

The Virginia Drinking Water Program: An Overview

“The purity of the public water supply bears a most intimate relation to the health of the community ... [and] ... its vital importance to the people of Virginia cannot be too vigorously impressed.” So stated Commissioner of Health, Dr. Ennion G. Williams, M.D., in his 1912 Annual Report to the Governor of Virginia. This statement from the first part of the last century remains valid into this century.

In fact, Virginians have always taken protection of our drinking water seriously. As far back as May 24, 1610, Sir Thomas Dale, Deputy Governor for the Colony of Virginia, proclaimed that “No man, woman ... dare to wash any unclean linnen, ... or throw out the water or suds of fowle cloathes ... within the Pallizadoes, or within forty foote of the same, ... nor rench and make clean any vessel within 20 foote of the olde well ... nor shall any aforesaid, within lesse than a quarter of one mile from the Pallizadoes, dare to do the necessities of nature, since by these unmanly, slothful, and loathsome immodesties, the whole fort may bee cloaked, and poisoned ...”

From 1912 through 1974, Virginia has continuously maintained a proactive state public drinking water program. In 1974 Virginia enacted its first set of enforceable regulations, establishing drinking water standards as well as waterworks design and operational criteria. Also that year, Congress passed, and President Ford signed, the Safe Drinking Water Act (SDWA). This marked the entrance of the federal government into the protection of public health, through the establishment of enforceable national drinking water standards.

The Environmental Protection Agency (EPA) established the Public Water System Supervision (PWSS) Program under the authority of the 1974 SDWA. Under the SDWA and the 1986 Amendments, EPA 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, EPA establishes treatment techniques (TTs) in lieu of an MCL to control unacceptable levels of contaminants in drinking water. The EPA also regulates how often public water systems (PWSs) monitor their drinking water for contaminants and report the monitoring results to the Virginia Department of Health (VDH). Generally, the larger the population served by a water system, the more frequent the monitoring and reporting (M/R) requirements. In addition, EPA requires PWSs to monitor for unregulated contaminants to provide data for future regulatory development. Finally, EPA requires PWSs to notify the public when they have violated these regulations. The 1996 Amendments to the SDWA require public notification to include a clear and understandable explanation 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.

The SDWA applies to all 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 EPA approval to administer their own PWSS Programs. The authority to run a PWSS Program is called primacy. For a state to receive

primacy, EPA must determine that the state meets certain requirements laid out in the SDWA and its 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 program requirements. Of the 56 States and Territories, all but Wyoming and the District of Columbia have primacy. The EPA Regional Offices administer the PWSS Programs within these two jurisdictions. Virginia has continuously maintained primacy for the PWSS Program since 1977.

Annual State PWS Report

Virginia submits quarterly data to the Safe Drinking Water Information System (SDWIS/FED), an automated database maintained by the EPA. The data submitted include, but are not limited to; PWS inventory information, the incidence of Maximum Contaminant Level, Maximum Residual Disinfectant Level, 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 EPA with an annual report of the violations of the primary drinking water standards. This report provides the numbers of violations in each of six categories: MCLs, MRDLs, treatment techniques, variances and exemptions, significant monitoring violations, and significant consumer notification violations. EPA Region 3 also reports federal enforcement actions taken. Data retrieved from SDWIS form the basis of this report.

Public Water System

A PWS (called a “waterworks” in Virginia) 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 waterworks. Waterworks can be community (such as cities, towns, mobile home parks); nontransient noncommunity (such as schools and factories); or transient noncommunity (such as rest stops and restaurants) which have their own source of water supply. This report covers all three types unless specified otherwise.

Maximum Contaminant Levels (MCLs)

Under the SDWA, the EPA sets national limits on contaminant levels in drinking water to ensure that the water is safe for human consumption. These standards are known as MCLs.

Maximum Residual Disinfectant Levels (MRDLs)

The EPA sets national limits on residual disinfectant levels in drinking water to reduce the risk of exposure to disinfectant byproducts formed, when waterworks add chemical disinfectant for either primary or residual treatment. These limits are known as MRDLs.

Treatment Techniques (TTs)

For some regulations, EPA establishes treatment techniques in lieu of an MCL to control unacceptable levels of certain contaminants. For example, TTs have been established for viruses, some bacteria, and turbidity.

Variance and Exemptions

Virginia can grant a waterworks a variance from a primary drinking water regulation if the characteristics of the raw water sources reasonably available to the waterworks do not allow the waterworks to meet the MCL. To obtain a variance, the waterworks must agree to install the best available technology, treatment techniques, or other means of limiting drinking water contamination that the Administrator finds are available (taking costs into account), and Virginia must find that the variance will not result in an unreasonable risk to public health. The variance shall be reviewed not less than every 5 years to determine if the waterworks remains eligible for the variance.

Virginia can grant an exemption temporarily relieving a waterworks of its obligation to comply with an MCL, treatment technique, or both if the waterworks' noncompliance results from compelling factors (which may include economic factors) and the waterworks was in operation on the effective date of the MCL or the treatment technique requirement. Virginia will require the waterworks to comply with the MCL or treatment technique as expeditiously as practical, but not later than 3 years after the otherwise applicable compliance date.

Monitoring

A waterworks is required to monitor and verify that the levels of contaminants present in the drinking water do not exceed the MCL. If a waterworks fails to have its water tested as required or fails to report the test results correctly to the VDH, a monitoring violation occurs.

Significant Monitoring Violations

For this report, significant monitoring violations are generally defined as any significant monitoring violation that has occurred during the calendar year of the report. A significant monitoring violation, with rare exceptions, occurs when no samples were taken or no results are reported to the VDH during the compliance period.

Consumer Notification

Every community waterworks is required to provide to its customers an annual drinking water quality report, also known as the Consumer Confidence Report (CCR). This report is to include some educational material, and provide information on the source water, the levels of any

detected contaminants, and compliance with drinking water regulations. During 2011, Virginia amended its CCR regulations to reflect that waterworks owners may notify their consumers through newspapers serving the local area in addition to direct delivery.

Significant Consumer Notification Violations

For this report, a significant public notification violation occurred if a community waterworks completely failed to provide its customers the required annual drinking water quality report.

Public Notice Violations

The Public Notification Rule requires all waterworks owners to notify their consumers any time a waterworks violated a national primary drinking water regulation or has a situation posing a risk to public health. Notices must be provided to every consumer and not just the billing consumer.

Obtaining a Copy of the 2012 Annual Compliance Report

As required by the SDWA, Virginia has made the 2012 Annual Compliance Report available to the public. Interested individuals can review a copy of the 2012 Annual Compliance Report for Virginia by accessing the Office of Drinking Water's website at:

<http://www.vdh.state.va.us/ODW/compliance/annualReport.htm>

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