interim), PFOS=0.02 ppt (interim).
  - On April 10, 2024, the U.S. EPA set the following Maximum Contaminant Levels (MCLs) for per- and polyfluoroalkyl substances (PFAS) in drinking water: PFOA and PFOS=4.0 parts per trillion (ppt) respectively; PFNA, PFHxS, and HFPO-DA (GenX)=10 ppt respectively; and Hazard Index=1
  - The PWSs must comply with all MCLs and notify the public for MCLs violation starting five years following the rule promulgation (i.e. starting in April 2029).
  - If the Running Annual Average (RAA) Hazard Index is greater than 1.0, it is considered a violation of the Hazard Index Maximum Contaminant Level (MCL).

$$\text{Hazard Index} = \frac{[\text{GenX}_{\text{sample}}]}{[10\ \text{ppt}]} + \frac{[\text{PFBS}_{\text{sample}}]}{[2000\ \text{ppt}]} + \frac{[\text{PFNA}_{\text{sample}}]}{[10\ \text{ppt}]} + \frac{[\text{PFHxS}_{\text{sample}}]}{[10\ \text{ppt}]}$$