



ANNUAL COMPLIANCE REPORT ON PUBLIC WATER SYSTEM VIOLATIONS

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New Hampshire Department of Environmental Services
Drinking Water & Groundwater Bureau
Annual Compliance Report on Public Water System Violations for 2019

INTRODUCTION

The 1996 Amendments to the Safe Drinking Water Act (SDWA) require each state to prepare an annual compliance report summarizing violations incurred by public water systems. The annual compliance report is submitted to the U.S. Environmental Protection Agency (USEPA) and made available to the public. The purpose of this report is to summarize the number and types of violations that public water systems receive as a result of failing to meet various requirements of the SDWA.

New Hampshire's 2019 Annual Compliance Report contains an overview of our drinking water program and a summary of regulated systems. Federal violations and their significance to various regulated monitoring programs and contaminants are discussed. There are tables and charts that reflect the compliance of New Hampshire's public water systems, either within this document or added as an appendix.

THE DRINKING WATER PROGRAM: AN OVERVIEW

The USEPA established the Public Water System Supervision (PWSS) Program under the authority of the 1974 Safe Drinking Water Act. Under the SDWA and the 1986 Amendments, USEPA sets national limits on contaminant levels in drinking water to ensure that the water is safe for human consumption. These limits are known as Maximum Contaminant Levels (MCLs) and the Maximum Residual Disinfectant Levels (MRDLs). For some regulations, USEPA establishes treatment techniques in lieu of an MCL to control unacceptable levels of contaminants in water. They also regulate how often public water systems (PWSs) monitor their water for contaminants and report the monitoring results to the states or to USEPA. Generally, the larger the population served by a water system, the more frequent the monitoring and reporting (M/R) requirements. In addition, USEPA requires PWSs to monitor for unregulated contaminants to provide data for future regulatory development. Finally, USEPA requires PWSs to notify their consumers when they have violated these regulations. The 1996 Amendments to the SDWA require consumer notification to include a clear and understandable explanation of the nature of the violation, its potential adverse health effects and steps that the PWS is undertaking to correct the violation.

The SDWA applies to the 50 states, the District of Columbia, Indian lands, Puerto Rico, the Virgin Islands, American Samoa, Guam and the Commonwealth of the Northern Mariana Islands.

The SDWA allows states and territories to seek USEPA approval to administer their own PWSS Programs. The authority to run a PWSS Program is called primacy. For a state to receive primacy, USEPA must determine that the state meets certain requirements laid out in the SDWA and federal regulations, including the adoption of state drinking water regulations that are at least as stringent as the Federal regulations. Primacy also requires the state to demonstrate that they can enforce the program requirements. Of the 56 states and territories, all but Wyoming and the District of Columbia have primacy. The USEPA Regional Offices administer the PWSS Programs within these two jurisdictions.

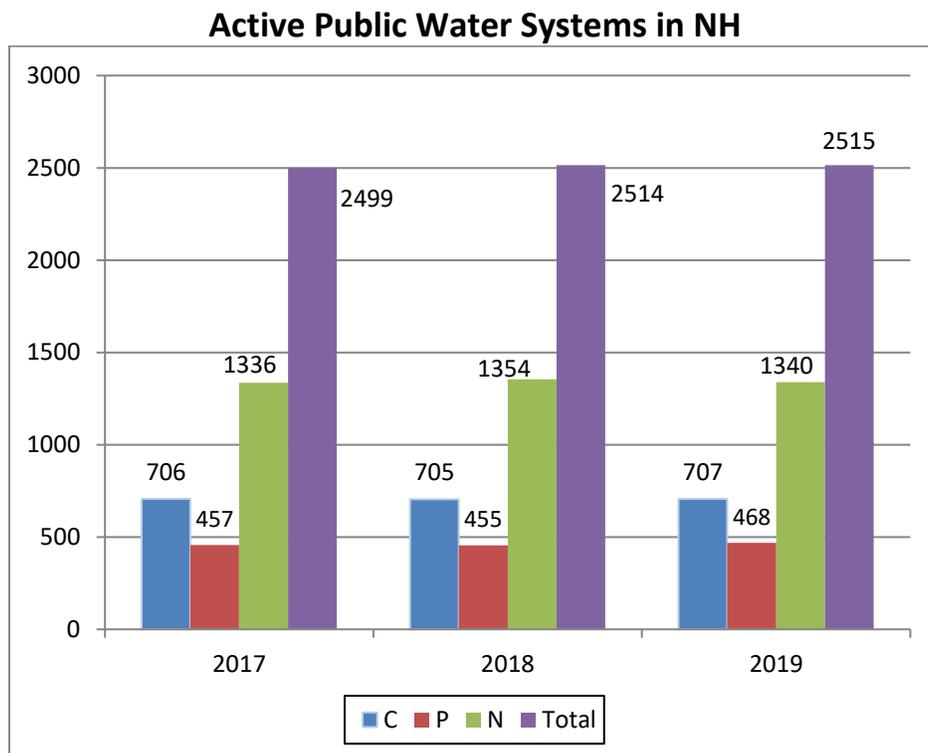
NEW HAMPSHIRE PUBLIC WATER SYSTEM PROFILE

New Hampshire defines a public water system (PWS) as a system that provides water via piping or other constructed conveyances for human consumption to at least 15 service connections or *designed to serve an average of at least 25 people* for at least 60 days each year. In accordance with New Hampshire rule Env-Dw 401.01(d), the population served by a Community PWS is determined by a household equivalent of 2.5 people, or 2.5 people per service connection.

There are three types of public water systems: Community (“C”) systems such as mobile home parks or municipalities, Non-Transient Non-Community (“P”) systems such as schools or factories, or Transient Non-Community (“N”) systems such as restaurants and campgrounds. For this report, when the acronym “PWS” is used, it means systems of all types unless specified in greater detail.

As of December 31, 2019, the PWS inventory consists of 2,515 active systems, of which 707 are “C” systems serving a population of 893,320. There are 468 “P” systems and 1,340 “N” systems. Most of New Hampshire’s “C” systems are very small, serving a population of less than 500. There are 580 “C” systems that serve a population of less than or equal to 500.

The following chart reflects an average system count over the last three years.



Community Systems by Population Ranges

Population Categories	Population Ranges	# of Community Systems	Total Population Served
Large Systems	>50,000	2	220,932
Medium Systems	10,001 – 50,000	16	338,000
	3,301 – 10,000	23	136,479
Small Systems	1,001 – 3,300	52	102,028
	501 – 1,000	34	24,798
	251 - 500	62	21,219
	101 – 250	192	30,994
	25 – 100	321	18,765
	<25	5	105

Other New Hampshire public water system statistics as of 2019:

Community Systems	# Systems	Population Served
Groundwater Only	632	300,127
Surface Water Only	20	222,073
Combined Sources (Surface and Groundwater)	17	290,602
Purchased Surface Water (only)	18	40,961
Purchased with Groundwater Sources	20	55,035

The “population served” numbers in the tables above and cited throughout this report represent the number of people served as estimated by Community PWSs and reported to the New Hampshire Department of Environmental Services (NHDES). For many “C” systems, non-residents make up a significant percentage of those numbers. Statewide, second homes make up 10.4% of the housing stock, according to the 2010 U.S. Census (the number of seasonal homes increased over 2,000 by 2015). If one were to compare the state resident population of 1,359,711 (U.S. Census Bureau 2019 estimates) to the total estimated population served by all “C” systems, it would appear that approximately 65% of the population is served by “C” systems and 35% use private wells. However, the Community PWSs estimate would be higher than the actual percentage because it does not take into account the significant non-resident population served.

NHDES’ Drinking Water and Groundwater Bureau (DWGB) is not aware of data regarding how the “C” water system population served is divided between residents and non-residents. Data from the 2014 and 2017 Behavioral Risk Factor Surveillance System Surveys conducted by NH Department of Health and Human Services indicate that roughly equal numbers of households rely on public water systems and private wells as their “main source of drinking water at home,” with the rest relying mainly on bottled water. If between one-third and two-thirds of the bottled water (and other sources) users have private wells, the percentage of households served by private wells is between 46 percent and 54 percent.

Approximately 300,127 people, or about 34% of the “C” water system population, are served by “C” systems that draw only from groundwater.

Approximately 222,073 people, or about 25% of the “C” water system population, are served by “C” systems that draw only from surface water.

All PWSs are required to comply with drinking water standards, water quality monitoring and reporting requirements, public notification requirements, and operational and construction standards. The DWGB tracks and monitors compliance with regulations, enforces the regulations, administers the Permit-to-Operate program, provides financial assistance through the State Revolving Fund (SRF) Program, conducts sanitary surveys, provides technical assistance, and trains and certifies water system operators. The DWGB also implements a Source Water Protection Program.

ANNUAL STATE PWS REPORT

Each quarter, primacy states submit data to the Safe Drinking Water Information System (SDWIS), an automated database maintained by USEPA. The data submitted include, but are not limited to, the following: PWS inventory information, the incidence of MCL exceedances, MRDLs, monitoring and treatment technique violations and information on enforcement activity related to these violations. Section 1414(c)(3) of the Safe Drinking Water Act requires states to provide USEPA with an annual report of violations of the primary drinking water standards. This report provides the number of violations in each of six categories: MCLs, MRDLs, treatment techniques, exemptions, significant monitoring violations, and significant consumer notification violations. USEPA Regional Offices also report any federal enforcement actions taken, however those enforcement actions are not part of this report.

The information in this report is based on New Hampshire’s drinking water database as well as SDWIS. Although the two databases are mostly synchronized, there are a few discrepancies where SDWIS counts unresolved violations from past years (i.e., Lead and Copper Rule (LCR) and Consumer Confidence Rule (CCR)). Prior year violations that are not included in this report can be found on the NHDES [OneStop website](#).

Maximum Contaminant Level (MCL) Violations

Under the Safe Drinking Water Act, USEPA sets national limits on contaminant levels in drinking water to ensure that the water is safe for human consumption. These limits are known as Maximum Contaminant Levels. This report includes MCL violations for microbiological contaminants under the Revised Total Coliform Rule (RTCR) and MCL violations for regulated chemical contaminants.

Maximum Residual Disinfectant Level (MRDL)

The USEPA sets national limits on residual disinfectant levels in drinking water to reduce the risk of exposure to disinfectant byproducts formed when public water systems add chemical disinfectant for either primary or residual treatment. These limits are known as Maximum Residual Disinfectant Levels.

Treatment Technique (TT) Violations

For some regulations, the USEPA establishes treatment techniques (TT) in lieu of an MCL to control unacceptable levels of certain contaminants. For example, treatment techniques have been established for viruses, bacteria and turbidity under the Surface Water Treatment Rule (SWTR). In some cases, such as the Lead and Copper Rule (LCR), once an exceedance has occurred, the PWS is required to conduct public education. Failure to do so results in a treatment technique violation.

Significant Monitoring (M/R) Violations

A PWS is required to monitor and verify that the level of a contaminant, if present in the water, does not exceed the MCL. Generally, the larger the population served, the more samples the PWS is required to take. If a PWS fails to have its water tested as required, then a monitoring (M/R) violation occurs. For this report, significant monitoring violations (except for the Surface Water Treatment Rule) occur when no samples were taken or no results were reported during a compliance period. A major Surface Water Treatment Rule Monitoring/Reporting violation occurs when fewer than 90% of the required samples are taken or no results are reported during a reporting interval.

Exemptions

Exemptions to specific requirements under the SDWA Amendments of 1996 may be granted under certain circumstances. If a PWS is unable to comply with an MCL or treatment technique requirement by the established deadline, a primacy state can grant the PWS an exemption from the applicable primary drinking water regulation with the condition that the system has an approved plan and schedule to address the situation. No New Hampshire PWS has been issued an exemption.

Significant Consumer Notification Violations

Every Community PWS is required to deliver to its customers a consumer confidence report (CCR), which is a brief annual water quality report. This report must provide information on source water, the levels of any detected contaminants and compliance with drinking water regulations, as well as educational material. A Community PWS that completely fails to provide customers with the required annual water quality report will incur a significant consumer notification violation.

COMPLIANCE SUMMARY

A summary of public water system violations for 2019 is included in Appendix A. The information includes the number of total violations and the number of total water systems in violation of a particular regulated contaminant. The regulatory contaminant categories are:

- Revised Total Coliform Rule (RTCR)**
- Groundwater Rule (GWR)**
- Disinfection Byproducts Rule (Stage 1/Stage 2 DBPR)**
- Surface Water Treatment Rule (LT2SWTR)**
- Chemical Monitoring**
- Lead and Copper Rule (LCR)**
- Consumer Confidence Report Rule (CCR)**

Violations from these programs and any resulting enforcement actions (along with their return to compliance status) are the basis of this Annual Compliance Report and can be found in the Appendices. Additional information about the water systems is also on the NHDES [OneStop website](#).

A description of these programs and the pertinent violations follow.

Revised Total Coliform Rule (RTCR)

The Revised Total Coliform Rule (RTCR) establishes a maximum contaminant level for *E. coli* and uses *E. coli* and total coliforms to initiate a “find and fix” approach to address fecal contamination that could enter into the distribution system. It requires public water systems to perform assessments to identify sanitary defects and subsequently take action to correct them.

DWGB implemented the RTCR early in February 2015. The rule was not implemented by USEPA nationwide until April 2016.

States are to report the following categories of RTCR violations (SDWIS Contaminant Code 8000):

***E. coli* MCL violation** (SDWIS Violation Code 1A): Indicates (1) EC+ routine with insufficient repeat samples, or (2) a combination of EC+ and TC+ results between the routine and repeat samples, or (3) TC+ routine with TC+ repeat samples not tested for *E. coli* by lab.

Level 1 Assessment/Assessment Form Treatment Technique violation (SDWIS Violation Code 2A): Indicates (1) Failure to conduct L1 assessment or complete form or (2) inadequate L1 assessment or insufficient content of assessment form.

Level 2 Assessment/Assessment Form Treatment Technique violation (SDWIS Violation Code 2B): Indicates (1) Failure to conduct L2 assessments or complete form or (2) inadequate L2 assessment or insufficient content of assessment form, or (3) L2 Assessor not state-approved.

Corrective Actions/Expedited Actions Treatment Technique violation (SDWIS Violation Code 2C): Indicates (1) Failure to complete corrective actions within the required timeframe when a Level 1 or Level 2 assessment is triggered; (2) failure to comply with state-required expedited/additional actions when an *E. coli* MCL happens.

Start-up Procedures Treatment Technique violation (SDWIS Violation Code 2D): Indicates failure to complete seasonal system start-up procedures.

Routine Monitoring violation (SDWIS Violation Code 3A): Indicates (1) failure to collect routine samples at appropriate site/frequency; (2) failure to collect replacement samples when state or lab invalidates one or more routine samples.

Additional Routine Monitoring violation (SDWIS Violation Code 3B): Indicates failure to collect additional routine samples required the next month after any TC+ happens (only applicable when a water system’s baseline RTCR monitoring frequency is not monthly).

TC Samples (triggered by turbidity exceedance) Monitoring violation (SDWIS Violation Code 3C): Indicates failure to collect required extra total coliform samples due to turbidity exceedance (only applicable to Subpart H systems avoiding filtration).

Monitoring Violation due to Lab and/or Analytical Method Errors (SDWIS Violation Code 3D): Indicates (1) failure to use the required/approved analytical methods, or to follow holding times or sample preparation or collection methods; (2) failure to use certified and/or state-approved laboratory.

Assessment Forms Reporting violation (SDWIS Violation Code 4A): Indicates failure to timely submit a completed assessment form where the assessment and assessment form is complete and adequate—only the delivery of the form is late.

Sample Results Reporting violation (SDWIS Violation Code 4B): Indicates (1) failure to provide sample results information to the state; (2) failure to provide notification to the state that a monitoring violation happened.

Certification Form (for Start-up Procedures) Reporting violation (SDWIS Violation Code 4C): Indicates failure to provide the certificate that confirms seasonal system start-up procedures have been completed (start-up procedures were completed on time and adequate—only the delivery of the certificate is late).

EC+ Notification Reporting violation (SDWIS Violation Type 4D): Indicates failure to notify the state within 24 hours about an EC+ compliance sample result (applies to any PWS each time it has an EC+ result even if there is no *E. coli* MCL violation).

***E. coli* MCL Reporting** violation (SDWIS Violation Type 4E): Indicates failure to provide notification to the state that an *E. coli* MCL violation happened.

Assessments, Assessment Forms, Corrective/Expedited Actions Reporting violation (SDWIS Violation Type 4F): Indicates failure to provide notification to the state that violations related to Level 1 and 2 assessments, assessment forms and corrective actions have happened.

Errors with Sample Siting Plan violation (SDWIS Violation Type 5A): Indicates failure to develop sample siting plan or to revise sample siting plan to include: (1) a sample collection schedule and/or (2) sample sites or the SOP describing how the sample sites will be chosen.

RTCR Recordkeeping violation (SDWIS Violation Type 5B): Indicates (1) failure to keep records for Level 1 and Level 2 assessments and corrective/expedited actions for 5 years; (2) failure to keep records for one year on repeat sample results that the state approved and extended the timeframe for sample collection.

During 2019, six public water systems received seven acute *E. coli* MCL violations. Six of the violations were at “N” water systems, and one of the violations was at a “C” water system. Of the water systems with such violations, all served 500 or fewer people.

To see if prior year violations for any public water system have returned to compliance, please check the NHDES [OneStop website](#).

Groundwater Rule (GWR)

USEPA published the Groundwater Rule in the Federal Register on November 8, 2006. New Hampshire implemented the GWR in December 2009. The purpose of the rule is to provide for increased protection against microbial pathogens in public water systems that use groundwater sources. USEPA is particularly concerned about groundwater systems that are susceptible to fecal contamination, as disease-causing pathogens may be found in fecal contamination. The GWR applies to public water systems that serve groundwater. The rule also applies to any system that mixes surface and groundwater if the groundwater is added directly to the distribution system.

The targeted strategy addresses risks through an approach that relies on the four major components listed below:

- Periodic sanitary surveys of systems that require the evaluation of eight critical elements of a public water system and the identification of significant deficiencies (e.g., a well located near a leaking septic system).
- Triggered source water monitoring when a system (that does not already treat drinking water to remove 99.99% (4-log) of viruses) identifies a positive sample during its Revised Total Coliform Rule monitoring.
- Corrective action is required for any system with a significant deficiency or source water fecal contamination.
- Compliance monitoring to ensure that treatment technology installed to treat drinking water reliably achieves 99.99% (4-log) inactivation or removal of viruses.

Triggered Monitoring violation (SDWIS Violation Code 34): Failure to collect triggered, source water samples within 24 hours of receiving notification of a total coliform positive sample, collected for routine compliance with the Revised Total Coliform Rule.

There were 88 systems (nine “C” systems, 72 “N” systems, and seven “P” systems) having 101 monitoring and reporting violations.

Treatment Technique violation (SDWIS Violation Code 41/Contaminant 0700): Failure to maintain 4-log treatment of viruses before or at the first customer for a groundwater source and failure to correct the deficiency within four hours of determining that the system is not maintaining at least 4-log treatment before or at the first customer.

There were two health-based violations for type 41/0700 violation.

Treatment Technique violation (SDWIS Violation Code 45): Failure to complete corrective action in accordance with a state-approved corrective action plan or non-compliance with a state-approved corrective action plan within 120 days of receiving written notice from the state of the deficiency.

There were 16 public water systems (eight “C” systems, six “N” systems, and two “P” systems) having 18 treatment technique violations.

To see if prior year violations for any public water system have returned to compliance, please check the NHDES [OneStop website](#).

Disinfection Byproducts Rule (Stage 1 & Stage 2 DBP)

The D/DBP rules apply to all surface and groundwater systems (and their consecutives) that use a chemical disinfectant (chlorine, chloramines, ozone, other). These systems are required to monitor for chlorine residuals and disinfection byproducts.

Maximum Contaminant Level (MCL) violation (SDWIS Violation Code 02): MCL violations occur when the sample exceeds the MCL.

There were ten public water systems receiving 21 individual MCL violations.

Monitoring and Reporting (M/R) violation (SDWIS Violation Code 27): Failure to sample.

There were 70 public water systems receiving 84 M/R violations.

Treatment Technique (TT) violation (SDWIS Violation Code 46): Failure to remove Total Organic Compound (TOC).

There were no violations of this type for any public water systems.

DBP violations for 2019 are summarized below with details included in the Appendices. Numbers in this report may not match the Appendices because when the data was generated, the difference between surface water only and groundwater only was not specified.

To see if prior year violations for any public water system have returned to compliance, please check the NHDES [OneStop website](#).

Disinfection Byproducts Violations										
Water Type	# Systems w/ MCL Violations	# MCL Violations (Vio Type 02)		# Systems w/ M/R Violations	# M/R Violations (Vio Type 27)				TT Violations (Vio Type 46)	MRDL Violations
		HAA5 (2456)	TTHM (2950)		Total Org. Carbon (2920)	HAA5 (2456)	TTHM (2950)	Chl.Resid. (0999)		
Surface	6	6	10	0	0	0	0	0	0	0
Ground	5	2	3	70	0	18	18	48	0	0
Totals	11	8	13	70	0	18	18	48	0	0

Surface Water Treatment Rule (SWTR, IESWTR, LT1, LT2SWTR)

The Surface Water Treatment Rule (SWTR) establishes standards for the treatment of surface water systems and groundwater under the direct influence of surface water. Public water systems subject to the SWTR are required to provide filtration and disinfection to achieve minimum 3-log inactivation of *Giardia lamblia* and 4-log inactivation of viruses. In addition, under the Interim Enhanced Surface Water Treatment Rule (IESWTR) and the Long Term 1 Enhanced Surface Water Treatment Rule (LT1SWTR), all surface water systems using conventional filtration must achieve a minimum of 2-log removal of *Cryptosporidium*. Monthly operating reports submitted to the NHDES record daily monitoring for turbidity and free chlorine residual at the filtration plant and monthly monitoring to confirm positive chlorine residual in the distribution system. Turbidity standards must be met in at least 95% of measurements taken each month, and chlorine residual in water entering the distribution system must be at least 0.2 mg/L. Failure to meet these or other SWTR standards results in a treatment technique violation).

New Hampshire has 20 water systems that derive at least some of their water from surface water. Of these, one system continues to retain its filtration waiver.

Violations of the SWTR (SDWIS Contaminant Code 0200) are reported for the following categories:

Monitoring, routine/repeat M/R (for unfiltered systems) (SDWIS Violation Code 31): Indicates a system's failure to carry out required water tests or to report the results of those tests.

Monitoring, routine/repeat M/R (for filtered systems) (SDWIS Violation Code 36): Indicates a system's failure to carry out required water tests or to report the results of those tests.

There was one Violation Type 36/0200 for one public water system.

Treatment techniques TT (for filtered systems) (SDWIS Violation Code 41): Indicates a system's failure to meet filtered water turbidity requirements.

There was one Violation Type 41 for one public water system.

TT Failure (for unfiltered systems) (SDWIS Violation Code 42): Indicates a system's failure to comply with the SWTR requirement to install filtration or meet filtration waiver conditions.

Health-based violations of the LT2SWTR (SDWIS Contaminant Code 0800) are reported for the following categories:

SDWIS Violation Code 33 indicates a failure to submit treatment requirement report; SDWIS Violation Code 41 indicates a failure to maintain microbial treatment; SDWIS Violation Code 42 indicates a failure to provide treatment; SDWIS Violation Code 45 indicates a failure to address a deficiency; and SDWIS Violation Code 47 indicates a treatment technique for uncovered reservoir.

The Monitoring and Reporting (M/R) violations of LT2SWTR are reported for the following categories:

SDWIS Violation Code 20 indicates a failure to consult/respond; SDWIS Violation Code 31 indicates a monitoring treatment (for surface unfiltered/GW); SDWIS Violation Code 32 indicates a violation of reporting and source monitoring (LT2); SDWIS Violation Code 36 indicates a violation of monitoring treatment (surface filter); and SDWIS Violation Code 37 indicates a treatment technique with no prior state approval.

There was one Violation Type 36/0800 for one public water system.

Other violation types for Contaminant Code 0800: SDWIS Violation Code 09 for recordkeeping violations.

To see if prior year violations for any public water system have returned to compliance, please check the NHDES [OneStop website](#).

Chemical Monitoring

Water quality testing for chemical contaminants is much less frequent than for microbiological contaminants. Chronic exposure over a long period is usually necessary to experience a risk to health. Chemical monitoring includes: volatile organic compounds (“VOCs,” which are solvents and hydrocarbons), synthetic organic compounds (“SOCs,” which are pesticides and plastics), inorganic compounds (“IOCs,” which are nitrate, nitrite and metals) and radionuclides (“RADs”). Community systems, with the exception of systems that solely use purchased water, are required to sample for all of the above parameters under New Hampshire rules. Non-transient/Non-Community (“P”) water systems sample for all parameters above with the exception of RADs, which are required for initial water quality testing only. Transient/Non-Community (“N”) systems are required to sample for nitrates once a year and nitrites once every three years.

Organic Contaminants: These are carbon-based compounds, such as industrial solvents and pesticides, which include VOCs and SOCs. These contaminants generally get into water through runoff from cropland, releases from underground storage tanks, discharges from factories or accidental spills. USEPA has set legal limits on 54 organic contaminants that are to be reported [40 CFR 141.61].

Inorganic Contaminants: These are non-carbon-based compounds, such as metals, nitrates and asbestos, which are generally naturally-occurring in some water, but can also get into water through farming, chemical manufacturing and other human activities. USEPA has established MCLs for 15 inorganic contaminants [40 CFR 141.62].

Radionuclides: These are radioactive particles that can occur naturally in water or result from human activity. USEPA has set legal limits on five types of radionuclides: radium-226 and radium-228, gross alpha, beta particle/photon radioactivity and Uranium [40 CFR 141.66]. Violations for these contaminants are reported using the following four categories:

Gross alpha (SDWIS Contaminant Code 4000): This is for alpha radiation above MCL of 15 picocuries/liter (pCi/L). Gross alpha includes radium-226 but excludes radon and uranium.

Uranium (SDWIS Contaminant Code 4006): Uranium mass above MCL of 30 micrograms per liter (ug/L).

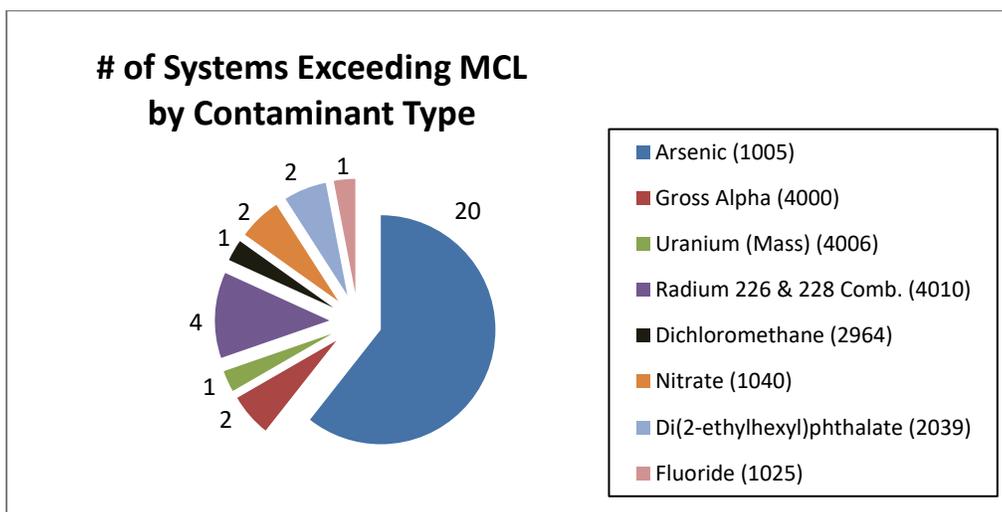
Combined radium-226 and radium-228 (SDWIS Contaminant Code 4010): Combined radiation from these two isotopes above MCL of 5 pCi/L.

Gross beta (SDWIS Contaminant Code 4101): Beta particle and photon radioactivity from man-made radionuclides above 4 millirem/year. This applies to systems serving populations greater than 100,000. Two types of chemical monitoring violations are reported:

Maximum Contaminant Level (MCL) violation (SDWIS Violation Code 01 for single sample; SDWIS Violation Code 02 for average): MCL violations occur when the sample exceeds the MCL.

Monitoring and Reporting (M/R) violation (SDWIS Violation Code 03): Failure to sample.

In 2019, 33 public water systems incurred 41 MCL violations (Violation Codes 01 and 02) for regulated chemical contaminants. Numbers in this report may not match the Appendices because a water system may have incurred multiple violations for any given contaminant or violation type.



New Hampshire tracks chemical data by six contaminant “sample” groups. These contaminant groups are used for M/R violations unless an individual IOC exceeds half the MCL or an individual VOC or SOC is detected. When one of these situations occurs, the individual contaminant is tracked.

The contaminant groups are listed in the following table:

NH Chemical Sample Groups		Sampling Rules
VOCs	Contains 21 regulated contaminants.	All new "C" and "P" systems sample quarterly the first year, annually thereafter; or, every 3 years with a waiver.
SOCs	Contains 25 regulated contaminants. NH has received waivers for 5 of the 30 regulated SOC's based on state pesticide use records. See Appendix A. Two SOC contaminants are waived for surface water systems.	New "C" and "P" systems sample annually, or every 3 or 6 years with a waiver.
IOCs	Contains 11 regulated contaminants for "C" systems, and 10 for "P" systems (excludes Fluoride).	All "C" and "P" groundwater systems must sample all Phase II/IIB and V IOCs every 3 years. All "C" and "P" systems using surface water must sample all Phase II/IIB and V IOCs annually. State rule requires "P" systems to sample for Fluoride.
RADs	Contains 3 regulated contaminants.	All new "C" systems sample quarterly, and future sampling requirements are based on the results of the quarterly samples for the first year.
Nitrates	(individual)	All systems must sample annually.
Nitrites	(individual)	All systems must sample every 3 years.

Group Contaminant Codes	Individual Contaminants	Systems with M/R Violations	Group M/R Violations	Individual M/R Violations
VOCs		2	2	42
Subtotal		2	2	42
SOCs		1	1	25
Subtotal		1	1	25
IOCs		-	-	-
	Arsenic (1005)	3	0	3
	Nitrate (1040)	9	0	9
Subtotal		12	0	12
RADs		-	-	-
	COMPLIANCE GROSS ALPHA (4000)	4	0	4
	URANIUM /(MASS units in ug/L) (4006)	3	0	3
	COMBINED RADIUM (-226 AND -228) (4010)	2	0	2
Subtotal		4	0	9
TOTALS		19	3	88

There were 88 individual chemical Monitoring violations incurred by 19 systems. There were three water systems with group VOC/SOC monitoring violations. Three systems incurred three Arsenic monitoring violations. Nine systems incurred nine Nitrate violations. Four water systems incurred nine monitoring violations for Radionuclides.

New Hampshire's policy is to wait until subsequent required sampling, specifically make-up sampling, has been completed before determining that compliance has been achieved. Those systems outlined above with outstanding violations have not been returned to compliance because they had not yet submitted all required chemical samples.

To see if prior year violations for any public water system have returned to compliance, please check the [OneStop website](#).

Lead and Copper Rule (LCR)

This rule established national limits on lead and copper in drinking water [40 CFR 141.80-91]. Corrosion of lead and copper pipes and plumbing fixtures poses various health risks when the associated water is ingested and can enter drinking water from household pipes and plumbing fixtures.

Lead contamination is a major concern today, especially when small children are involved. Sampling under this rule reflects this concern. The number of samples required is based on the system's population. Systems that do not exceed action levels (0.015 mg/l for lead and 1.3 mg/l for copper) will sample each site twice the first year, once a year for the next three years and then once every three years. Systems that exceed action levels need to conduct corrosion control studies, possibly provide treatment, and conduct additional sampling.

Community ("C") and Non-Transient/Non-Community ("P") water systems are required to sample under this rule. Transient/Non-Community ("N") water systems are exempt from the Lead and Copper Rule.

New Hampshire reports violations of the LCR (SDWIS Contaminant Code 5000) in the following categories:

Initial lead and copper tap violation (Monitoring/Reporting) (SDWIS Violation Code 51): Indicates that a system did not meet initial lead and copper testing requirements or failed to report the results of those tests to the state, or who incurred the initial tap monitoring violation prior to the calendar year M/R but failed to return to compliance prior to January 1. Systems failing to sample by January 1 of the following year continue to incur the violation until required samples are taken.

Follow-up or routine lead and copper tap M/R violation (SDWIS Violation Code 52): Indicates that a system did not meet follow-up or routine lead and copper tap testing requirements or failed to report the results. As with the previous M/R violation, systems failing to sample by January 1 of the following year continue to incur the violation until the required samples are taken.

Routine Water Quality M/R violation (SDWIS Violation Code 53): Indicates that a system did not meet routine water quality testing requirements or failed to report the results. The violation continues until the system reports the next period sample results or until the system is optimized for corrosion control treatment.

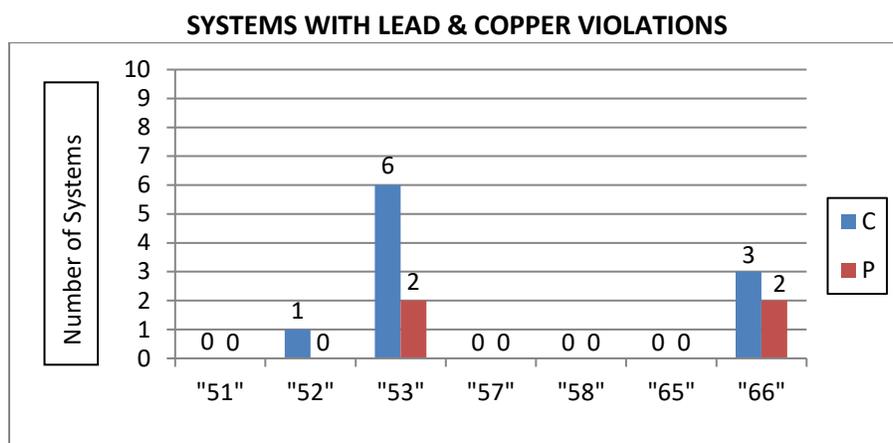
Treatment installation violation (Treatment Technique) (SDWIS Violation Codes 57, and 58): Indicates a failure to install an optimal corrosion control treatment system (57) or optimize a source water treatment system (58) which would reduce lead and copper levels in water at the tap.

Public education violation TT violation (SDWIS Violation Code 65): Indicates that a system did not provide required public education about reducing or avoiding lead intake from water.

Lead Consumer Notice M/R violation (SDWIS Violation Code 66): Indicates a failure to provide notice of lead tap results to the individual tap(s) from where the sample was taken and/or failure to submit an example of this notice and a certification to the state 141.85(d)(1)-(4) and 141.90(f)(3).

There were no monitoring/reporting Violation Code 51 violations in 2019. One system incurred a routine or follow-up violation (Vio Code 52). There were eight systems having eight water quality violations (Vio Code 53), and five water systems incurred five violations for lead consumer notice (Vio Code 66).

To see if prior year violations for any public water system have returned to compliance, please check the NHDES [OneStop website](#).



Consumer Confidence Report Rule (CCR)

All active Community water systems are required to deliver to their customers a brief annual water quality report. This report must include educational materials and provide information on the public water system source water, the levels of any detected contaminants and compliance with drinking water regulations. In addition, reports must be submitted to the primacy agency. Any "C" system failing to complete the CCR requirements will incur the following violation:

Significant Consumer Notification violation (SDWIS Violation Code 71, Contaminant Code 7000): Any Community water system that completely fails to provide the consumer confidence report during the calendar year.

New Hampshire received interim primacy for the CCR, which gave NHDES enforcement authority for violations incurred from 2002 forward. There were seven systems incurring seven CCR violations in 2019.

To see if prior year violations for any public water system have returned to compliance, please check the NHDES [OneStop website](#).

DWGB COMPLIANCE ASSISTANCE AND ENFORCEMENT ACTIVITIES

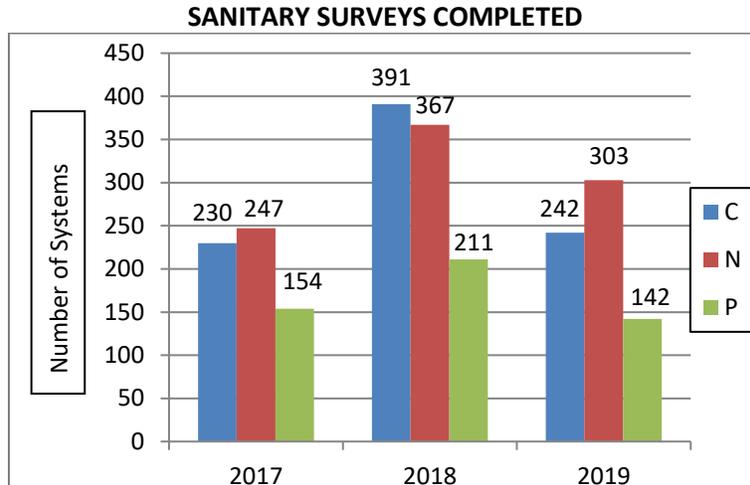
The DWGB uses a variety of means to assist PWSs to maintain compliance with applicable SDWA and state regulations. The compliance assistance activities include the following: making sampling schedules and analysis forms available over the internet, emailing reminder postcards, offering regular operator training courses and special topic seminars, emailing the DWGB's newsletter to approximately 4,000 stakeholders, offering fact sheets on a wide variety of subjects and providing technical assistance over the phone as well as during sanitary surveys.

Should a system fail to monitor according to schedule, exceed a Maximum Contaminant Level, violate a treatment technique, fail to perform public notice or fail to correct a significant deficiency identified in a sanitary survey, the system is issued a Notice of Violation (NOV). In the majority of cases, an NOV is likely to prompt system representatives to bring their water system back into compliance. In a small number of cases, additional enforcement action is required. If the violation is not resolved or additional violations are accrued, a Letter of Deficiency (LOD) is issued. The LOD requests that certain actions be completed within specified time periods. The LOD seeks voluntary compliance from the system owners and it is not independently enforceable. More serious violations or repetitive violations may result in the issuance of an Administrative Order (AO), Administrative Order by Consent (AOC) and/or the imposition of Administrative Fines. On rare occasions, it has been necessary to refer a water system to the New Hampshire Attorney General's office for civil and/or criminal penalties.

Because New Hampshire rules specify that sampling be conducted in the month or quarter specified in the Master Sampling Schedule, NOV letters are sent out as soon as each month/quarter is complete. Systems that fail to sample during the assigned period are sent the NOV letter, and make-up sampling is required as soon as possible. This provides for a more equitable enforcement response to all systems, regardless of month/quarter assigned, promotes compliance by establishing NHDES' oversight capabilities and allows NHDES to better balance the processing of enforcement actions throughout the year. The NHDES Drinking Water program is very comprehensive. The various sections work closely with one another and all use the same database. The programs have enhanced compliance in the state by providing additional outreach efforts.

Sanitary Surveys

NHDES staff conducts sanitary surveys or water system inspections every three years for "C" and "P" systems and every five years for "N" systems. The water systems are inspected for compliance with drinking water program regulations. Any necessary water quality samples can also be taken during the survey. Surveys are one of the best ways of ensuring proper protection of drinking water supplies and the proper operation of public water systems. Periodic visits to the water systems allow the DWGB staff to update its data and gather other information on the water system that is required under federal and state regulation. All new systems are surveyed as they come online. In 2019, DWGB staff conducted 959 total site visits, 687 of them being sanitary surveys. In addition, there were 34 site investigations, 60 technical assistance visits, 11 boil order responses, 16 visits related to capacity development, 178 Level 1 assessments, 90 Level 2 assessments, and other reasons for site visits at public water systems.



Operator Certification Program

New Hampshire requires that all “C” and “P” public water system types have a certified operator. These operators oversee many system operations to ensure a safe and adequate water supply to the system’s customers. There are two categories of certification (treatment and distribution), and each category is divided into five levels of complexity. Each level has its own strict experience and education requirements, and applicants must pass a certification exam by obtaining a grade of at least 70% to become certified. NHDES sponsors classes and seminars and requires certified operators to maintain continued education units (CEUs). As of December 31, 2019, there were 1,010 active water system operators licensed in New Hampshire.

CONCLUSIONS

In general, New Hampshire tends to have a higher number of MCL occurrences than other states. Unlike most other states and territories, New Hampshire has Administrative Rule, Env-Dw 719.02, which requires the owner of a PWS to enter into a written agreement with an accredited laboratory to perform duties related to reporting drinking water quality analyses. The agreement must contain the provision that the lab reports all analytical results directly to DWGB, the primacy agency. In most states and territories, the PWS submits water quality results from an accredited lab to the primacy agency. The primacy agency and federal government may never know of an MCL occurrence in these situations since the PWS may opt to resample or incur a monitoring violation rather than receive an MCL violation. New Hampshire public water systems do not have this option. The intent of this rule was to protect consumer health from risks that could be caused by systems manipulating the submission of sampling data.

The majority of PWS violations that occurred in New Hampshire in 2019 were due to the failure to monitor. While these violations are of concern, they are generally considered secondary to violations that more directly affect public health, such as violations occurring from exceeding a maximum contamination level. We believe that modifications to our enforcement strategies have reduced the overall number of violations as our enforcement presence is better recognized. Sampling schedules and analysis forms are available over the Internet, making it easier for systems to comply.

When a system addresses its violations, it returns to compliance (RTC). The time it takes a New Hampshire water system to achieve RTC status varies depending upon the nature of the underlying violation. For example, a PWS receiving a treatment technique (TT) violation under the Surface Water Treatment Rule may achieve RTC status in a month, but it may take a seasonal PWS up to a year to achieve RTC status following a Revised Total Coliform Rule Monitoring/Reporting violation.

REPORT AVAILABILITY AND CONTACT INFORMATION

Questions regarding this report may be submitted by contacting:

NH Dept. of Environmental Services – Water Division
Drinking Water & Groundwater Bureau
PO Box 95
Concord, NH 03302-0095
(603) 271-2513
dwgbinfo@des.nh.gov

This report, along with prior year annual compliance reports, is also available on the [NHDES website](#).

The status of all violations (and additional information about the New Hampshire public water systems) can be found by PWS ID at the NHDES [OneStop website](#).