MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY

2025 Annual Report on Michigan Public Water System Violations

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Introduction

The Michigan Department of Environment, Great Lakes, and Energy (EGLE) administers the Public Drinking Water Program in Michigan under delegation of authority from the United States Environmental Protection Agency (USEPA). The 1996 amendments to the federal Safe Drinking Water Act (SDWA) require states with primacy to prepare an annual report on public water system (PWS) violations of the national primary drinking water regulations within the state. This report fulfills this responsibility for the 2025 calendar year and includes violations of Maximum Contaminant Level (MCL), Maximum Residual Disinfectant Level (MRDL), Treatment Technique (TT) requirements, and major monitoring or reporting requirements. The entire report is on the EGLE Drinking Water Web page at Michigan.gov/CommunityWater.

The Drinking Water Program: An Overview

The USEPA established the Public Water System Supervision (PWSS) Program under the authority of the 1974 SDWA and the 1986 and 1996 amendments.

In the SDWA:

- The USEPA set national limits on contaminant levels in drinking water to ensure that the water is safe for human consumption. These limits are known as MCLs and MRDLs.
- Because certain contaminants are difficult to measure, the USEPA establishes TTs in lieu of an MCL to control unacceptable levels of contaminants in water.
- The USEPA specifies how often PWSs must monitor their water for contaminants and report the monitoring results to the state. Generally, the larger the population served by a water system, the more frequent the monitoring and reporting requirements. In addition, the USEPA requires PWSs to monitor for unregulated contaminants to provide data for future regulatory development.
- The USEPA requires PWSs to notify their consumers when they have violated these regulations. Public notification must include a clear and understandable explanation of the nature of the violation, its potential adverse health effects, steps that the PWS is undertaking to correct the violation, and the possibility of alternative water supplies during the violation.

Who Must Comply

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.

States and territories are allowed to seek the USEPA's approval to administer their own PWSS Programs. The authority to run a PWSS Program is called *primacy*. For a state to receive primacy, the USEPA must determine that the state meets certain requirements laid out in the SDWA and the regulations, including the adoption of drinking water regulations that are at least as stringent as the federal regulations and a demonstration that they can enforce the PWSS 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.

The 1986 SDWA amendments gave Indian Tribes the right to apply for and receive primacy. The USEPA currently administers the PWSS Program on all Indian lands except the Navajo Nation, which was granted primacy in late 2000.

The Michigan Drinking Water Program

As part of the primacy program, the Michigan public drinking water program has the following responsibilities:

- Onsite Inspections
- Construction Permitting
- Operator Certification
- Laboratory Certification
- Monitoring and enforcing compliance with the SDWA
- Administering the Drinking Water State Revolving Loan Program which provides loans to drinking water supplies for construction projects
- Source Water Protection
- Capacity Development

The Community Water Supply (CWS) Program is conducted out of eight district offices around the state, with technical assistance and other program administration in the central office located in Lansing. The Noncommunity Water Supply (NCWS) Program has been delegated to the local health departments (LHD), with assistance and oversight from a team of state employees both in the Lansing office and in the district offices.

Annual State Public Water System Report

Each quarter, primacy states submit data to the federal Safe Drinking Water Information System (SDWIS/FED), an automated database maintained by the USEPA. The data submitted include, but are not limited to, PWS inventory information; the incidence of MCLs, monitoring, and TT violations; and information on enforcement activity related to these violations. Section 1414(c)(3) of the SDWA requires states to provide the 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, TTs, variances and exemptions, significant monitoring violations, and significant consumer notification violations. The USEPA regional offices report the information for Wyoming, the District of Columbia, and all Indian lands except the Navajo Nation. The USEPA regional offices also report federal enforcement actions taken. Data retrieved from the SDWIS/FED and EGLE databases form the basis of this report.

Michigan's Public Water Systems

A PWS is defined as a system that provides water via piping or other constructed conveyances for human consumption to at least 15 service connections or serves an average of at least 25 people for at least 60 days each year. There are three types of PWSs. When the acronym "PWS" is used in this report, it means systems of all three types listed in Table 1, unless specified in greater detail.

TABLE 1: Types of Public Water Supply Systems

1. COMMUNITY: Year-round residential consumers (such as towns, manufactured housing communities, subdivisions, apartments)
2. NONTRANSIENT NONCOMMUNITY: Same non-residential consumers six months out of the year (such as schools, day cares, industries, places of employment)
3. TRANSIENT NONCOMMUNITY: Different non-residential consumers every day (such as hotels, parks, campgrounds, rest areas, restaurants)

Table 2 shows the number of systems in Michigan by type.

TABLE 2: Michigan Supplies by Type

Type of Water System	Total Number in Michigan	Population Served
Community Water Systems	1,382	7,425,286
Nontransient Noncommunity Water Systems	1,407	300,000
Transient Noncommunity Water Systems	8,262	Over 1 million per day

Understanding This Report: Definitions

Maximum Contaminant Level:
Under the SDWA, the USEPA sets national limits on contaminant levels in drinking water to ensure the water is safe for human consumption. These limits are known as MCLs.

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

Treatment Techniques:
For some regulations, the USEPA establishes TTs in lieu of an MCL to control unacceptable levels of certain contaminants. For example, TTs have been established for viruses, some bacteria, and turbidity.

Variances and Exemptions:
A primacy state can grant a PWS a variance from a primary drinking water regulation if the characteristics of the raw water sources reasonably available to the PWS do not allow the system to meet the MCL. To obtain a variance, the system must agree to install the best available technology, TTs, or other means of limiting drinking water contamination that the Administrator finds are available (taking costs into account), and the state must find that the variance will not result in an unreasonable risk to public health. The variance shall be reviewed not less than every five years to determine if the system remains eligible for the variance.

A primacy state can grant an exemption temporarily relieving a PWS of its obligation to comply with an MCL, TT, or both, if the system's noncompliance results from compelling factors (which may include economic factors) and the system was in operation on the

effective date of the MCL or TT requirement. The state will require the PWS to comply with the MCL or TT as expeditiously as practicable, but not later than three years after the otherwise applicable compliance date. Michigan currently has no PWSs under a variance or exemption.

Monitoring and Reporting:
A PWS is required to monitor and verify that the levels of contaminants present in the water do not exceed the MCL or MRDL. If a PWS fails to have its water tested as required or fails to report test results correctly to the primacy agent, a monitoring and reporting violation occurs.

Significant Monitoring and Reporting Violations:
For this report, significant monitoring violations are generally defined as any major monitoring violation that occurred during the calendar year of the report. A major monitoring violation, with rare exceptions, occurs when no samples were taken, or no results were reported during a compliance period.

Consumer Notification:
Every CWS is required to deliver to its customers a brief annual water quality report. This report is to include some educational material and will provide information on the source water, the levels of any detected contaminants, and compliance with drinking water regulations. These reports are required to be made available to customers no later than July 1 of each year. Residents should contact their water supply if they would like to obtain a copy of its most recent report.

Significant Consumer Notification Violations:
For this report, a significant public notification violation occurs if a CWS completely fails to provide its customers with the required annual water quality report.

Public Notification Violations:
The Public Notification Rule requires all PWSs to notify their consumers any time a PWS violated a national primary drinking water regulation or has a situation posing a risk to public health. The time period that a PWS has to notify the public depends upon the risk posed by the violation or situation. Notices must be provided to persons served (not just billing consumers).

Significant Public Notification Violations:
For this report, a significant public notification violation occurs when a PWS completely fails to notify its consumers that the PWS violated a national primary drinking water regulation or had a situation posing a risk to public health.

Conclusions

The amount of monitoring required of a PWS is dependent on the type and category of PWS (community versus noncommunity, groundwater versus surface water); parameters regulated (microbiological, chemical, and physical); and the size of the system. Locations of monitoring vary (entry point to the distribution, designated sites in the water distribution system, etc.). There are 1,382 community PWSs serving approximately 7.43 million people in Michigan. Approximately 53 percent are operated by government entities such as cities and villages, while 47 percent are privately owned. There are 9,669 noncommunity PWSs in Michigan at facilities such as schools, industries, restaurants, motels, campgrounds, churches, and roadside parks. The majority of noncommunity systems are very small privately-owned businesses that provide water to fewer than 100 people per day. It is estimated that 10 to 20 percent of the owner/operators change each year at these facilities.

Violations outlined in this report do not necessarily reflect conditions of a PWS that are continuous throughout the year. In many instances, the violation a PWS experienced was for only one monitoring period, which is the case for most monthly bacteriological monitoring. In some cases where a monitoring violation occurred, a PWS may have been late in taking the required number of samples. No direct risk to public health exists with a monitoring violation. Violation of an MCL poses a risk to public health; however, it does not necessarily mean the public experienced illness from the violation event.

PWSs that exceed drinking water standards (MCL, MRDL, or TT violations) are required to notify the public, correct the problem, and provide a safe alternate source of drinking water in the interim, if necessary. Although all MCL violations are considered very serious and are addressed accordingly, only 24 PWSs incurred an MCL violation in 2025 involving indicators of fecal contamination in the drinking water, a more serious public health threat. Both CWSs that encountered *E. coli* and most of the NCWSs have returned to compliance. Follow-up on those not yet demonstrating compliance is prioritized by LHDs.

Beginning in April 2016, the total coliform provisions of the SDWA were modified under the Revised Total Coliform Rule (RTCR). Prior to this change, total coliform bacteria had an MCL. Beginning April 1, 2016, this MCL was replaced with a Treatment Technique Trigger, which requires formal assessments to identify potential pathways for contamination. Any identified sanitary defects must be corrected by a set deadline. The PWS must notify the public if they fail to complete the assessment or fail to take corrective actions by the deadline. This change only applies to the total coliform MCL. The acute MCL for *E. coli*, which is the fecal indicator, still exists and requires Tier 1 public notification.

This year's report continues to reflect higher violations for lead and copper at CWSs. A portion of the increase is due to targeted enforcement efforts and Michigan's more stringent lead and copper regulations promulgated in 2018. In addition, some federal Lead and Copper Rule Revision compliance requirements began in 2024 and 2025. Specifically, water supplies were required to submit service line material inventories to EGLE in October 2024 and begin certifying to lead service line notification requirements in July 2025. Failure of some water supplies to comply with the deadline resulted in additional TT and reporting violations.

For nontransient NCWSs, which do not have service lines like most CWSs, service line material inventories were still required. EGLE received an inventory for 84 percent of the nontransient supplies. To date, no lead pipes conveying water from well to building or between buildings have been identified, and none are expected as follow-up progresses on those supplies that have not yet reported.

More Lead and Copper Rule violations were also recorded for NCWSs. As with certain other violation types, an increase in numbers can be attributed in part to recent transitions in data management software and tracking processes the NCWS program has endured. The new database allows tracking and reporting of violation types not possible in the legacy data system. In 2025, a three-year monitoring period ended for many NCWSs, so there were more monitoring and reporting violations in comparison to 2024.

In August 2020, Michigan promulgated drinking water standards and associated requirements for seven per- and polyfluoroalkyl substances (PFAS). Violations of Michigan's PFAS requirements are included in this report.

CWSs had 20 chemical MCL violations in 2025: two for perfluorooctanoic acid (PFOA) at one supply, 13 for arsenic at seven supplies, two for nitrate at two supplies, one for ethylene dibromide, and two for radium 226/228 at two supplies.

For NCWSs, there were 69 new or continuing chemical MCL violations reported in 2025. There were 15 supplies that incurred arsenic MCL violations, seven had nitrate MCL violations, and four were issued a PFAS MCL violation. Typically, with chemical MCL violations, the supply owner either pursues better quality water through a new well using a different aquifer or applies to have water treatment devices approved for installation. Most of the unresolved chemical MCL violations are being addressed in these ways.

Most violations reported in the NCWS Program are for failure to collect water samples at the prescribed frequency (monitoring/reporting violations), as opposed to actual instances of contamination. Twenty-one percent of NCWSs failed to collect a required bacteriologic or nitrate sample at some point in 2025. This metric remained near the

20 percent rate first seen in 2016, the first year of the RTCR, when the rate of monitoring violations jumped from eight or nine percent under the prior rule. The RTCR resulted in many systems having to increase the number of samples they collect each year, which increased the chances they miss collecting a sample.

The failure to collect all required water samples is a significant concern. EGLE launched a new initiative throughout 2025 focused on improving compliance with sampling requirements and emphasizing reminders, education, enforcement, and targeting selected water supplies where noncompliance sampling requirements are a problem. The monitoring compliance initiative yielded mixed results by the end of the year, as circumstances of staffing and resources varied widely among LHDs.

In a broader context, Michigan's drinking water program does not rely solely on sampling to protect public health, but rather relies on a multi-barrier approach. The primary barriers to prevent contamination of water systems include proper well system construction; isolation from contaminant sources; proper design, operation, and construction of treatment facilities; periodic inspections with correction of deficiencies; and owner/operator education and oversight. These activities provide the foundation for safe drinking water, and periodic sampling is a tool to assess ongoing safe operations. Therefore, a missed routine sample from a properly constructed water system with a satisfactory history of safe samples is a concern, but not a direct threat to health.

Obtaining a Copy of the 2025 Report

The 2025 Annual Report on Michigan Public Water System Violations is available on the Internet at Michigan.gov/CommunityWater. Click on "Annual Reports on Public Water System Violations."

The report can also be obtained by contacting Dan Dettweiler, NCWS Technical Support Unit, Environmental Health Section, at 517-614-8644 or DettweilerD@Michigan.gov; or Kristen Philip, Community Water Supply Section, at 517-582-3136 or PhilipK@Michigan.gov.