How to Avoid Violations and Significant Deficiencies at Your Public Water System

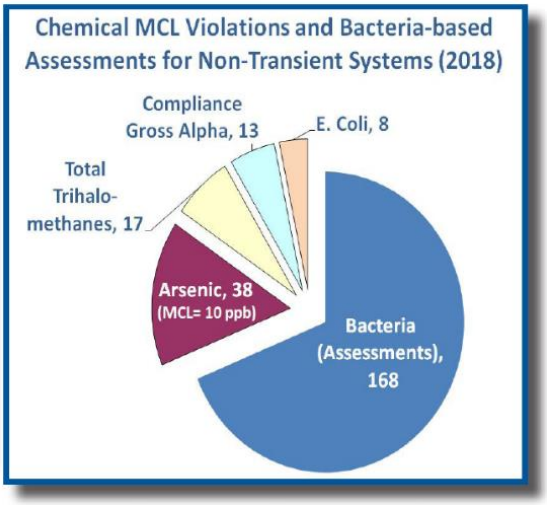
Good news! All five of the most frequent violations of drinking water regulations by the approximately 2,500 Public Water Systems (PWS) in New Hampshire in calendar year (CY) 2018 are easily and completely avoidable with a little planning.

Most Frequent Violations by New Hampshire Public Water Systems in 2018

Violation	How to Avoid
Bacteria Monitoring or Reporting (M/R) Failure	Check online PWS Master Sampling Schedule. Sample early in monitoring period and the week
Failure to Pay Permit to Operate Fee	Submit completed application (find on NHDES OneStop using PWS ID number; select PTO icon)
Failure to Monitor Groundwater Source After Detecting Bacteria	Sample wells/spring for bacteria within 1 day of lab report
Failure to Correct Significant Deficiency	Correct/ask for later due date within 30 days
Disinfection Byproducts M/R	See Bac. M/R Failure

Four of the top five violations can be avoided simply by sampling on time, paying the annual permit fee, and sampling active wells and other water sources within 24 hours of detection of bacteria in a routine sample.

Violations are also issued for exceeding a Maximum Contaminant Level (MCL). Of all routinely analyzed chemical parameters, arsenic most frequently exceeds its MCL.



Arsenic is of note because its MCL is 30 – 3,000 times less protective than MCLs for other regulated cancer-causing contaminants, depending on which contaminant you compare it to. For this reason, it will be lowered in 2021 to better protect public health in New Hampshire.

Public Water System Categories

- **Community** – residential
- **Non-Community** – not residential
  - **Non-Transient (NTNC)** –not a residential water system and serves the same 25 people, or more, over 6 months per year, e.g., office park.
  - **Transient (TNC)** – a system that serves at least 25 persons in a transitory setting or more than 60 days each year, e.g., coffee shop.

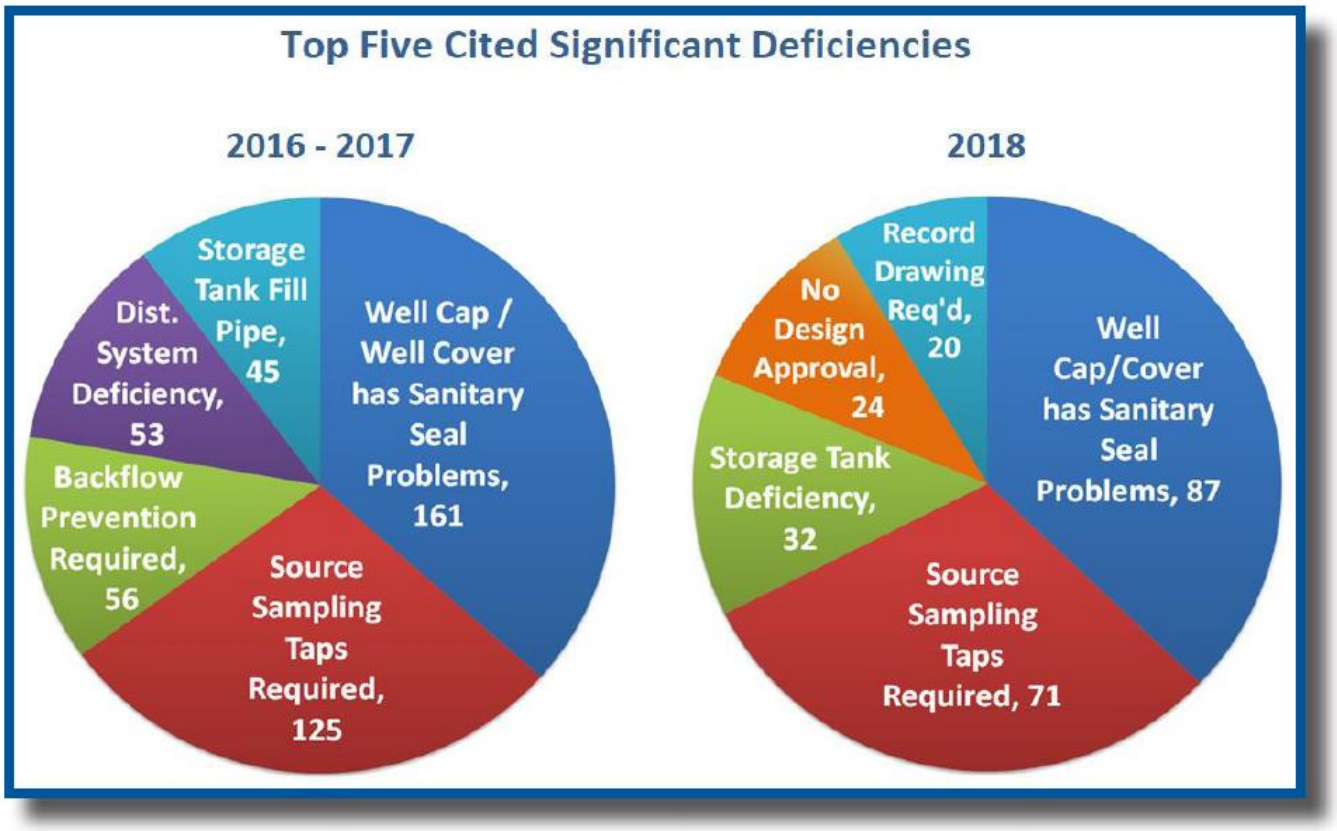
The smallest PWSs (serving fewer than 250 people) incur between 80% and 85% of monitoring/reporting violations. PWSs serving transient populations (such as gas stations) violate drinking water regulations more frequently than community or non-transient, non-community PWSs. Of transient PWSs, restaurants and campgrounds have the highest violation rates, typically for failing to sample water for bacteria.

For further detail about violations see the Annual Compliance Report.

NHDES Drinking Water and Groundwater Bureau (DWGB) sanitary surveyors conduct official inspections (sanitary surveys) of approximately 600 PWSs every year, to support public health for users of these water systems. The surveyors identify Significant Deficiencies (SigDefs), which are issues that could compromise the safety of the supplied water. DWGB sanitary surveyors and state-certified water system operators also conduct water system assessments triggered by detection of bacteria in PWS water samples. These inspectors search for and identify Sanitary Defects (a subset of SigDefs), which must be corrected. Corrections range from simple actions such as tightening nuts on well cap bolts to more costly actions such as replacing a well or water main. Uncorrected significant deficiencies incur violations.

Both violations and uncorrected significant deficiencies potentially carry political impacts due to annual reporting to each water consumer. The single most effective way to avoid citations is annual inspection using the same Level 2 Assessment Form that state sanitary surveyors use, with inspection tips in fact sheet WD-DWGB-7-13, to find and fix any issues found.

The most frequently-cited deficiencies change little from year to year, as shown in the chart below. The most frequent deficiencies are among the simplest to correct: making sure that the well is sealed against the surrounding soil and groundwater, and installing a sampling tap for each water source. Many causes of a water storage tank SigDef (e.g., torn vent screen, hole on a hatch, missing fill pipe, etc.) are easily corrected.



Other frequent deficiencies include cross-connections between potable and non-potable water supplies, and installation of treatment equipment without NHDES review and approval of equipment design specifications (e.g., residential-quality ultraviolet lights are commonly installed when equipment for PWS should meet NSF Standard 55).

For information about DWGB outreach to strengthen water system capabilities, see the Annual Capacity Report.