

**STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH
REGULATORY SERVICES BRANCH
DRINKING WATER SECTION**

**PUBLIC WATER SYSTEMS VIOLATIONS REPORT
CALENDAR YEAR 2004**



Keeping Connecticut Healthy
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INTRODUCTION

The Connecticut Department of Public Health (DPH) is the State's lead agency in all matters related to the purity and adequacy of drinking water. Connecticut's "primacy" status, granted by the United States Environmental Protection Agency (EPA) allows DPH to implement and enforce provisions of the Federal Safe Drinking Water Act (SDWA) through State statutes and regulations in the Public Health Code. The Drinking Water Section (DWS) in the Department's Regulatory Services Branch administers the statewide drinking water program associated with the SDWA.

In 1996, the United States Congress amended the SDWA. One of the important provisions in the amendments is the public information component that requires State drinking water programs to issue an annual report on violations incurred by public water systems (PWS). States must also make this report available to the public. This document comprises DPH's annual report, which must be made available to the public and submitted to EPA by July 1, 2005. This report covers the calendar year 2004.

PUBLIC WATER SYSTEMS IN CONNECTICUT

The DPH Drinking Water Section (DWS) exercises regulatory oversight of approximately 2956 PWS throughout Connecticut. These PWS fall into three categories. Community PWS, of which there are about 583, serve at least 25 year round residents. In Connecticut, approximately 79% of the state's population of 3.4 million people obtains their drinking water from community water systems. Non-transient non-community PWS, of which there are approximately 653, serve at least 25 of the same individuals, other than year round residents, for more than six months per year. Examples of non-transient non-community PWS are schools, day care centers, and factories. Finally, there are about 1720 transient non-community PWS in Connecticut that provide drinking water to places like restaurants and campgrounds.

Over two-thirds of the population on community PWS are supplied by surface water. Groundwater serves the remaining population on community water systems, and almost all non-community PWS rely on groundwater.

REGULATION OF CONTAMINANTS

Public Water Systems are required to monitor and test their drinking water. Community PWS monitor and test for all regulated microbiological, chemical and radionuclide contaminants. Non-transient non-community PWS monitor and test for all regulated microbiological and chemical contaminants. Transient non-community PWS are required to monitor and test for microbiological contaminants and two chemical contaminants (nitrate and nitrite). EPA sets national limits or standards known as Maximum Contaminant Levels (MCL) for all regulated contaminants. The MCL represents the maximum permissible level of a contaminant in the water.

Public Water Systems submit the results of their water quality tests to DWS. The water quality data is then entered into SDWIS/ STATE and compliance with all applicable MCLs and monitoring requirements is determined.

The United States Environmental Protection Agency also establishes minimum treatment techniques. This report includes violations of treatment techniques under the Lead and Copper Rule. For this report, violations of this treatment technique means a failure to meet operational and PWS requirements under the rule.

CALENDAR YEAR 2004 REPORT OF PUBLIC WATER SYSTEM VIOLATIONS

This annual violation report includes three types of violations. The first type of violation is an exceedance of MCLs. The second are for treatment technique violations under the Lead and Copper Rule. The third are for significant monitoring violations, which are defined by EPA as a PWS failure to collect a required sample or submit a required water quality test result to DWS.

When a PWS has a violation, DWS provides technical assistance to the PWS to ensure that it implements all required procedures associated with the violation such as public notification and any necessary corrective action such as the installation of appropriate treatment.

During calendar year 2004, DPH issued 146 formal enforcement actions to PWS. The actions taken included 10 Consent Orders, 2 Administrative Orders, and 144 Notices of Violation with Civil Penalty. The majority of these formal enforcement actions were issued to community and non-transient non-community PWS that incurred significant monitoring and reporting violations.

Connecticut does not have any PWS that have been granted a variance or exemption; therefore there have not been any violations of variances or exemptions in calendar year 2004.

Our goal is to oversee the PWS return to compliance as quickly as possible. The Drinking Water Section remains committed to continue its positive working relationship with the PWS for the express purpose of protecting public health by minimizing violations.

REPORT EXPLANATION

The majority of PWS with violations are small systems serving populations of less than 1,000 people. Small PWS are the most frequent violators of Federal and State drinking water mandates. DWS devotes considerable time and effort to helping small community and non-community PWS understand and comply with their mandated requirements. The Drinking Water Section's efforts to identify and regulate non-community PWS, has resulted in an increase in significant monitoring, reporting, and MCL violations. As the DWS continues to identify, regulate, and take enforcement actions against non-community PWS, it is logical to assume that the increase in significant monitoring, reporting and MCL violations will continue.

The attached tables present data on PWS violations in calendar year 2004. Table A reports violations according to the three types of violations and water contaminants. Table B covers MCL violations, Table C covers treatment technique violations and Table D covers significant monitoring and reporting violations. The definitions appended to Table A further explain the terms in this report and corresponding tables.

Maximum Contaminant Level Violations: (refer to Table B)

In calendar year 2004, the DWS issued 406 violations to 241 PWS for exceedances of MCLs. Fifty-five community and 186 Non-community PWS incurred MCL violations.

Microbiological: Eighty-eight percent of all MCL violations in calendar year 2004 were for microbiological contamination of public water supplies.

1. Total Coliform – Forty-three community, 56 non-transient non-community and 117 transient non-community PWS were issued a total of 334 total coliform MCL violations. A PWS incurs a violation for total coliform when the test result shows the *presence* of coliform bacteria in the water. When a violation occurs, the DWS assists the PWS with identifying the source of the coliform bacteria. Total coliforms are common in the environment and are generally not harmful themselves. The presence of these bacteria in drinking water, however, generally indicates a problem with the system that should be corrected. The problem is often corrected through system improvements and chlorination of the system.

2. Total Coliform Acute –Three community, 6 non-transient non-community and 14 transient non-community PWS were issued a total of 23 total coliform acute MCL violations. An acute total coliform violation occurs when fecal coliform or *E. coli* bacteria is detected in the system's water. *E. coli* bacteria are generally not harmful themselves, but their presence in drinking water is serious because they usually are associated with sewage or animal wastes.

Public Water Systems must notify customers that *E. coli* bacteria have been found in the water, and the DWS strongly recommends that the system request that its customers boil their water until the source is free of contamination.

For *E. coli* bacteria contamination, the DWS assists the PWS with completing a careful inspection of the well and surrounding area. This inspection often reveals the source of the contamination. Chlorination of the well and removal of the identified contaminant source usually returns the system to compliance. Formal enforcement actions are needed in some situations to address these violations.

Chemical and Radionuclides: In calendar year 2004, thirty-one PWS in Connecticut incurred 49 violations for MCL exceedances of 11 different regulated chemicals. Long-term exposure to these chemicals can pose

serious risk to public health. Additionally, infants can become ill if exposed to high levels of nitrate for a short period of time.

Regulated contaminants can occur naturally in the ground. They can also be the result of releases to the ground from commercial and industrial processes or improper disposal of hazardous waste.

When a PWS exceeds an MCL it must notify its customers of the violation. At the same time, the PWS takes action to return to compliance by replacing the contaminated source of supply or by identifying and installing treatment specifically designed to reduce the level of the contaminant in the water. The DWS approves all treatment prior to installation.

Treatment Technique Violations: (refer to Table C)

Lead and Copper Rule - Failure to install treatment for lead or copper or issue public education materials under the Lead and Copper Rule have been defined by EPA as treatment technique violations in this report. In calendar year 2004, one treatment technique violation was incurred. It was for failure to provide adequate public education to customers on the health risks associated with the presence of lead in the drinking water.

Significant Monitoring and Reporting Violations: (refer to Table D)

In calendar year 2004, the DWS issued 10,284 violations to 1,059 PWS for failure to monitor and report water quality test results. Each year, PWS have specific monitoring and reporting requirements for that year. When a PWS fails to comply with these requirements, a public health risk may be created due to the absence of test results on the quality of the system's water.

Through technical assistance and enforcement actions, the DWS will work to reduce the number of monitoring and reporting violations for both community and non-community PWS in 2005.

CONCLUSION

The DPH's annual "Public Water Systems Violations report, Calendar Year 2004" documents the number of systems in Connecticut that violated MCLs, treatment techniques, monitoring and reporting requirements, and public notification requirements during the 2004 calendar year. Where a violation occurred, the DWS acted promptly to ensure that the PWS addressed the problem. Public Water Systems that did not correct violations were issued further enforcement actions.

Our mission is to protect public health by ensuring the purity and adequacy of drinking water, now and in the future. The Section's enforcement actions and technical assistance efforts are two of the strategies employed by the DWS to achieve our mission. On behalf of the DPH, the DWS will continue to capitalize on opportunities to promote compliance among the State's public drinking water systems to achieve this mission.