PROPOSED RULEMAKING

ENVIRONMENTAL QUALITY BOARD

[25 PA. CODE CH. 109]

Disinfection Requirements Rule

The Environmental Quality Board (Board) proposes to amend Chapter 109 (relating to safe drinking water) to read as set forth in Annex A. The proposed amendments will strengthen water system requirements relating to microbial protection and disinfection requirements.

The proposed amendments also include minor clarifications to the Stage 2 Disinfectants/Disinfection Byproducts Rule (Stage 2 DBPR), Long Term 2 Enhanced Surface Water Treatment Rule (LT2) and the Lead and Copper Rule Short-Term Revisions (LCRSTR) to obtain or maintain primacy. The United States Environmental Protection Agency (EPA) promulgated the Federal Stage 2 DBPR at 71 FR 388 (January 4, 2006), the Federal LT2 at 71 FR 654 (January 5, 2006) and the Federal LCRSTR at 72 FR 57782 (October 10, 2007). The Commonwealth adopted State regulations implementing the Federal rules at 39 Pa.B. 7279 (December 26, 2009), Stage 2 DBPR and LT2, and 40 Pa.B. 7212 (December 18, 2010), LCRSTR. Minor clarifications are needed to obtain or maintain primacy for these rules.

The proposed amendments will protect public health through a multiple barrier approach designed to guard against microbial contamination by ensuring the adequacy of treatment designed to inactivate microbial pathogens and the integrity of drinking water distribution systems.

Safe drinking water is vital to maintaining healthy and sustainable communities. Proactively avoiding incidents such as waterborne disease outbreaks can prevent loss of life, reduce the incidents of illness and reduce health care costs. Proper investment in public water system infrastructure and operations helps ensure a continuous supply of safe drinking water, enables communities to plan and build future capacity for economic growth, and ensures their long-term sustainability for years to come.

The disinfectant residual requirements in the distribution system will apply to all 1,982 community water systems and those noncommunity water systems that have installed disinfection (822) for a total of 2,804 public water systems. These public water systems serve a total population of 10.6 million people.

The CT/log inactivation monitoring and reporting requirements will apply to all 353 filter plants which are operated by 319 water systems.

This proposed rulemaking was adopted by the Board at its meeting of November 17, 2015.

A. *Effective Date*

This proposed rulemaking will go into effect upon final-form publication in the *Pennsylvania Bulletin*. The submission of a sample siting plan is required 6 months after promulgation to allow time for development of the plan.

The Board is seeking comment on whether other provisions of the proposed rulemaking should be deferred. For example, some systems may need up to 6 months to make operational changes and effectively increase disinfectant residuals to 0.2 mg/L throughout the distribution system. If capital improvements are needed, a system-specific compliance schedule may be needed. Comments on the anticipated length of time needed to increase disinfectant residuals and whether capital improvements are anticipated to meet the proposed requirements are requested.

B. *Contact Persons*

For further information, contact Lisa D. Daniels, Director, Bureau of Safe Drinking Water, P. O. Box 8467, Rachel Carson State Office Building, Harrisburg, PA 17105-8467, (717) 787-9633; or William Cumings, Assistant Counsel, Bureau of Regulatory Counsel, P. O. Box 8464, Rachel Carson State Office Building, Harrisburg, PA 17105-8464, (717) 787-7060. Information regarding submitting comments on this proposed rulemaking appears in Section I of this preamble. Persons with a disability may use the Pennsylvania AT&T Relay Service at (800) 654-5984 (TDD users) or (800) 654-5988 (voice users). The proposed rulemaking is available electronically through the Department of Environmental Protection's (Department) web site at www.dep.pa.gov.

C. *Statutory Authority*

The proposed rulemaking is being made under the authority of section 4 of the Pennsylvania Safe Drinking Water Act (35 P. S. § 721.4), which grants the Board the authority to adopt rules and regulations governing the provision of drinking water to the public, and section 1920-A of The Administrative Code of 1929 (71 P. S. § 510-20), which authorizes the Board to promulgate rules and regulations necessary for the performance of the work of the Department.

D. *Background and Purpose*

Amendments to surface water treatment regulations regarding monitoring and reporting

The proposed amendments include new monitoring and reporting requirements to ensure compliance with existing treatment techniques regarding log inactivation and CT requirements. Log inactivation is a measure of the amount of viable microorganisms that are rendered nonviable during disinfection processes. CT is the product of residual disinfectant concentration (C) and disinfectant contact time (T). The CT value is used to determine the levels of inactivation under various operating conditions.

Public water systems using surface water or groundwater under the direct influence of surface water (GUDI) sources have long been required to meet log inactivation and CT requirements for the inactivation of Giardia cysts and viruses. These existing treatment technique requirements are intended to ensure that water systems provide adequate and continuous disinfection for the inactivation of pathogens.

The Small Water Systems Technical Assistance Center (TAC) Board recommended (by a vote of seven to six) that the monitoring requirements for CT calculations should be deleted and deferred to a future Chapter 109 revision because there are many variables for calculating CTs and the TAC believes this would be an additional burden for most systems. This recommendation was not incorporated into this proposed rulemaking because the only way to ensure compliance with the existing treatment techniques is to measure and record the data elements that are needed to calculate CTs (that is, disinfectant residual,

temperature, pH, flow and volume) and report the results. In addition, water suppliers should already be monitoring these data elements because the data is needed to properly operate filtration plants. Costs associated with the new reporting requirements should be minimal due to the availability of the EPA's CT calculator tool and the use of summary forms for reporting data for compliance purposes.

The proposed amendments also clarify the existing minimum residual disinfectant level at the entry point. By adding a zero to the minimum level (0.20 mg/L), water suppliers will be required to maintain a residual that is equal to or greater than 0.20 mg/L. Currently, levels of 0.15 mg/L or higher round up to 0.2 mg/L and are considered in compliance. A level of 0.20 mg/L is necessary due to the importance of meeting CTs and of maintaining an adequate disinfectant residual in the water entering the distribution system. Also, this level of sensitivity is consistent with existing requirements for the Groundwater Rule (0.40 mg/L) as specified in § 109.1302(a)(2) (relating to treatment technique requirements). Finally, this level of sensitivity is achievable using current online instrumentation for the measurement of disinfectant residuals.

The TAC recommended (by a vote of ten to three) that the residual remain at 0.2 mg/L because water systems using strip chart recorders may not be able to record data to two decimal places and water systems would be required to upgrade to more costly supervisory control and data acquisition systems. The Department estimates that 114 out of 352 plants (or ~ 30%) may be using strip chart recorders. Strip chart recorders can record measurements to two decimal places provided the proper scale and resolution is used. In cases when the requisite scale and resolution is not possible, an upgrade to electronic recording devices would cost approximately $1,500. This cost should not be prohibitive for filter plants and the use of electronic devices offers several advantages. Advantages of using electronic recording devices include improved data reliability, faster and more comprehensive data analysis, better data resolution, elimination of the need for interpolating trace values from a chart, cost savings through the elimination of consumables (pens and chart paper) and reductions in errors associated with transferring analog data to a spreadsheet for recordkeeping or reporting purposes.

Log inactivation and entry point disinfectant residual requirements are existing Federal requirements in 40 CFR 141.72(b) (relating to disinfection).

Amendments to disinfectant residual requirements in the distribution system

The proposed amendments are intended to strengthen the distribution system disinfectant residual requirements by increasing the minimum residual in the distribution system to 0.2 mg/L free or total chlorine. The Department's existing disinfectant residual requirements for distribution systems have not been substantially updated since 1992 and require the maintenance of a detectable residual that is defined as 0.02 mg/L. The Department's existing treatment technique is not protective of public health because a residual of 0.02 mg/L does not represent a true detectable residual and the level is inadequate to protect against microbial growth within the distribution system.

Why is it important to maintain a disinfectant residual within the distribution system?

Maintenance of a disinfectant residual in the distribution system is:

- Required under the Federal Surface Water Treatment Rule for all systems using surface water and GUDI sources, and under Chapter 109 for all community water systems and those noncommunity water systems that have installed disinfection.
- Designated by the EPA as the best available technology for compliance with both the Total Coliform Rule (TCR) and the Revised TCR.
- Considered an important element in a multiple barrier strategy aimed at maintaining the integrity of the distribution system and protecting public health.
- Intended to maintain the integrity of the distribution system by inactivating microorganisms in the distribution system, indicating distribution system upset and controlling biofilm growth.

Most regulatory mandates regarding drinking water focus on enforcing water quality standards at the treatment plant and not within the distribution system. There should be no change in the quality of treated water from the time it leaves the treatment plant until the time it is consumed. However, substantial changes can occur to finished water as a result of physical, chemical and biological reactions. Data on waterborne disease outbreaks suggest that distribution systems remain a source of contamination that has yet to be fully addressed (National Research Council (NRC), 2006).

The distribution system is a critical and often underrecognized component of every public water system. Thousands of miles of pipes, pumps, valves, finished water storage tanks and other appurtenances link treated water from plants to consumers' taps. Distribution systems represent the largest majority of physical infrastructure for public water systems and their repair and replacement requires significant financial resources. The EPA estimates the 20-year water transmission and distribution needs for this Commonwealth at $9.3 billion, with finished water storage facility infrastructure needs estimated at an additional $1.6 billion (EPA Drinking Water Infrastructure Needs Survey, 2013).

As distribution systems age, deterioration can occur due to corrosion, erosion of pipe materials and external pressures that can lead to breaches in pipes and storage facilities, intrusion and main breaks. In recent years, deteriorating water infrastructure in many parts of the United States has resulted in frequent water main breaks and other situations that can pose intermittent or persistent health risks (EPA, 2010). Many of these deficiencies create pathways of contamination. Therefore, ensuring the integrity and effective operation of distribution systems is critical for public health protection.

Water quality may degrade during water distribution for the following reasons: the way water is treated or not treated before it is distributed; chemical and biological reactions that take place in the water during distribution; reactions between the water and distribution system materials; and contamination from external sources that occurs because of main breaks, leaks coupled with hydraulic transients, improperly maintained storage facilities and other factors (NRC, 2005).

Many different microbes have demonstrated the ability to survive in the distribution system, with some possessing the ability to grow or produce biofilms. Microbes that

may be present include bacteria, viruses and protozoa. Microbial presence in the distribution system can result in colonization of the distribution system infrastructure. Once biofilm development begins, subsequent material, organisms and contamination introduced to the distribution system can become entrained in the biofilm. Contamination and material in the biofilm may subsequently be released into the flowing water under various circumstances. As a result, biofilms can act as a slow-release mechanism for persistent contamination of the water (EPA, 2002b).

Factors that influence pathogen survival and growth in the distribution system include water chemistry (temperature, pH, and the like), presence of nutrients, system hydraulics, sediment accumulation and presence (or absence) of disinfectant residual. Of these factors, maintenance of an adequate disinfectant residual throughout the distribution system plays a key role in controlling the growth of pathogens and biofilms and is a treatment technique that serves as one of the final barriers to protect public health. Lack of an adequate residual may increase the likelihood that disease-causing organisms such as *E. coli* and *Legionella* are present.

LeChevallier (1999) reported that two fundamental reasons for adding secondary disinfection are to: (1) prevent or limit regrowth of microorganisms in the distribution system; and (2) inactivate any microorganisms that may enter the system through contamination. In addition to controlling regrowth, maintaining a disinfectant residual in the distribution system serves to inactivate microorganisms that may enter the system through cross-connections, main breaks and pressure transients. Although it may be true in some cases (that conventional disinfectant residuals may be ineffective against massive contamination from cross-connections), it is likely that small amounts of contamination occur on a much more frequent basis and that maintenance of an effective disinfectant residual throughout the distribution network acts as an important barrier in these instances.

It is increasingly being recognized that water treatment and chemistry factors may play a role in downstream proliferation of opportunistic pathogens and utilities therefore play some role in controlling outbreaks (Water Research Foundation, 2013).

According to the Centers for Disease Control and Prevention (CDC), despite advances in water treatment and management, waterborne disease outbreaks continue to occur in the United States (Figure 1). The outbreaks reported during 2009—2010 highlight several emerging and persisting public health challenges associated with drinking water systems. *Legionella* accounted for 58% of outbreaks and is the most frequently reported etiology among drinking water systems (Figure 2). In addition, the large proportion (78%) of illnesses observed in outbreaks involved distribution system deficiencies (Figure 3). This data emphasizes the importance of protecting, maintaining and improving the public drinking water distribution system infrastructure because these deficiencies can lead to widespread illness (CDC, 2013).

Figure 1. Number of waterborne disease outbreaks associated with drinking water (N = 851), by year and etiology—United States, 1971—2010.

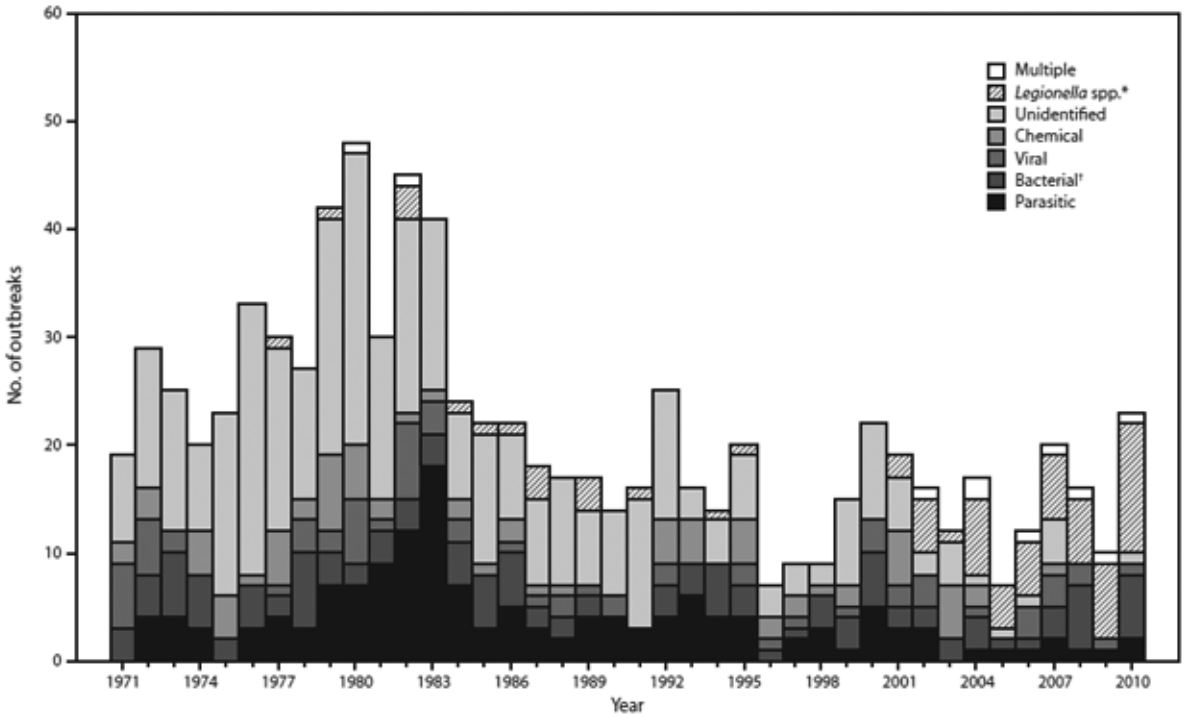


Figure 2. Etiology of Drinking Water Outbreaks (N = 33) and Outbreak-related Cases (N = 1,040), Waterborne Disease and Outbreak Surveillance System, 2009—2010.

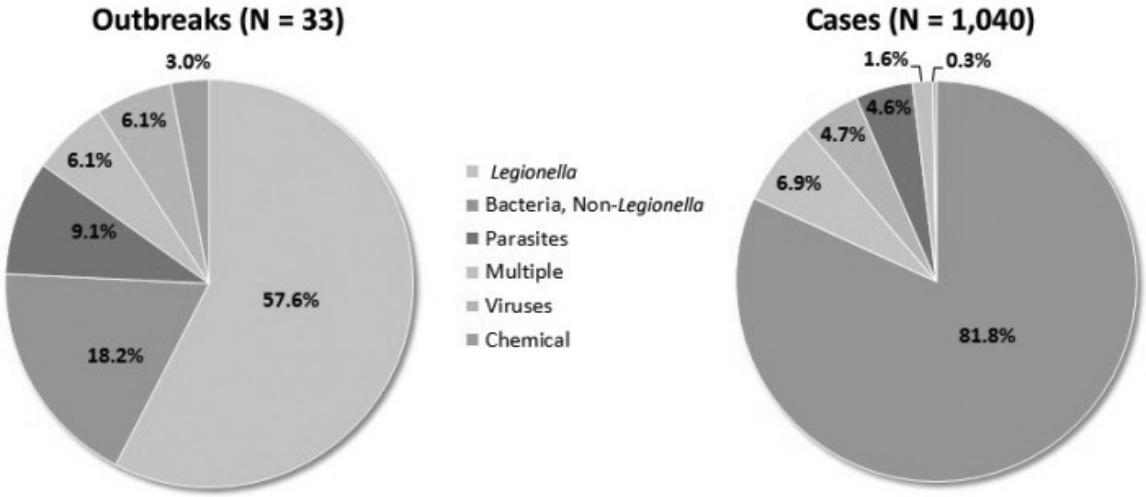
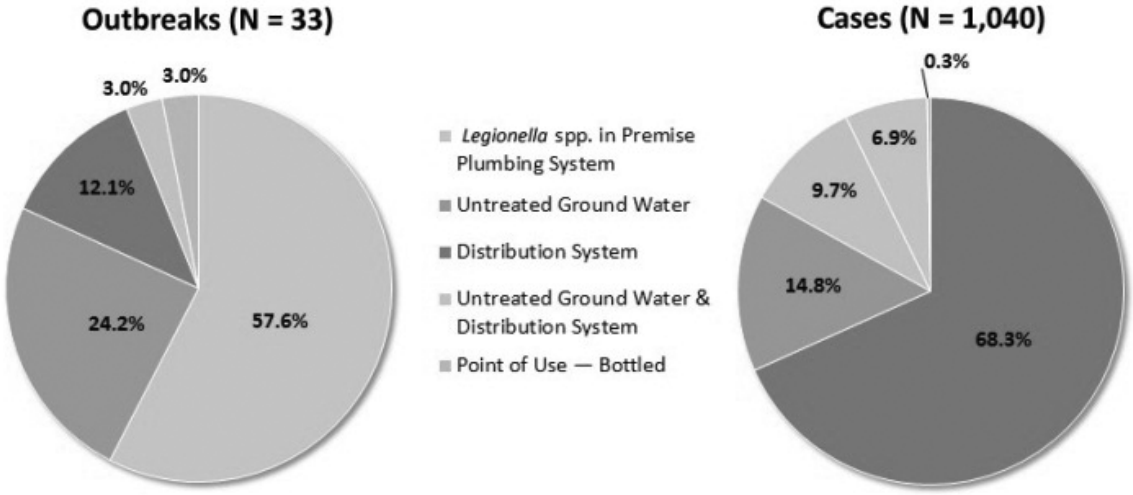
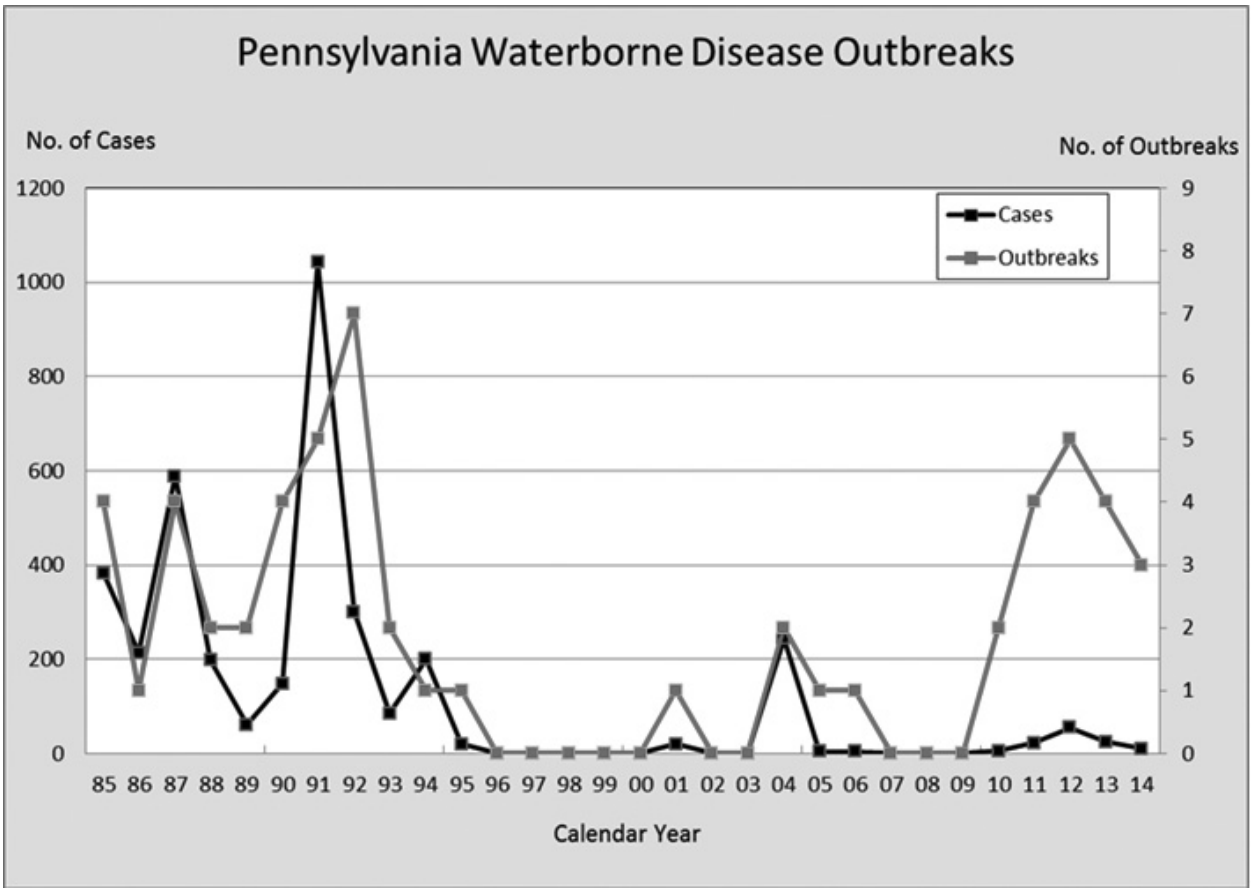


Figure 3. Deficiencies Assigned to Drinking Water Outbreaks (N = 33) and Outbreak-related Cases (N = 1,040), Waterborne Disease and Outbreak Surveillance System, 2009—-2010.



Waterborne disease outbreaks in this Commonwealth have followed a similar trend in that nearly all outbreaks since 2010 have been associated with *Legionella* and distribution system deficiencies.

Figure 4. Waterborne Disease Outbreaks in Pennsylvania Associated with Drinking Water, 1985—2014 (Source: Pennsylvania Public Water System Compliance Report for 2014).



There have been a total of 18 *Legionella* outbreaks in this Commonwealth since 2010. The outbreaks occurred at several types of facilities, including personal care homes, apartment buildings, long-term care facilities, hotels, condominiums, correctional facilities, recreational parks and hospitals. The outbreaks resulted in 117 cases of illness, 71 hospitalizations and 8 deaths.

The distribution system is the remaining component of public water supplies yet to be adequately addressed in National efforts to eradicate waterborne disease. This is evident from data indicating that although the number of waterborne disease outbreaks including those attributable to distribution systems is decreasing, the proportion of outbreaks attributable to distribution systems is increasing (NRC, 2006).

What is a true detectable residual?

To answer this question, several terms must first be defined. The Method Detection Limit (MDL) is a statistically derived qualitative value that is determined in the lab and provides a 99% confidence that the detected value in a given matrix is greater than zero. The MDL does not represent a quantitative value. The Method Limit (ML), also known as the practical quantitation limit, is the lowest achievable quantifiable limit at a 95% confidence level and is derived from the MDL. The MDL is multiplied by a factor to yield the ML. The ML is often rounded based on the precision and sensitivity of the method or the maximum contaminant level (MCL), or both.

According to Hach Company© (Primer, 2015), a leading manufacturer of chlorine residual monitoring devices, the MDL and ML used by the EPA to approve Hach's Free and Total Chlorine Residual Methods were 0.02 mg/L Cl and 0.1 mg/L Cl, respectively.

MDL = 0.024, rounded to 0.02 mg/L Cl

ML = MDL * 3.18
ML = 0.02 * 3.18
ML = 0.06 mg/L Cl, rounded to 0.1 mg/L Cl

In other words, the lowest achievable quantifiable limit is 0.1 mg/L.

In addition, all chlorine residual test methods are subject to interferences from inorganic and organic constituents such as iron, manganese, other oxidants and disinfection byproducts, and organic chloramines. These interferences can cause false positive results (Hach Company©, 2013).

Pressman and Wahman (2014 and 2015) reported that free chlorine and inorganic chloramines may react with dissolved organic nitrogen to form organic chloramines. Organic chloramines are problematic because they interfere with analytical methods and are poor disinfectants

(that is, show little or no bactericidal activity). When total chlorine residuals are very low, between "detectable" and around 0.2 mg Cl_2/L, there may be little to no active disinfectant (that is, inorganic monochloramine) actually present.

The Colorado Department of Public Health and Environment (CDPHE) conducted a study to determine the detection limit for free chlorine using hand-held DPD devices in a field setting. The study included analyzing data from over 450 samples that were collected from 15 public water systems from across the state. The study findings showed a detection limit of 0.09 mg/L (99% confidence) (CDPHE, 2014).

Based on these studies and reports, and the prevalence of iron, manganese and other constituents of concern in raw and finished waters in this Commonwealth, the Department believes that the true detectable residual is likely somewhere between 0.1—0.2 mg/L.

The Board is seeking comments on additional studies and reports related to detection limits for free and total chlorine residual analysis in the field.

What is an adequate residual for the control of microbial growth?

This proposed rulemaking includes a regulatory limit of 0.2 mg/L (free or total chlorine) in the distribution system to ensure a true detectable residual and a meaningful residual for the control of microbial growth. This position is supported by the following studies, reports and data.

Early studies that were used to support the regulatory limit of 0.2 mg/L at the entry point include the following:

• Fair, et al. (1968) reported that the contact time needed to achieve a 99% *E. coli* kill at a free chlorine concentration of 0.2 mg/L was 6 minutes at a temperature of 2—5° C and a pH of 8.5. Additional data suggests that the bactericidal efficacy increases with decreasing pH.

• Berg (1964) reported kill rates in excess of 99% for *E. coli*, Adenovirus 3 and Poliomyelitis virus 1. These kill rates were achieved at 0.2 mg/L of HOCL and 10 minutes of contact time at 0—6° C.

• Butterfield (1948) reported to the United States Public Health Service that the minimum free chlorine residual to disinfect water at 10 minutes of contact time should be 0.2 mg/L. This recommendation was for a pH range of 6.0—7.0.

LeChevallier, et al. (1996, 2007 and 2014) conducted an 18-month survey of 31 water systems in North America to determine the factors that contribute to the occurrence of coliform bacteria in drinking water. The study found that systems that maintained dead-end free chlorine levels of < 0.2 mg/L or monochloramine levels of < 0.5 mg/L had substantially more coliform occurrences than systems that maintained higher disinfectant residuals. Research also showed data from a utility in Utah that experienced occurrences of total coliform bacteria and *E. coli* when free chlorine residuals in its distribution system averaged only 0.1 mg/L. Coliform occurrences were controlled by increasing the free chlorine concentration > 0.2 mg/L. The study concludes that the occurrence of coliform bacteria within a distribution system is dependent upon a complex interaction of chemical, physical, operational and engineering parameters. No one factor could account for all of the coliform occurrences and all of the parameters must be considered in devising a solution to the regrowth problem.

The CDPHE conducted a study to review total coliform and *E. coli* occurrence data. The study showed a relationship between chlorine residuals and occurrence. There was a higher rate of occurrence of both contaminants as the chlorine residual decreased. Specifically, the CDPHE found the following:

Coliform Bacteria and Residual Chlorine Data (July 1, 2011—November 15, 2013)

	Samples Received	*Number of TC+*	*% of Positives*
< 0.1 mg/L	3,357	102	3.0%
<0.2 mg/L	7,805	160	2.0%
≥ 0.2 mg/L	83,433	462	0.55%
Totals	91,238	622	0.7%

Regarding *E. coli*, the CDPHE found that ~ 48% of all *E. coli* positive results occurred when disinfectant residuals were < 0.2 mg/L (CDPHE, 2014).

Industry standards

• The 2012 edition of The Great Lakes-Upper Mississippi River Board of State and Provincial Public Health and Environmental Managers (Ten States Standards) specifies that the minimum free chlorine residual in water distribution systems should be 0.2 mg/L, and the minimum chloramine residual, where chloramination is practiced, should be 1.0 mg/L at distant points in the distribution system.

• The Water Research Foundation recommends a free chlorine residual of 0.20 mg/L and a total chlorine residual of 0.50 mg/L for an optimized distribution system (Water Research Foundation, 2010, Criteria for Optimized Distribution Systems).

Both the EPA and the Department have developed Area Wide Optimization Programs for Distribution Systems and recommend maintenance of residuals ≥ 0.20 mg/L free chlorine at all locations in the distribution system at all times. In addition, the EPA recommends maintenance of residuals ≥ 1.50 mg/L monochloramine at all locations in the distribution system at all times to provide a disinfection barrier against both microbial contamination and nitrification prevention.

The goal of the Distribution System Optimization Program is to sustain the water quality leaving the plant throughout all points in the distribution system. To further define distribution system optimization, "optimization" refers to improving drinking water quality to enhance public health protection without significant capital improvements to the water treatment plant or distribution system infrastructure.

The distribution system is the last "barrier" for protecting public health, meaning the physical and chemical barriers that have been established are necessary to protect the public from intentional or unintentional exposure to contaminants after the water has been treated. Distribution system optimization focuses on two primary health concerns related to water quality within the distribution system—microbial contamination and disinfection by-product (DBP) formation.

If implemented, distribution system optimization will lead to increased public health protection through increased monitoring and operational oversight, resulting in improved physical protection and improved water quality for all customers.

State data

In addition to reviewing numerous studies, the disinfectant residual requirements of other states were also

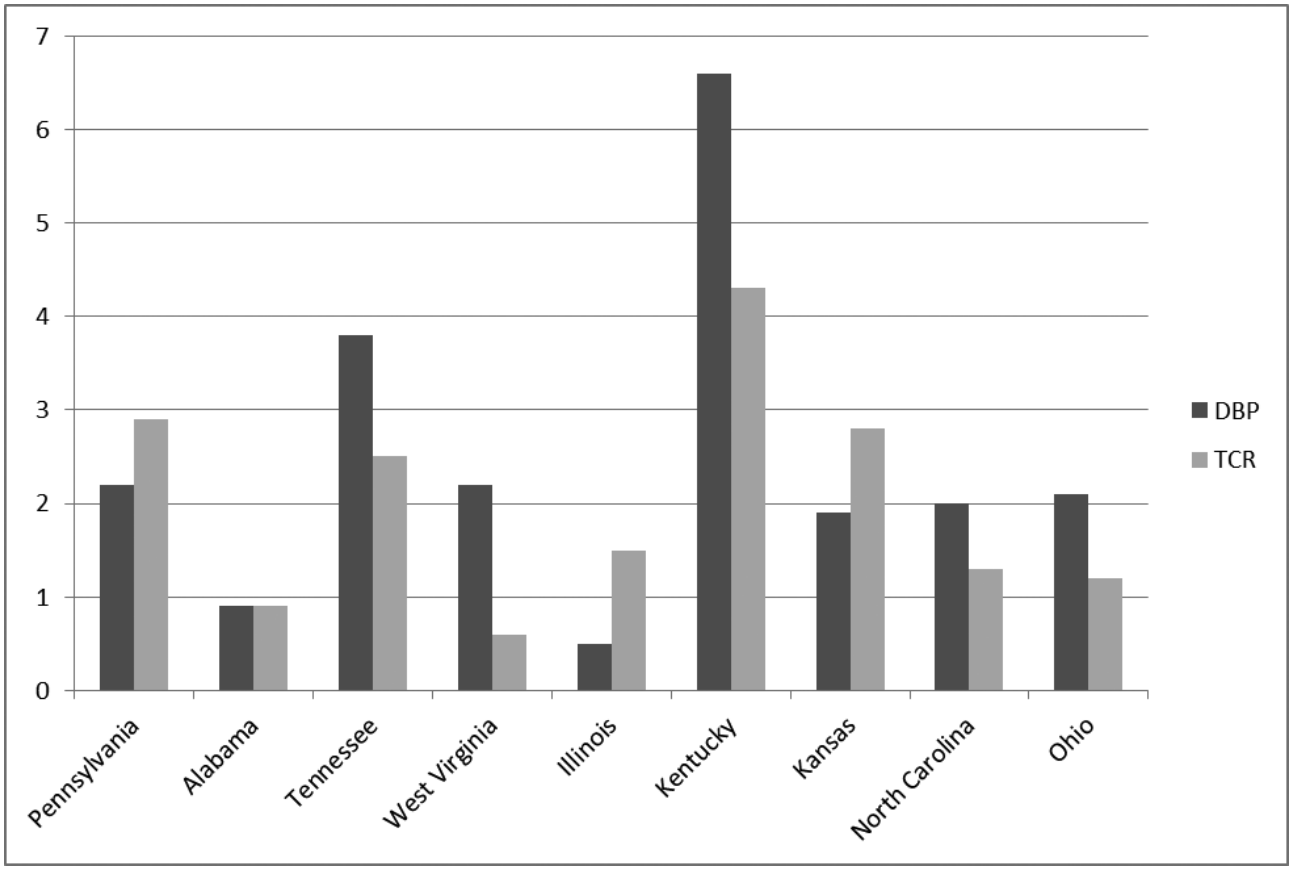
reviewed. At least 23 states have promulgated more stringent requirements when compared to the Commonwealth's current standard of 0.02 mg/L. Nineteen of these states have disinfectant residual requirements that are ≥ 0.2 mg/L, which supports the Board's proposed standard of 0.2 mg/L. The following table includes a summary of other states' requirements.

State	*Minimum Distribution System Residual (mg/L)*
Alabama*	0.2 (free), 0.5 (total)
Colorado*	0.2 (free or total)
Delaware	0.3 (free)
Florida*	0.2 (free), 0.6 (total)
Georgia	0.2 (free)
Illinois*	0.2 (free), 0.5 (total)
Indiana	0.2 (free), 0.5 (total)
Iowa	0.3 (free), 1.5 (total)
Kansas*	0.2 (free), 1.0 (total)
Kentucky*	0.2 (free), 0.5 (total)
Louisiana*	0.5 (free or total)
Minnesota	0.1 (free or total)
Missouri	0.2 (total)
Nebraska	SW-0.2 (free), 0.25 or 0.5 (total); GW-0.1 (free)
Nevada	0.05 (free or total)
New Jersey*	0.05 (free or total)
North Carolina*	0.2 (free), 1.0 (total)
Ohio*	0.2 (free), 1.0 (total)
Oklahoma	0.2 (free), 1.0 (total)
Tennessee*	0.2 (free)
Texas*	0.2 (free), 0.5 (total)
Vermont	0.1 (free)
West Virginia*	0.2 (total)

* States with mandatory disinfection

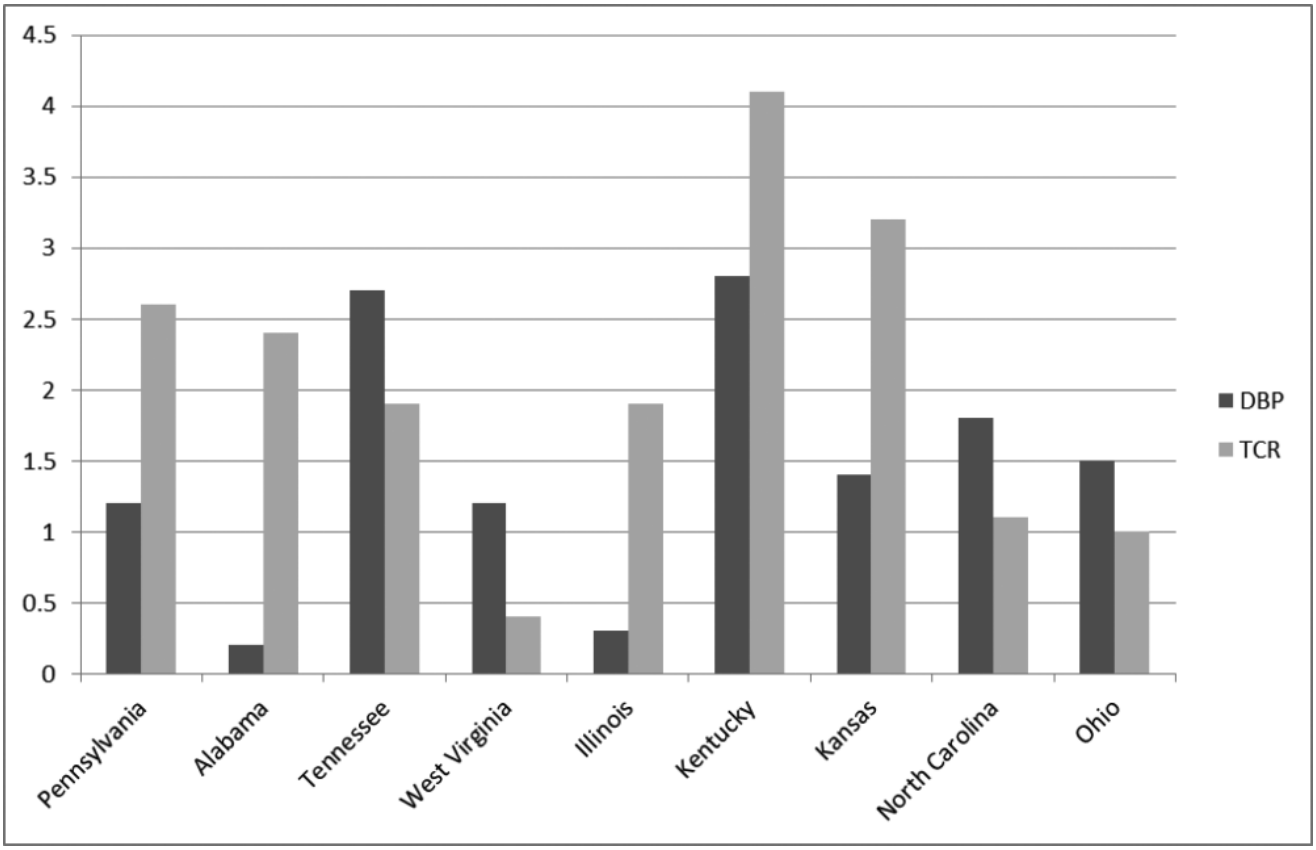
The proposed disinfectant residual requirements aim to strike a balance between improving microbial inactivation while limiting adverse impacts on DBP formation. Water systems can meet more stringent disinfectant residual requirements and still be in compliance with DBPs as evidenced by a review of TCR and DBP compliance data from other states (EPA, ECHO web site).

Percentage of Community Water Systems with Fiscal Year 2011 Violations—Commonwealth vs. States with Mandatory Disinfection and Residuals ≥ 0.2 mg/L



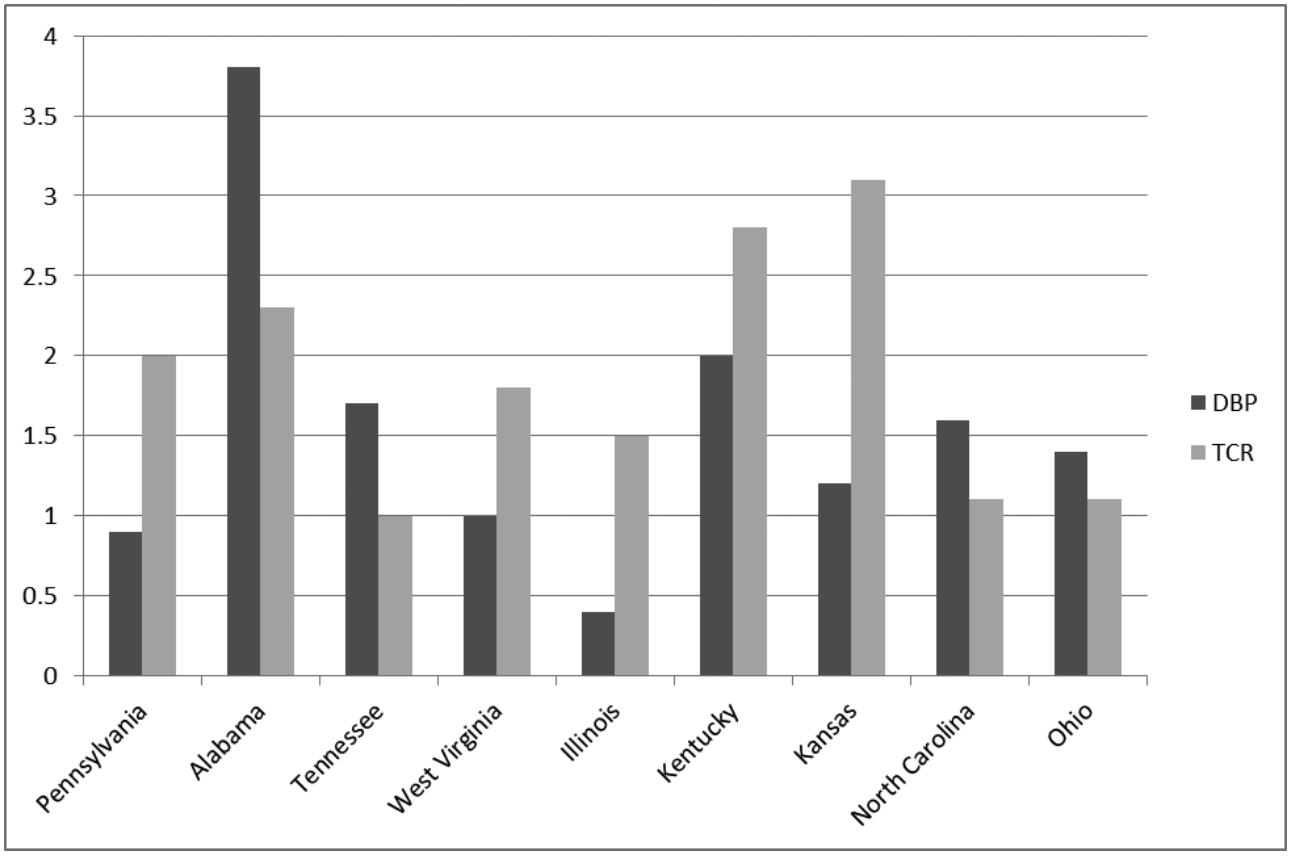
In 2011, seven of eight states had better TCR compliance rates than the Commonwealth, while six of eight states had better DBP compliance rates than the Commonwealth.

Percentage of Community Water Systems with Fiscal Year 2012 Violations—Commonwealth vs. States with Mandatory Disinfection and Residuals ≥ 0.2 mg/L



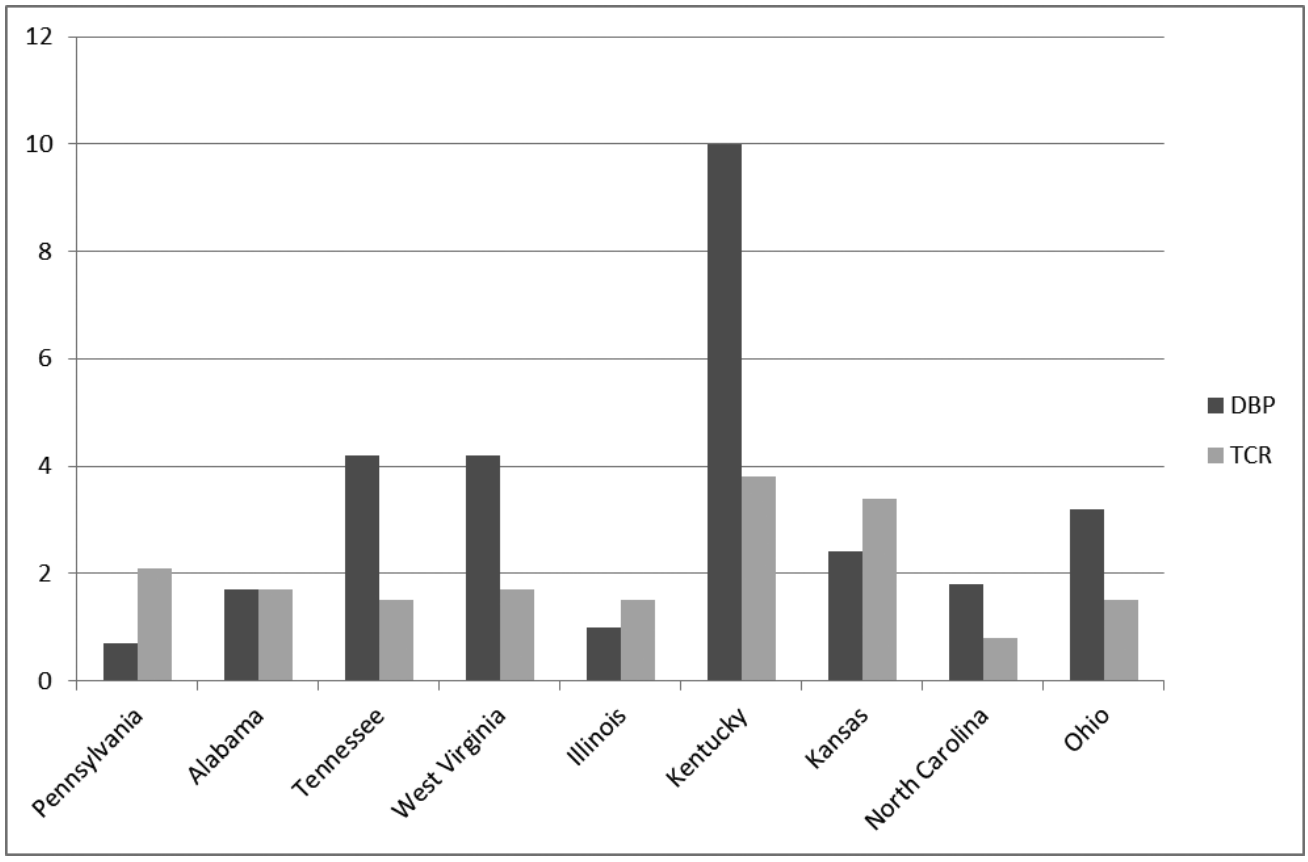
In 2012, six of eight states had better TCR compliance rates than the Commonwealth, while three of eight states had better DBP compliance rates than the Commonwealth.

Percentage of Community Water Systems with Fiscal Year 2013 Violations—Commonwealth vs. States with Mandatory Disinfection and Residuals ≥ 0.2 mg/L



In 2013, five of eight states had better TCR compliance rates than the Commonwealth, while one of eight states had better DBP compliance rates than the Commonwealth.

Percentage of Community Water Systems with Fiscal Year 2014 Violations—Commonwealth vs. States with Mandatory Disinfection and Residuals ≥ 0.2 mg/L



In 2014, six of eight states had better TCR compliance rates than the Commonwealth, while zero of eight states had better DBP compliance rates than the Commonwealth.

In each of the last 4 years, the large majority of states requiring disinfectant residual levels ≥ 0.2 mg/L had better TCR compliance rates than the Commonwealth (that is, had lower percentages of community water systems with TCR MCL violations). Some states were also able to control DBP violations as well.

A disinfectant residual serves as an indicator of distribution system contamination and the effectiveness of distribution system best management practices. Best management practices include flushing, storage tank maintenance, cross-connection control, leak detection, and effective pipe replacement and repair practices. The effective implementation of best management practices will help water suppliers comply with the disinfectant residual treatment technique by lowering chlorine demand and maintaining an adequate disinfectant residual throughout the distribution system. These same practices can also help control DBP formation.

The TAC recommended (by a vote of eight to five) that the minimum required disinfectant residual should be 0.1 mg/L (free or total). No supporting studies or reports were provided in support of a residual of 0.1 mg/L (free or total).

The Board requests comments including references to studies, reports or data that support a disinfectant residual of 0.1 mg/L or any other disinfectant residual that is equally protective of public health.

The TAC also recommended (by a vote of 12 to 0 with 1 abstention) that the Board retain the requirement for Heterotrophic Plate Count (HPC) monitoring. It was recommended that HPC should be kept as another tool to demonstrate compliance with the distribution system disinfectant residual requirements. No supporting studies or reports were provided to support that an HPC < 500 provides an equivalent level of public health protection when compared to a disinfectant residual of 0.2 mg/L.

The Board requests comments including references to studies, reports or data that provide supporting evidence that an HPC < 500 provides an equivalent level of public health protection when compared to a disinfectant residual of 0.2 mg/L.

Costs

Disinfectant residuals in the distribution system

It is anticipated that the large majority of water systems will be able to comply with this requirement with little to no capital costs. According to Department records for the last 3 years (2012—2014):

• Based on more than 82,000 monthly average distribution system disinfectant residual values reported by 2,583 different water systems: 95.6% of the average values

already meet or exceed the increased minimum residual of 0.2 mg/L (free chlorine); and only 4.4% of the average values are below the minimum residual.

• For the 37 systems that chloraminate, based on more than 1,200 monthly average values reported: 99.67% of the average values already meet or exceed the increased minimum residual of 0.2 mg/L (total chlorine); and only 0.33% of the average values are below the minimum residual.

Systems may need to increase the frequency of or improve the effectiveness of existing operation and maintenance best management practices, such as flushing, storage tank maintenance, cross-connection control, leak detection, and effective pipe replacement and repair practices to lower chlorine demand and meet disinfectant residual requirements at all points in the distribution system.

Some systems with very large and extensive distribution systems may need to install automatic flushing systems or booster chlorination stations to achieve a 0.2 mg/L residual at all points in the distribution system. The estimates for these facilities are as follows: costs for automatic flushers: ~ $2,000; and costs for booster chlorination stations: $200,000—$250,000.

The Department estimates that 20% of large systems (serving > 50,000), or six systems, may need to install automatic flushing devices or booster chlorination stations, or both. Three systems may need to install up to five automatic flushers for a cost of $10,000 for each system, a total of $30,000. Three systems may need to install a booster chlorination station at $250,000 for each system, a total of $750,000. The total capital costs to the regulated community may be $780,000.

Costs for small systems are not expected to increase because most small systems are already maintaining adequate disinfectant residuals (0.40 mg/L) as required by the Groundwater Rule.

The Board requests comments on anticipated costs to comply with the proposed disinfectant residual requirements.

The Board is also seeking comments on whether a deferred effective date of 6 months after final promulgation is warranted to provide water systems with additional time to make any necessary operational changes. If capital improvements are needed, a system-specific compliance schedule may be needed. Comments on the anticipated length of time needed to increase disinfectant residuals and whether capital improvements are anticipated to meet the proposed requirements are requested.

References

Berg, G. (1964). "The Virus Hazard in Water Supplies." *Journal of New England Water Works Association*, 78, p. 79.

Butterfield, C. T. (1948). "Bactericidal Properties of Chloramines and Free Chlorine in Water." *Public Health Reports*, 63, p. 934, and *Journal—American Water Works Association*, 40, p. 1305.

CDC (2013). "Surveillance for Waterborne Disease Outbreaks Associated with Drinking Water and Other Nonrecreational Water—US, 2009—2010." *Morbidity and Mortality Weekly Report*, 62(35).

CDPHE (April 2014). "Draft—Minimum Distribution System Disinfectant Residuals: Chlorine Residual Values Reported from Within Drinking Water Distribution Systems."

Department of Environmental Protection. "Pennsylvania Public Water System Compliance Report for 2014."

EPA (April 2010). "Final—Priorities of the Distribution System Research and Information Collection Partnership."

EPA (April 2013). "Drinking Water Infrastructure Needs Survey and Assessment, Fifth Report to Congress." EPA 816-R-13-006.

EPA (2002a). "The Effectiveness of Disinfectant Residuals in the Distribution System." http://www.epa.gov/safewater/disinfection/tcr/regulation_revisions.html.

EPA (2002b). "Health Risks from Microbial Growth and Biofilms in Drinking Water Distribution Systems." http://www.epa.gov/safewater/disinfection/tcr/regulation_revisions.html.

EPA, Enforcement and Compliance History Online database.

Fair, G. M., et al. (1968). *Water and Waste Engineering*, J. Wiley & Sons, Inc.

Great Lakes—Upper Mississippi River Board of State and Provincial Public Health and Environmental Managers (10 States Standards) (2012 Edition). "Recommended Standards for Waterworks."

Hach Company (2013). "Chlorination, Chloramination and Chlorine Measurement."

Hach Company (June 2015). "Primer on DPD Chlorine Method Detection Limits and Their Use in Compliance Monitoring."

LeChevallier, M. W. (1999). "The Case for Maintaining a Disinfectant Residual." *Journal—American Water Works Association*, 91(1), p. 86.

LeChevallier, M. W., et al. (1996). "Full-Scale Studies of Factors Related to Coliform Regrowth in Drinking Water." *Applied and Environmental Microbiology*, 62(7), p. 2201.

LeChevallier, M. W. (2007). "Sources of Coliform Bacteria and Causes of Coliform Occurrences in Distribution Systems." www.waterrf.org/resources/Lists/ProjectPapers/Attachments/3/IssuePapers.pdf.

LeChevallier, M. W. (2014). "Conducting Self-Assessments Under the Revised Total Coliform Rule." *Journal—American Water Works Association*, 106(9), p. 90.

NRC (2005). "Public Water Supply Distribution Systems: Assessing and Reducing Risks, First Report." http://www.nap.edu/catalog/11262.html.

NRC (2006). "Drinking Water Distribution Systems: Assessing and Reducing Risks." http://www.nap.edu/catalog/11728.html.

Pressman, J. G. and Wahman, D. G. (November 2014). "Perspectives on the Meaning of Detectable Distribution System Residual and Implications for *N. fowleri* Control." AWWA Water Quality Technology Conference, New Orleans, LA.

Wahman, D. G. and Pressman, J. G. (2015). "Distribution System Residuals—Is 'Detectable' Still Acceptable for Chloramines." *Journal—American Water Works Association*, 107(8), p. 53.

Water Research Foundation (2010). "Criteria for Optimized Distribution Systems."

Water Research Foundation (2013). "State of the Science and Research Needs for Opportunistic Pathogens in Premise Plumbing."

Water Research Foundation (2009). "Strategies for Managing Total Coliform and *E. coli* in Distribution Systems."

History of pre-draft proposed rulemaking for disinfection requirements

The pre-draft proposed rulemaking was originally included in the Pre-Draft Proposed Revised Total Coliform Rule (RTCR), which was presented to the TAC on June 18, and September 23, 2014, for review and comment. On April 21, 2015, the Board approved the proposed RTCR with modifications. The modifications included splitting out the non-RTCR provisions for additional stakeholder input. The motion was made with the expectation that the non-RTCR provisions would be revisited promptly. On April 30, 2015, the TAC Board voted to recommend that the regulation be split further, with the non-RTCR rulemaking to focus solely on the disinfection requirements and the minor corrections needed to obtain or maintain primacy.

To provide additional opportunity for stakeholder input on the disinfection requirements, TAC meetings were convened on May 18, May 26, June 16, and June 30, 2015. During these meetings, 14 water systems and organizations delivered presentations to help inform the discussion. These stakeholder presentations and other materials provided by the Department may be found on the Department's web site. Two additional meetings were held with large water systems on June 29, and July 16, 2015, to gather additional comments. As a result of these six additional stakeholder meetings, several revisions were made during the pre-draft rulemaking process, including revisions to the minimum required disinfectant residual levels, monitoring and reporting requirements, and compliance determinations. These revisions were made to address concerns about compliance costs and the frequency of public notification. The TAC provided a final set of recommendations on July 15, 2015. Many of the TAC's recommendations are incorporated into this proposed rulemaking. Other recommendations are incorporated into this preamble as a means to solicit further public comment. Refer to Section E for more information about the TAC's recommendations.

E. *Summary of Regulatory Requirements*

§ 109.1. Definitions

The existing definition of "consecutive water system" is proposed to be amended to clarify that a system which obtains all of its water from another public water system and provides treatment to meet a primary MCL, MRDL or treatment technique is a consecutive water system.

§ 109.202. State MCLs, MRDLs and treatment technique requirements

The heading of § 109.202(a) (relating to State MCLs, MRDLs and treatment technique requirements) is proposed to be amended to "primary MCLs, MRDLs and treatment technique requirements" to be consistent with the heading of Subchapter B (relating to MCLs, MRDLs or treatment technique requirements).

Section 109.202(a)(1) and (2) is proposed to be amended to add "MRDLs and treatment technique requirements" following any mention of "MCLs" to be consistent with the heading of Subchapter B.

Section 109.202(c)(1)(ii) is proposed to be separated into clauses (A) and (B) to improve readability and to clarify disinfection requirements within filtration plants.

Proposed § 109.202(c)(1)(ii)(A) clarifies that monitoring is required to ensure compliance with existing log inactivation requirements. Refer to Section D of this preamble for more information.

Proposed § 109.202(c)(1)(ii)(B) clarifies the minimum residual disinfectant level at the entry point. By adding a zero to the minimum level (0.20 mg/L), water suppliers will be required to maintain a residual that is equal to or greater than 0.20 mg/L. Currently, levels of 0.15 or higher round up to 0.2 and are in compliance. A level of 0.20 mg/L is necessary due to the importance of meeting CTs and maintaining an adequate disinfectant residual in the water entering the distribution system. Also, this level of sensitivity is consistent with existing requirements for the Groundwater Rule (0.40 mg/L) as specified in § 109.1302(a)(2). Refer to Section D of this preamble for more information.

Log inactivation and entry point disinfectant residual requirements are existing Federal requirements in 40 CFR 141.72(b).

Proposed § 109.202(c)(4) clarifies that disinfectant residual requirements in § 109.710 (relating to disinfectant residual in the distribution system) apply to community water systems using a chemical disinfectant or that deliver water that has been treated with a chemical disinfectant (that is, a consecutive water system).

Proposed § 109.202(c)(5) clarifies that nontransient noncommunity water systems that have installed chemical disinfection and transient noncommunity water systems that have installed chemical disinfection under § 109.202(c)(1) or § 109.1302(b) must comply with the disinfectant residual requirements specified in § 109.710.

The misspelled word "community" is proposed to be corrected in the first line of § 109.202(g).

§ 109.301. General monitoring requirements

Section 109.301(1) (relating to general monitoring requirements) is proposed to be amended to remove an unnecessary reference to the Federal drinking water regulations.

Section 109.301(1)(i)(C) is proposed to be amended to clarify that a public water supplier shall record the number of periods each day when the residual disinfectant concentration at the entry point is less than 0.20 mg/L for more than 4 hours to be consistent with proposed language in § 109.202(c)(1)(ii). This section is also proposed to be amended to clarify that the length of time that grab sampling or manual recording can be substituted for continuous monitoring or recording is 5 working days after the equipment fails which is consistent with Federal requirements in 40 CFR 141.74(c)(2) (relating to analytical and monitoring requirements).

Section 109.301(1)(i)(D) is proposed to be amended to incorporate new monitoring requirements for the residual disinfectant concentration in the distribution system for filtered surface water and GUDI systems. Public water suppliers shall monitor in accordance with a sample siting plan.

Proposed § 109.301(1)(i)(D)(I) and (II) clarifies that public water suppliers shall monitor the residual disinfectant concentration at the same time and from the same location as total coliform samples, and shall ensure that the disinfectant residual is measured at least once per week. Disinfectant residual monitoring conducted at total coliform sample sites can be used to meet the weekly monitoring requirement. For any week that a total coliform sample is not collected, the water supplier shall

measure the disinfectant residual at a representative location within the distribution system as per its sample siting plan. The TAC recommended (by a unanimous vote) that water suppliers be required to measure the distribution system disinfectant residual at least once per week, instead of once per day as initially proposed. This recommendation was incorporated into this proposed rulemaking.

Proposed § 109.301(1)(i)(D)(III) ensures equitable water quality for all consumers by requiring public water suppliers to include sample sites (that do not meet the minimum level) in the monitoring conducted the following month. The expectation is that sample sites that were out of compliance should be returned to compliance by the next month. This ensures that areas of the distribution system with chronically low disinfectant residuals receive additional monitoring and operational oversight.

Proposed § 109.301(1)(i)(D)(IV) cross-references the compliance determination requirements in § 109.710.

Proposed § 109.301(1)(v) and (vi) requires new monitoring requirements to ensure compliance with existing treatment technique requirements proposed in § 109.202(c)(1)(ii)(A). Refer to Section D of this preamble for more information.

Section 109.301(2)(i) is proposed to be amended to change "fecal coliform" to "*E. coli*" to be consistent with the Federal MCL specified under 40 CFR 141.63(c) (relating to maximum contaminant levels (MCLs) for microbiological contaminants).

Section 109.301(2)(i)(E) is proposed to be amended to incorporate new monitoring requirements for the residual disinfectant concentration in the distribution system for unfiltered surface water and GUDI systems. Public water suppliers shall monitor in accordance with a sample siting plan. This language is consistent with the proposed amendments to § 109.301(1)(i)(D).

Section 109.301(5)(iii)(B) and (6)(ii)(B) is proposed to be amended to clarify monitoring requirements after the initial detection of a volatile organic compound or synthetic organic chemical. These proposed amendments are consistent with Federal requirements in 40 CFR 141.24 (relating to organic chemicals, sampling and analytical requirements).

Section 109.301(6)(vii) is proposed to be amended to include a cross-reference regarding submission requirements for waiver requests and renewals in clause (D).

Section 109.301(6)(vii)(A) is proposed to be amended to clarify that dioxin and polychlorinated biphenyls are included in the waiver process. Section 109.301(6)(vii)(E) is proposed to be deleted. These proposed amendments reflect Federal requirements in 40 CFR 141.24.

Section 109.301(7)(i)(A) is proposed to be deleted to reflect Federal requirements in 40 CFR 141.23 (relating to inorganic chemical sampling and analytical requirements).

Existing § 109.301(7)(i)(B) is proposed to be renumbered as § 109.301(7)(i)(A) and retitled to reflect the Federal requirements in 40 CFR 141.23.

Proposed § 109.301(7)(i)(B) clarifies sampling point location requirements for asbestos monitoring. This addition reflects Federal requirements in 40 CFR 141.23.

Section 109.301(7)(i)(C) is proposed to be amended to include a cross-reference to the new waiver language in § 109.301(7)(i)(F).

Proposed § 109.301(7)(i)(F) clarifies asbestos monitoring waiver requirements. This addition reflects Federal requirements in 40 CFR 141.23.

Section 109.301(7)(iii)(C)(II) is proposed to be amended to clarify repeat monitoring requirements for inorganic chemical monitoring.

Section 109.301(12)(iv)(B)(II) is proposed to be amended to reflect Federal analytical requirements for bromate in 40 CFR 141.132(b)(3)(ii)(B) (relating to monitoring requirements).

Section 109.301(13) is proposed to be rewritten for clarity and amended to also require transient noncommunity water systems with 4-log treatment under Subchapter M (relating to additional requirements for groundwater sources) to conduct disinfectant residual monitoring consistent with requirements of this paragraph and § 109.710.

§ 109.303. Sampling requirements

Section 109.303(e) (relating to sampling requirements) is proposed to be amended to correct a Federal citation regarding monitoring requirements for unregulated contaminants and to delete another Federal citation which no longer exists.

§ 109.408. Tier 1 public notice—categories, timing and delivery of notice

Section 109.408(a)(2) (relating to Tier 1 public notice—categories, timing and delivery of notice) is proposed to be amended to correct a Chapter 109 cross-reference.

Section 109.408(a)(6) is proposed to be amended to clarify that Tier 1 public notice is required for a failure to meet log inactivation requirements for more than 4 hours or a failure to maintain minimum entry point disinfectant residuals for more than 4 hours when the log inactivation value was not calculated.

§ 109.701. Reporting and recordkeeping

Section 109.701(a)(2) (relating to reporting and recordkeeping) is proposed to be amended to clarify that water systems must follow reporting requirements under subsection (a)(1) in addition to the requirements specified under subsection (a)(2).

Section 109.701(a)(2)(i)(C) is proposed to be amended to require new reporting requirements for log inactivation values for Giardia to ensure compliance with existing treatment technique requirements in proposed § 109.202(c)(1)(ii)(A). The existing reporting requirements that are in addition to the reporting requirements in subsection (a)(1) are no longer necessary and are proposed to be deleted.

Proposed § 109.701(a)(2)(i)(D) requires new reporting requirements for log inactivation values for viruses to ensure compliance with existing treatment technique requirements in proposed § 109.202(c)(1)(ii)(A). The existing reporting requirements that are in addition to the reporting requirements specified in § 109.701(a)(1) are no longer necessary and are being deleted.

Existing § 109.701(a)(2)(ii)(D) is proposed to be renumbered as § 109.701(a)(2)(ii)(C). Existing § 109.701(a)(2)(ii)(C) is proposed to be deleted because this additional reporting requirement is no longer necessary. The distribution system residual reporting requirements are specified in existing § 109.701(a)(1).

Section 109.701(a)(2)(iv) is proposed to be deleted because the requirement to collect HPC measurements is proposed to be deleted from § 109.710(b). This provision

is no longer necessary due to the changes to residual disinfectant requirements specified in § 109.710.

Section 109.701(a)(8) is proposed to be amended to require a sample siting plan for distribution system disinfectant residual monitoring. The existing reporting requirements that are in addition to the reporting requirements in § 109.701(a)(1) are no longer necessary and are proposed to be deleted.

§ 109.710. Disinfectant residual in the distribution system

Section 109.710(a) and (b) is proposed to be amended to strengthen minimum distribution system disinfectant residual requirements for community water systems, nontransient noncommunity water systems with chemical disinfection and any transient noncommunity water system with filtration or 4-log treatment of viruses. These proposed amendments will assist water systems to maintain compliance with the requirement of § 109.4(2) (relating to general requirements) that treatment is adequate to protect the public health. Refer to Section D of this preamble for more information.

Existing § 109.710(c) is proposed to be renumbered as § 109.710(d).

Proposed § 109.710(c) clarifies that a treatment technique violation occurs when the minimum disinfectant residual is not maintained in the distribution system and defines the water system's obligation to respond to this situation. This section also retains the requirement for a water system to investigate the cause and corrective action whenever the minimum residual is not maintained. However, this investigation is only required if the minimum residual is not maintained at the same sample location in 2 consecutive months or more.

The TAC recommended (by a vote of eight to five) that compliance should be required 95% of the time. While this compliance requirement is reasonable for large water systems that collect more than 40 TCR samples per month, it may not be feasible to calculate a 95th percentile for smaller systems that only collect one or two samples per month. Instead of a 95% compliance determination for small systems, the proposed monitoring frequency was increased to four samples per month (one per week) with systems remaining in compliance if no more than one sample per month is below the limit.

The Board requests comments on the compliance determinations, especially for small systems.

§ 109.715. Nitrification control plan

Proposed § 109.715 (relating to nitrification control plan) requires a water system that uses chloramines as a disinfection process to develop and implement a nitrification control plan. This plan is instead of requiring a higher residual for systems that chloraminate to provide simultaneous control of microbes and nitrification. The TAC recommended (by a vote of eight to five) that nitrification control plans should be system-specific. This recommendation was incorporated into this proposed rulemaking.

§ 109.1002. MCLs, MRDLs or treatment techniques

Section 109.1002(a) (relating to MCLs, MRDLs or treatment techniques) is proposed to be amended to clarify that disinfection profiling and benchmarking requirements in § 109.204 (relating to disinfection profiling and benchmarking) apply to bottled, vended, retail and bulk water haulers. These proposed amendments are made in response to EPA comments and are required to obtain primacy for LT2.

Section 109.1002(c) is proposed to be amended to correct the relating to language for Subchapter L (relating to long-term 2 enhanced surface water treatment rule).

§ 109.1003. Monitoring requirements

Section 109.1003(a) (relating to monitoring requirements) is proposed to be amended in response to EPA comments to obtain primacy for LT2.

Section 109.1003(a)(1)(ix) is proposed to be amended to clarify that samples for disinfection byproduct monitoring must be collected during the peak historical month and that systems on a quarterly frequency must ensure the samples are evenly spaced. These proposed amendments are necessary to be consistent with existing § 109.301(12) (relating to general monitoring requirements) and the Federal Stage 2 Disinfection Byproducts Rule, and are in response to EPA comments to obtain primacy for the Stage 2 DBPR.

Proposed § 109.1003(a)(1)(xi) clarifies chlorine dioxide monitoring requirements for bottled, vended, bulk and retail water systems. This proposed subparagraph is in response to EPA comments to obtain primacy for the Stage 2 DBPR. Existing § 109.1003(a)(1)(xi) is proposed to be renumbered as § 109.1003(a)(1)(xii).

Proposed § 109.1003(a)(1)(xiii) clarifies that bottled, vended, bulk and retail water systems with filtration for surface water or GUDI sources must meet minimum disinfection residual requirements. This proposed subparagraph is in response to EPA comments to obtain primacy for LT2.

Proposed § 109.1003(a)(1)(xiv) requires that bottled, bulk and retail water systems that use or purchase water from a system that uses surface water or GUDI sources must also meet the minimum distribution system disinfection residual requirements. These proposed amendments are in response to EPA comments to obtain primacy for LT2. The provision allowing HPC less than 500 instead of a disinfectant residual is included because these systems are purchasing finished water that has already been treated with an appropriate level of disinfection, and these systems often remove the chlorine from the water prior to their entry point and add an alternate secondary disinfectant such as ultraviolet light.

Proposed § 109.1003(a)(2)(iv) requires that vended water systems that purchase water from a system that uses surface water or GUDI sources must also meet the minimum distribution system disinfection residual requirements. This proposed subparagraph is in response to EPA comments to obtain primacy for LT2.

Section 109.1003(b)(2) is proposed to be amended to change "certified" to "accredited" in reference to the type of laboratory acceptable to the Department. This amendment reflects the revised terminology in Chapter 252 (relating to environmental laboratory accreditation).

Proposed § 109.1003(b)(6) clarifies sampling and analysis requirements to be consistent with § 109.304(a) (relating to analytical requirements). This proposed paragraph is in response to EPA comments and is required to maintain primacy.

Section 109.1003(e) is proposed to be amended to require retail water facilities to follow the requirements in that subsection. This proposed amendment was made in response to EPA comments and is required to maintain primacy.

Proposed § 109.1003(h) is moved from § 109.1003(a) for clarification of compliance determinations. This pro-

posed amendment is in response to EPA comments and is necessary to maintain primacy.

Proposed § 109.1003(i) is added to be consistent with existing language in § 109.302 (relating to special monitoring requirements).

§ 109.1004. Public notification

Section 109.1004(a) (relating to public notification) is proposed to be amended to correct terminology for bottled, vended, retail and bulk public water systems in response to EPA comments to maintain primacy.

§ 109.1008. System management responsibilities

Section 109.1008(b) (relating to system management responsibilities) is proposed to be amended to correct the name of the Department's Bureau of Safe Drinking Water.

Proposed § 109.1008(g) requires bottled, vended, retail and bulk hauling water systems to comply with the significant deficiencies requirements in § 109.705 (relating to sanitary surveys).

Proposed § 109.1008(h) clarifies Stage 2 DBPR monitoring plan and operational evaluation level requirements. This proposed subsection is in response to EPA comments and is required to maintain primacy.

§ 109.1103. Monitoring requirements

Section 109.1103(c)(1)(ii) (relating to monitoring requirements) is proposed to be amended to clarify the period within which a small or medium water system that exceeded an action level is required to conduct additional lead and copper monitoring. This proposed amendment was made to be consistent with Federal requirements in 40 CFR 141.86 (relating to monitoring requirements for lead and copper in tap water).

Section 109.1103(d) is proposed to be amended to clarify lead service line replacement requirements. This proposed amendment reflects Federal requirements in 40 CFR 141.84 (relating to lead service line replacement requirements).

Section 109.1103(e)(3)(i)(C) is proposed to be amended to clarify that the requirements specified in that clause relate to a water system that exceeded the action level for either lead or copper. This proposed amendment is made to be consistent with existing language in subsection (e)(3).

Section 109.1103(g)(2)(v) is proposed to be amended to clarify the original intent of the subparagraph, which is to require that 50% of the total samples being collected for lead and copper shall be taken from sites served by a lead service line.

Section 109.1103(k)(6)(ii) is proposed to be amended to clarify that a system must monitor in accordance with all of the requirements in subsection (e), including the frequency and timing of monitoring, not just the number of sample sites.

§ 109.1107. System management responsibilities

Section 109.1107(d)(4) (relating to system management responsibilities) is proposed to be amended to clarify that a water system is not required to pay for replacement of privately owned lead service lines.

§ 109.1202. Monitoring requirements

Sections 109.1202(a)(4)(i) and (ii) (relating to monitoring requirements) is proposed to be amended to change the annual mean *E. coli* concentration triggers for monitoring to be greater than 100 *E. coli*/100 mL. These proposed amendments are made to be consistent with Federal guidance.

Section 109.1202(i) is proposed to be amended to correct a cross-reference.

§ 109.1302. Treatment technique requirements

Section 109.1302(a) is proposed to be amended to correct a citation regarding State MCLs, MRDLs and treatment technique requirements.

F. *Benefits, Costs and Compliance*

Benefits

The proposed amendments will affect all 1,982 community water systems and those noncommunity water systems that have installed disinfection (822) for a total of 2,804 public water systems. These public water systems serve a total population of 10.6 million people.

The proposed amendments are intended to reduce the public health risks and associated costs related to waterborne pathogens and waterborne disease outbreaks. Costs related to waterborne disease outbreaks are extremely high. For example, the total medical costs and productivity losses associated with the 1993 waterborne outbreak of cryptosporidiosis in Milwaukee, WI, was $96.2 million—$31.7 million in medical costs and $64.6 million in productivity losses. The average total cost per person with mild, moderate and severe illness was $116, $475 and $7,808, respectively. See Corso, P. S., Kramer, M. H., Blair, K. A., Addiss, D. G., Davis, J. P., Haddix, A. C. (April 2003). "Cost of illness in the 1993 Waterborne Cryptosporidium outbreak, Milwaukee, Wisconsin." *Emerging Infectious Diseases*, http://wwwnc.cdc.gov/eid/article/9/4/02-0417.

In 2008, a large Salmonella outbreak caused by contamination of a storage tank and distribution system of the municipal drinking water supply occurred in Alamosa, CO. The outbreak's estimated total cost to residents and businesses of Alamosa using a Monte Carlo simulation model (10,000 iterations) was approximately $1.5 million (range: $196,677—$6,002,879) and rose to $2.6 million (range: $1,123,471—$7,792,973) with the inclusion of outbreak response costs to local, state and nongovernmental agencies and City of Alamosa healthcare facilities and schools. This investigation documents the significant economic and health impacts associated with waterborne disease outbreaks and highlights the potential for loss of trust in public water systems following these outbreaks. See "Economic and Health Impacts Associated with a Salmonella Typhimurium Drinking Water Outbreak—Alamosa, CO, 2008," http://www.ncbi.nlm.nih.gov/pubmed/23526942.

Communities in this Commonwealth will benefit from: (1) the avoidance of a full range of health effects from the consumption of contaminated drinking water such as acute and chronic illness, endemic and epidemic disease, waterborne disease outbreaks, and death; (2) the continuity of a safe and adequate supply of potable water; and (3)

the ability to plan and build future capacity for economic growth and ensure long-term sustainability for years to come.

Compliance Costs

Disinfectant residual monitoring at the entry point

It is estimated that 114 out of 352 plants (or ~ 30%) may be using strip chart recorders. Strip chart recorders can record measurements to two decimal places provided the proper scale and resolution is used. In cases where the requisite scale and resolution is not possible, an upgrade to electronic recording devices would cost approximately $1,500. It is estimated that 25% of these systems or 29 systems may need to upgrade to electronic recording devices. The estimated cost is 29 systems x $1,500 = $43,500.

This cost should not be prohibitive for filter plants, and the use of electronic devices offers several advantages. Advantages of using electronic recording devices include improved data reliability, faster and more comprehensive data analysis, better data resolution, elimination of the need for interpolating trace values from a chart, cost savings through the elimination of consumables (pens and chart paper) and reductions in errors associated with transferring analog data to a spreadsheet for recordkeeping or reporting purposes.

Disinfectant residuals in the distribution system

It is anticipated that the large majority of water systems will be able to comply with this requirement with little to no capital costs. According to Department records for the last 3 years (2012—2014):

- Based on more than 82,000 monthly average distribution system disinfectant residual values reported by 2,583 different water systems: 95.6% of the average values already meet or exceed the increased minimum residual of 0.2 mg/L (free chlorine); and only 4.4% of the average values are below the minimum residual.

- For the 37 systems that chloraminate, based on more than 1,200 monthly average values reported: 99.67% of the average values already meet or exceed the increased minimum residual of 0.2 mg/L (total chlorine); and only 0.33% of the average values are below the minimum residual.

Systems may need to increase the frequency of or improve the effectiveness of existing operation and maintenance best management practices, such as flushing, storage tank maintenance, cross-connection control, leak detection, and effective pipe replacement and repair practices to lower chlorine demand and meet disinfectant residual requirements at all points in the distribution system.

Some systems with very large and extensive distribution systems may need to install automatic flushing systems or booster chlorination stations to achieve a 0.2 mg/L at all points in the distribution system. The Department's estimates for these facilities are as follows: costs for automatic flushers: ~ $2,000; and costs for booster chlorination stations: $200,000—$250,000.

It is estimated that 20% of large systems (serving > 50,000), or six systems, may need to install automatic flushing devices or booster chlorination stations, or both. Three systems may need to install up to five automatic flushers for a cost of $10,000 for each system, a total of $30,000. Three systems may need to install a booster chlorination station at $250,000 for each system, a total of $750,000. The total capital costs to the regulated community may be $780,000.

Costs for small systems are not expected to increase because most small systems are already maintaining adequate disinfectant residuals (0.40 mg/L) as required by the Groundwater Rule.

Total costs for the regulated community are estimated at $43,500 + $780,000 = $823,500.

The Board requests comments on anticipated costs to comply with the proposed disinfectant residual requirements.

Compliance Assistance Plan

The Safe Drinking Water Program utilizes the Commonwealth's Pennsylvania Infrastructure Investment Authority (PENNVEST) Program to offer financial assistance to eligible public water systems. This assistance is in the form of a low-interest loan, with some augmenting grant funds for hardship cases. Eligibility is based upon factors such as public health impact, compliance necessity and project/operational affordability.

The Safe Drinking Water Program has established a network of regional and Central Office training staff that is responsive to identifiable training needs. The target audience in need of training may be either program staff or the regulated community.

In addition to this network of training staff, the Bureau of Safe Drinking Water has staff dedicated to providing both training and outreach support services to public water system operators. The Department's web site also provides timely and useful information for treatment plant operators.

Finally, the Department also provides various tools and technical assistance to water systems through the Distribution System Optimization Program. The goal of distribution optimization is to sustain the water quality leaving the plant throughout all points in the distribution system. To further define distribution system optimization, "optimization" refers to improving drinking water quality to enhance public health protection without significant capital improvements to the water treatment plant or distribution system infrastructure.

The distribution system is the last "barrier" for protecting public health, meaning the physical and chemical barriers that have been established are necessary to protect the public from intentional or unintentional exposure to contaminants after the water has been treated. Distribution system optimization focuses on two primary health concerns related to water quality within the distribution system—microbial contamination and DBP formation.

If implemented, distribution system optimization will lead to increased public health protection through increased monitoring and operational oversight, resulting in improved physical protection and improved water quality for all customers.

Paperwork Requirements

Paperwork requirements include: reporting of log inactivation values on a monthly basis using existing forms; reporting additional disinfectant residual levels measured in the distribution system using existing forms; development of a disinfectant residual sample siting plan; and development of a nitrification control plan.

G. *Sunset Review*

This proposed rulemaking will be reviewed in accordance with the sunset review schedule published by the

Department to determine whether the regulations effectively fulfill the goals for which they were intended.

H. *Regulatory Review*

Under section 5(a) of the Regulatory Review Act (71 P. S. § 745.5(a)), on February 11, 2016, the Department submitted a copy of this proposed rulemaking and a copy of a Regulatory Analysis Form to the Independent Regulatory Review Commission (IRRC) and to the Chairpersons of the House and Senate Environmental Resources and Energy Committees. A copy of this material is available to the public upon request.

Under section 5(g) of the Regulatory Review Act, IRRC may convey any comments, recommendations or objections to the proposed rulemaking within 30 days of the close of the public comment period. The comments, recommendations or objections must specify the regulatory review criteria in section 5.2 of the Regulatory Review Act (71 P. S. § 745.5b) which have not been met. The Regulatory Review Act specifies detailed procedures for review, prior to final publication of the rulemaking, by the Department, the General Assembly and the Governor of comments, recommendations or objections raised.

I. *Public Comments*

Interested persons are invited to submit written comments, suggestions or objections regarding the proposed rulemaking to the Board. Comments, suggestions or objections must be received by the Board by April 19, 2016. In addition to the submission of comments, interested persons may also submit a summary of their comments to the Board. The summary may not exceed one page in length and must also be received by the Board by April 19, 2016. The one-page summary will be distributed to the Board and available publicly prior to the meeting when the final-form rulemaking will be considered.

Comments including the submission of a one-page summary of comments may be submitted to the Board online, by e-mail, by mail or express mail as follows. If an acknowledgement of comments submitted online or by e-mail is not received by the sender within 2 working days, the comments should be retransmitted to the Board to ensure receipt. Comments submitted by facsimile will not be accepted.

Comments may be submitted to the Board by accessing eComment at http://www.ahs.dep.pa.gov/eComment. Comments may be submitted to the Board by e-mail at RegComments@pa.gov. A subject heading of the proposed rulemaking and a return name and address must be included in each transmission.

Written comments should be mailed to the Environmental Quality Board, P. O. Box 8477, Harrisburg, PA 17105-8477. Express mail should be sent to the Environmental Quality Board, Rachel Carson State Office Building, 16th Floor, 400 Market Street, Harrisburg, PA 17101-2301.

J. *Public Hearings*

The Board will hold three public hearings for the purpose of accepting comments on this proposed rulemaking. The hearings will be held at 1 p.m. on the following dates:

March 28, 2016	Department of Environmental Protection Southcentral Regional Office Susquehanna Room 909 Elmerton Avenue Harrisburg, PA 17110
April 5, 2016	Department of Environmental Protection Southeast Regional Office Delaware and Schuylkill Conference Rooms 2 East Main Street Norristown, PA 19401
April 7, 2016	Department of Environmental Protection Southwest Regional Office Building 500 Waterfront Conference Rooms A and B 400 Waterfront Drive Pittsburgh, PA 15222

Persons wishing to present testimony at a hearing are requested to contact the Environmental Quality Board, P. O. Box 8477, Harrisburg, PA 17105-8477, (717) 787-4526 at least 1 week in advance of the hearing to reserve a time to present testimony. Oral testimony is limited to 5 minutes for each witness. Witnesses are requested to submit three written copies of their oral testimony to the hearing chairperson at the hearing. Organizations are limited to designating one witness to present testimony on their behalf at each hearing.

Persons in need of accommodations as provided for in the Americans with Disabilities Act of 1990 should contact the Board at (717) 787-4526 or through the Pennsylvania AT&T Relay Service at (800) 654-5984 (TDD) or (800) 654-5988 (voice users) to discuss how the Board may accommodate their needs.

JOHN QUIGLEY,
Chairperson

Fiscal Note: 7-520. No fiscal impact; (8) recommends adoption.

Annex A

TITLE 25. ENVIRONMENTAL PROTECTION

PART I. DEPARTMENT OF ENVIRONMENTAL PROTECTION

Subpart C. PROTECTION OF NATURAL RESOURCES

ARTICLE II. WATER RESOURCES

CHAPTER 109. SAFE DRINKING WATER

Subchapter A. GENERAL PROVISIONS

§ 109.1. Definitions.

The following words and terms, when used in this chapter, have the following meanings, unless the context clearly indicates otherwise:

* * * * *

Consecutive water system—A public water system which obtains all of its water from another public water system and resells the water to a person, provides treatment to meet a primary MCL**, MRDL or treatment technique,** or provides drinking water to an interstate carrier. The term does not include bottled water and bulk water systems.

* * * * *

Subchapter B. MCLs, MRDLs OR TREATMENT TECHNIQUE REQUIREMENTS

§ 109.202. State MCLs, MRDLs and treatment technique requirements.

(a) *Primary MCLs**, MRDLs and treatment technique requirements***.

(1) A public water system shall supply drinking water that complies with the primary MCLs**, MRDLs and treatment technique requirements** adopted by the EQB under the act.

(2) This subchapter incorporates by reference the primary MCLs**, MRDLs and treatment technique requirements** in the National Primary Drinking Water Regulations**[, at 40 CFR Part 141, Subparts B and G (relating to maximum contaminant levels)] 40 CFR Part 141 (relating to National Primary Drinking Water Regulations)** as State MCLs, **MRDLs and treatment technique requirements** under authority of section 4 of the act (35 P. S. § 721.4), unless other MCLs**, MRDLs and treatment technique requirements** are established by regulations of the Department. The primary MCLs**, MRDLs and treatment technique requirements** which are incorporated by reference are effective on the date established by the Federal regulations.

* * * * *

(c) *Treatment technique requirements for pathogenic bacteria, viruses and protozoan cysts*. A public water system shall provide adequate treatment to reliably protect users from the adverse health effects of microbiological contaminants, including pathogenic bacteria, viruses and protozoan cysts. The number and type of treatment barriers and the efficacy of treatment provided shall be commensurate with the type, degree and likelihood of contamination in the source water.

(1) A public water supplier shall provide, as a minimum, continuous filtration and disinfection for surface water and GUDI sources. The treatment technique must provide at least 99.9% removal and inactivation of Giardia lamblia cysts, and at least 99.99% removal and inactivation of enteric viruses. Beginning January 1, 2002, public water suppliers serving 10,000 or more people shall provide at least 99% removal of Cryptosporidium oocysts. Beginning January 1, 2005, public water suppliers serving fewer than 10,000 people shall provide at least 99% removal of Cryptosporidium oocysts. The Department, depending on source water quality conditions, may require additional treatment as necessary to meet the requirements of this chapter and to protect the public health.

* * * * *

[(ii) The combined total effect of disinfection processes utilized in a filtration plant shall achieve at least a 90% inactivation of Giardia cysts and a 99.9% inactivation of viruses, as determined by CTs and measurement methods established by the EPA. The residual disinfectant concentration in the water delivered to the distribution system prior to the first customer may not be less than .2 mg/L for more than 4 hours, as demonstrated by measurement taken under § 109.301(1). Failure to maintain this level that extends beyond 4 hours constitutes a breakdown in treatment. A system that experiences a breakdown in treatment shall, under § 109.701(a)(3) (relating to reporting and recordkeeping), notify the Department within 1 hour after the water system learns of the violation or the situation, and shall provide public notice in accordance with § 109.408 (relating to Tier 1 public notice categories, timing and delivery of notice).]

(ii) The combined total effect of disinfection processes utilized in a filtration plant shall:

(A) Achieve at least 1.0-log inactivation of Giardia cysts and 3.0-log inactivation of viruses as demonstrated by measurements taken under § 109.301(1). Failure to maintain the minimum log inactivation for more than 4 hours of operation constitutes a breakdown in treatment.

(B) Provide a minimum residual disinfectant concentration of 0.20 mg/L at the entry point as demonstrated by measurements taken under § 109.301(1). Failure to maintain the minimum entry point disinfectant residual for more than 4 hours of operation is a treatment technique violation.

(iii) For an unfiltered surface water source permitted for use prior to March 25, 1989, the public water supplier shall:

* * * * *

(3) A community public water system shall provide continuous disinfection and comply with Subchapter M (relating to additional requirements for groundwater sources) for groundwater sources.

(4) Community water systems using a chemical disinfectant or that deliver water that has been treated with a chemical disinfectant shall comply with the minimum disinfectant residual specified in § 109.710 (relating to disinfectant residual in the distribution system).

(5) Nontransient noncommunity water systems that have installed chemical disinfection and transient noncommunity water systems that have installed chemical disinfection in accordance with paragraph (1) or § 109.1302(b) (relating to treatment technique requirements) shall comply with the minimum disinfectant residual specified in § 109.710.

(d) *Fluoride.* A public water system shall comply with the primary MCL for fluoride of 2 mg/L, except that a noncommunity water system implementing a fluoridation program approved by the Department of Health and using fluoridation facilities approved by the Department under § 109.505 (relating to requirements for noncommunity water systems) may exceed the MCL for fluoride but may not exceed the fluoride level approved by the Department of Health. The secondary MCL for fluoride of 2 mg/L established by the EPA under 40 CFR 143.3 (relating to secondary **[MCLs] maximum contaminant levels**) is not incorporated into this chapter.

* * * * *

(g) *Treatment technique requirements for disinfection byproduct precursors.* **[Comminity] Community** water systems and nontransient noncommunity water systems that use either surface water or GUDI sources and that use conventional filtration treatment shall provide adequate treatment to reliably control disinfection byproduct precursors in the source water. Enhanced coagulation and enhanced softening are deemed by the Department to be treatment techniques for the control of disinfection byproduct precursors in drinking water treatment and distribution systems. This subchapter incorporates by reference the treatment technique in 40 CFR 141.135 (relating to treatment technique for control of disinfection byproduct (DBP) precursors). Coagulants approved by the Department are deemed to be acceptable for the purpose of this treatment technique. This treatment technique is effective on the date established by the Federal regulations.

* * * * *

Subchapter C. MONITORING REQUIREMENTS

§ 109.301. General monitoring requirements.

Public water suppliers shall monitor for compliance with MCLs, MRDLs and treatment technique requirements in accordance with the requirements established by the EPA under the National Primary Drinking Water Regulations, 40 CFR Part 141 **[(relating to national primary drinking water regulations)] (relating to National Primary Drinking Water Regulations)**, except as otherwise established by this chapter unless increased monitoring is required by the Department under § 109.302 (relating to special monitoring requirements). Alternative monitoring requirements may be established by the Department and may be implemented in lieu of monitoring requirements for a particular National Primary Drinking Water Regulation if the alternative monitoring requirements are in conformance with the Federal act and regulations. The monitoring requirements shall be applied as follows:

(1) *Performance monitoring for filtration and disinfection.* A public water supplier providing filtration and disinfection of surface water or GUDI sources shall conduct the **following** performance monitoring requirements **[established by the EPA under the National Primary Drinking Water Regulations]**, unless increased monitoring is required by the Department under § 109.302.

(i) Except as provided under subparagraphs (ii) and (iii) a public water supplier:

* * * * *

(C) Shall continuously monitor and record the residual disinfectant concentration of the water being supplied to the distribution system and record both the lowest value for each day and the number of periods each day when the value is less than **[.2] 0.20** mg/L for more than 4 hours. If a public water system's continuous monitoring or recording equipment fails, the public water supplier may, upon notification of the Department under § 109.701(a)(3) (relating to reporting and recordkeeping), substitute grab sampling or manual recording every 4 hours in lieu of continuous monitoring. Grab sampling or manual recording may not be substituted for continuous monitoring or recording for longer than 5 **working** days after the equipment fails.

(D) Shall measure and record the residual disinfectant concentration at representative points in the distribution system **[no less frequently than the frequency required for total coliform sampling for compliance with the MCL for microbiological contaminants.] in accordance with a sample siting plan as specified in § 109.701(a)(8) and as follows:**

(I) A public water supplier shall monitor the residual disinfectant concentration at the same time and from the same location that a total coliform sample is collected as specified in paragraph (3)(i) and (ii). Measurements taken under this subclause may be used to meet the requirements under subclause (II).

(II) A public water supplier shall monitor the disinfectant residual at representative locations in the distribution system at least once per week.

(III) A public water supplier that does not maintain the minimum disinfectant residual specified in § 109.710 (relating to disinfectant residual in the distribution system) at one or more sample sites shall include those sample sites in the monitoring conducted the following month.

(IV) Compliance with the minimum disinfectant residual shall be determined in accordance with § 109.710.

(ii) For a public water supplier serving 3,300 or fewer people, the Department may reduce the residual disinfectant concentration monitoring for the water being supplied to the distribution system to a minimum of 2 hours between samples at the grab sampling frequencies prescribed as follows if the historical performance and operation of the system indicate the system can meet the residual disinfectant concentration at all times:

* * * * *

(iv) A public water supplier providing conventional filtration treatment or direct filtration and serving 10,000 or more people and using surface water or GUDI sources shall, beginning January 1, 2002, conduct continuous monitoring of turbidity for each individual filter using an approved method under the EPA regulation in 40 CFR 141.74(a) (relating to analytical and monitoring requirements) and record the results at least every 15 minutes. Beginning January 1, 2005, public water suppliers providing conventional or direct filtration and serving fewer than 10,000 people and using surface water or GUDI sources shall conduct continuous monitoring of turbidity for each individual filter using an approved method under the EPA regulation in 40 CFR 141.74(a) and record the results at least every 15 minutes.

* * * * *

(D) A public water supplier serving fewer than 10,000 persons has a maximum of 14 days following the failure of the equipment to repair or replace the equipment before a violation is incurred.

(v) A public water supplier shall calculate the log inactivation of Giardia, using measurement methods established by the EPA, at least once per day during peak hourly flow. The log inactivation for Giardia must also be calculated whenever the residual disinfectant concentration at the entry point falls below the minimum value specified in § 109.202(c) (relating to State MCLs, MRDLs and treatment technique requirements) and continue to be calculated every 4 hours until the residual disinfectant concentration at the entry point is at or above the minimum value specified in § 109.202(c). Records of log inactivation calculations must be reported to the Department in accordance with § 109.701(a)(2).

(vi) In addition to the requirements specified in subparagraph (v), a public water supplier that uses a disinfectant other than chlorine to achieve log inactivation shall calculate the log inactivation of viruses at least once per day during peak hourly flow. The log inactivation for viruses must also be calculated whenever the residual disinfectant concentration at the entry point falls below the minimum value specified in § 109.202(c) and continue to be calculated every 4 hours until the residual disinfectant concentration at the entry point is at or above the minimum value specified in § 109.202(c). Records of log inactivation calculations must be reported to the Department in accordance with § 109.701(a).

(2) *Performance monitoring for unfiltered surface water and GUDI.* A public water supplier using unfiltered surface water or GUDI sources shall conduct the following source water and performance monitoring requirements on an interim basis until filtration is provided, unless increased monitoring is required by the Department under § 109.302:

(i) Except as provided under subparagraphs (ii) and (iii), a public water supplier:

(A) Shall perform **[fecal coliform]** ***E. coli*** or total coliform density determinations on samples of the source water immediately prior to disinfection. Regardless of source water turbidity, the minimum frequency of sampling for **[fecal or total coliform determination] total coliform or *E. coli* determinations** may be no less than the following:

* * * * *

(E) Shall measure the residual disinfectant concentration at representative points in the distribution system **[no less frequently than the frequency required for total coliform sampling for compliance with the MCL for microbiological contaminants.] in accordance with a sample siting plan as specified in § 109.701(a)(8) and as follows:**

(I) A public water supplier shall monitor the residual disinfectant concentration at the same time and from the same location that a total coliform sample is collected as specified in paragraph (3)(i) and (ii). Measurements taken under this subclause may be used to meet the requirements under subclause (II).

(II) A public water supplier shall monitor the disinfectant residual at representative locations in the distribution system at least once per week.

(III) A public water supplier that does not maintain the minimum disinfectant residual specified in § 109.710 at one or more sample sites shall include those sample sites in the monitoring conducted the following month.

(IV) Compliance with the minimum disinfectant residual shall be determined in accordance with § 109.710.

(ii) For a public water supplier serving 3,300 or fewer people, the Department may reduce the residual disinfectant concentration monitoring for the water being supplied to the distribution system to a minimum of 2 hours between samples at the grab sampling frequencies prescribed as follows if the historical performance and operation of the system indicate the system can meet the residual disinfectant concentration at all times:

* * * * *

(5) *Monitoring requirements for VOCs.* Community water systems and nontransient noncommunity water systems shall monitor for compliance with the MCLs for VOCs established by the EPA under 40 CFR 141.61(a) (relating to **[MCLs] maximum contaminant levels** for organic contaminants). The monitoring shall be conducted according to the requirements established by the EPA under 40 CFR 141.24(f) (relating to organic chemicals**,** sampling and analytical requirements), incorporated herein by reference, except as modified by this chapter. Initial or first year monitoring mentioned in this paragraph refers to VOC monitoring conducted on or after January 1, 1993.

* * * * *

(iii) *Repeat monitoring for entry points at which a VOC is detected.* For entry points at which a VOC is detected at a level equal to or greater than 0.0005 mg/L, then:

* * * * *

(B) The Department may decrease the quarterly monitoring requirement specified in clause (A) provided it has determined that the system is reliably and consistently below the MCL. **[The Department will not make this determination unless a groundwater or GUDI system takes a minimum of 2 quarterly samples and a surface water system takes a minimum of 4 quarterly samples.] For an initial detection of a VOC, the Department will not make this determination until the water system obtains results from a minimum of four consecutive quarterly samples that are reliably and consistently below the MCL.**

* * * * *

(6) *Monitoring requirements for SOCs (pesticides and PCBs).* Community water systems and nontransient noncommunity water systems shall monitor for compliance with the MCLs for SOCs established by the EPA under 40 CFR 141.61(c). The monitoring shall be conducted according to the requirements established by the EPA under 40 CFR 141.24(h), incorporated herein by reference except as modified by this chapter.

* * * * *

(ii) *Repeat monitoring for SOCs that are detected.* If an SOC is detected (as defined by the EPA under 40 CFR **[Part]** 141.24(h)(18) or by the Department), then:

* * * * *

(B) The Department may decrease the quarterly monitoring requirement specified in clause (A) provided it has determined that the system is reliably and consistently below the MCL. **[The Department will not make this determination unless a groundwater or GUDI system takes a minimum of 2 quarterly samples and a surface water system takes a minimum of 4 quarterly samples.] For an initial detection of a SOC, the Department will not make this determination until the water system obtains results from a minimum of four consecutive quarterly samples that are reliably and consistently below the MCL.**

* * * * *

(vii) *Waivers.* A waiver will be granted to a public water supplier from conducting the initial compliance monitoring or repeat monitoring, or both, for an SOC based on documentation provided by the public water supplier and a determination by the Department that the criteria in clause (B), (C) or (D) has been met. A waiver is effective for one compliance period and may be renewed in each subsequent compliance period. If the Department has not granted a use waiver in accordance with clause (B), the public water supplier is responsible for submitting a waiver application and renewal application to the Department for review in accordance with clause (B) **[or],** (C) **or (D)** for specific entry points. Waiver applications will be evaluated relative to the vulnerability assessment area described in clause (A) and the criteria in clause (B) **[or],** (C) **or (D)**. Entry points at which treatment has been installed to remove an SOC are not eligible for a monitoring waiver for the SOCs for which treatment has been installed.

(A) *Vulnerability assessment area for SOCs* **[** ***except*** **]** ***including*** *dioxin and PCBs.*

* * * * *

(D) *Wavier requests and renewals.* Waiver requests and renewals shall be submitted to the Department, on forms provided by the Department, for review and approval prior to the end of the applicable monitoring period. Until the waiver request or renewal is approved, the public water system is responsible for conducting all required monitoring.

[(E) ***Waivers for dioxin and PCBs.*** **A system is granted a waiver from monitoring for dioxin and PCBs unless the Department determines that there is a source of dioxin or PCB contamination which poses a threat to a drinking water source.]**

(viii) *Invalidation of SOC samples.*

* * * * *

(7) *Monitoring requirements for IOCs*. Community water systems and nontransient noncommunity water systems shall monitor for compliance with the MCLs for IOCs established by the EPA under 40 CFR 141.62 (relating to maximum contaminant levels **[(MCLs)]** for inorganic contaminants). Transient noncommunity water suppliers shall monitor for compliance with the MCLs for nitrate and nitrite. The monitoring shall be conducted according to the requirements established by the EPA under 40 CFR 141.23 (relating to inorganic chemical sampling and analytical requirements). The requirements are incorporated by reference except as modified by this chapter.

(i) *Monitoring requirements for asbestos.*

[(A) ***Waivers for asbestos monitoring.*** **A system is granted a waiver from asbestos monitoring unless the Department determines that the system's distribution system contains asbestos cement pipe and the system has not implemented optimum corrosion control measures, or the Department determines that the system's source water is vulnerable to asbestos contamination.**

(B) ***Initial monitoring schedule.*** **]** **(A)** ***Monitoring frequency***. Community water systems and nontransient noncommunity water systems not granted a waiver under clause **[(A)]** **(F)** shall monitor for compliance with the MCL for asbestos by taking one sample at each vulnerable sampling point during the first 3-year compliance period of each 9-year compliance cycle, with the initial compliance monitoring beginning not later than the calendar year beginning January 1, 1995.

(B) ***Sampling points.*** **A system shall monitor at the following locations:**

(I) Each entry point to the distribution system.

(II) At least one representative location within the distribution system identified in a written sample site plan that includes a materials evaluation of the distribution system. The written sample site plan must be maintained on record and submitted to the Department prior to conducting initial monitoring or upon request.

(C) *Monitoring of new entry points.* New entry points which begin operation after December 31, 1995, shall conduct initial monitoring during the first compliance period of the first compliance cycle after the entry point begins serving the public, if the Department determines that a waiver cannot be granted in accordance with clause **[(A)]** **(F)**.

(D) *Repeat monitoring for systems that exceed the asbestos MCL.* If a sample exceeds the MCL for asbestos, the monitoring at that sampling point shall be continued quarterly beginning in the quarter following the MCL **[violation]** **exceedance**. After **[4]** **four** consecutive quarterly samples with results reliably and consistently below the MCL at that entry point, the required monitoring is reduced to one sample at that entry point during the first 3-year compliance period of each subsequent 9-year compliance cycle, if treatment has not been installed to remove asbestos from the source water. Compliance monitoring at entry points at which treatment has been installed to remove asbestos from source water shall be conducted at least annually, and performance monitoring shall be conducted quarterly.

(E) *Confirmation samples.* For asbestos sample results in excess of the MCL during annual or less frequent compliance monitoring, the water supplier shall take a confirmation sample within 2 weeks of notification by the accredited laboratory performing the analysis. The average of the results of the original and the confirmation sample will be used to determine compliance. Monitoring shall be completed by the deadline specified for asbestos compliance monitoring.

(F) ***Waivers for asbestos monitoring.*** **A waiver will be granted to a public water supplier from conducting compliance monitoring for asbestos based on documentation provided by the public water supplier and a determination by the Department that the criteria in this clause have been met. A waiver is effective for one compliance period and may be renewed in each subsequent compliance period. Entry points at which treatment has been installed to remove asbestos are not eligible for a monitoring waiver.**

(I) A waiver for entry point compliance monitoring may be granted if the sources supplying the entry point are not vulnerable to asbestos contamination.

(II) A waiver for distribution system monitoring may be granted if the distribution system does not contain asbestos cement pipe as indicated in the materials evaluation or if the water system has optimized corrosion control as specified in Subchapter K (relating to lead and copper).

(III) Waiver requests and renewals shall be submitted to the Department, on forms provided by the Department, for review and approval prior to the end of the applicable monitoring period. Until the waiver request or renewal is approved, the public water system is responsible for conducting all required monitoring.

(ii) *Monitoring requirements for nitrate and nitrite.*

* * * * *

(iii) *Monitoring requirements for antimony, arsenic, barium, beryllium, cadmium, cyanide, chromium, fluoride, mercury, nickel, selenium and thallium*.

* * * * *

(C) *Repeat monitoring for entry points at which an IOC MCL is exceeded*.

* * * * *

(II) After analyses of **[4] four** consecutive quarterly samples **[at an entry point where treatment has not been installed to comply with an IOC MCL]** indicate that contaminant levels are reliably and consistently below the MCLs, the required monitoring **at an entry point where treatment has not been installed to comply with an IOC MCL** for each IOC that is reliably and consistently below the MCL is reduced to the frequencies stated in clause (A). This reduced monitoring option does not apply to entry points at which treatment has been installed for IOC removal. Compliance monitoring for IOCs for which treatment has been installed to comply with an MCL shall be conducted at least annually, and performance monitoring shall be conducted quarterly.

* * * * *

(12) *Monitoring requirements for disinfection byproducts and disinfection byproduct precursors.* Community water systems and nontransient noncommunity water systems that use a chemical disinfectant or oxidant shall monitor for disinfection byproducts and disinfection byproduct precursors in accordance with this paragraph. Community water systems and nontransient noncommunity water systems that obtain finished water from another public water system that uses a chemical disinfectant or oxidant to treat the finished water shall monitor for TTHM and HAA5 in accordance with this paragraph. Systems that use either surface water or GUDI sources and that serve at least 10,000 persons shall begin monitoring by January 1, 2002. Systems that use either surface water or GUDI sources and that serve fewer than 10,000 persons, or systems that use groundwater sources, shall begin monitoring by January 1, 2004. Systems monitoring for disinfection byproducts and disinfection byproduct precursors shall take all samples during normal operating conditions. Systems monitoring for disinfection byproducts and disinfection byproduct precursors shall use only data collected under this chapter to qualify for reduced monitoring. Compliance with the MCLs and monitoring requirements for TTHM, HAA5, chlorite (where applicable) and bromate (where applicable) shall be determined in accordance with 40 CFR 141.132 and 141.133 (relating to monitoring requirements; and compliance requirements) which are incorporated herein by reference.

* * * * *

(iv) *Bromate.* Community water systems and nontransient noncommunity water systems that use ozone for disinfection or oxidation shall monitor for bromate.

* * * * *

(B) *Reduced monitoring.*

* * * * *

(II) Beginning April 1, 2009, a system required to analyze for bromate may reduce monitoring from monthly to quarterly, if the system's running annual average bromate concentration computed quarterly is less than or equal to 0.0025 mg/L based on monthly measurements as prescribed in clause (A) **analyzed using methods specified in 40 CFR 141.132(b)(3)(ii)(B)** for the most recent 4 quarters. Systems qualifying for reduced bromate monitoring under subclause (I) may remain on reduced monitoring as long as the running annual average of quarterly bromate samples **analyzed using methods specified in 40 CFR 141.132(b)(3)(ii)(B)** is less than or equal to 0.0025 mg/L. If the running annual average bromate concentration is greater than 0.0025 mg/L, the system shall resume routine monitoring as prescribed under clause (A).

* * * * *

(13) *Monitoring requirements for disinfectant residuals.* Community water systems and nontransient noncommunity water systems that use either chlorine**[,] or** chloramines or **[chlorine dioxide] that obtain finished water from another public water system that uses either chlorine or chloramines, and transient noncommunity water systems that install chemical disinfection treatment in accordance with § 109.1302(b) (relating to treatment technique requirements)** shall monitor for disinfectant residuals in accordance with this paragraph. Community water systems **[and],** nontransient noncommunity water systems **[that obtain finished water from another public water system that uses either chlorine or] and transient noncommunity water systems that use** chlorine dioxide to treat the finished water shall monitor for chlorine **[residual] dioxide** in accordance with this paragraph. **[Community water systems and nontransient noncommunity water systems that obtain finished water from another public water system that uses chloramines to treat the finished water shall monitor for chloramine residual in accordance with this paragraph. Transient noncommunity water systems that use chlorine dioxide as either a disinfectant or oxidant shall monitor for chlorine dioxide residual in accordance with this paragraph. Systems that use either surface water or GUDI sources and that serve at least 10,000 persons shall begin monitoring by January 1, 2002. Systems that use either surface water or GUDI sources and that serve fewer than 10,000 persons, or systems that use groundwater sources, shall begin monitoring by January 1, 2004.]** Systems monitoring for disinfectant residuals shall take all samples during normal operating conditions. Compliance with the MRDLs and monitoring requirements for chlorine, chloramines and chlorine dioxide (where applicable) shall be determined in accordance with 40 CFR 141.132 and 141.133 **[(relating to monitoring requirements; and compliance requirements)]** which are incorporated herein by reference. **Compliance with the minimum disinfectant residual shall be determined in accordance with § 109.710.**

(i) *Chlorine and chloramines.* Systems shall measure the residual disinfectant level **[at the same points in the distribution system and at the same time that total coliforms are sampled, as specified in paragraph (3). Systems that used either surface water or GUDI sources may use the results of residual disinfectant concentration sampling conducted under paragraph (1) or (2) in lieu of taking separate samples.] in accordance with a sample siting plan as specified in § 109.701(a)(8) and as follows:**

(A) Public water systems shall monitor the residual disinfectant concentration at the same time and from the same location that a total coliform sample is collected as specified in paragraph (3)(i) and (ii). Systems that use either surface water or GUDI sources may use the results of residual disinfectant concentration sampling conducted under paragraph (1) or (2) instead of taking separate

samples. Measurements taken under this clause may be used to meet the requirements under clause (B).

(B) Public water systems shall monitor the disinfectant residual at representative locations in the distribution system at least once per week.

(C) A public water system that does not maintain the minimum disinfectant residual specified in § 109.710 at one or more sample sites shall include those sample sites in the monitoring conducted the following month.

(ii) *Chlorine dioxide.*

* * * * *

§ 109.303. Sampling requirements.

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(e) Compliance monitoring samples for the contaminants listed under 40 CFR **[141.40(n)] 141.40(a)**, 141.61(a) and (c), 141.62 and 141.88 may be composited in accordance with 40 CFR 141.23(a)(4), 141.24(f)(14)**[, (g)(7)]** and (h)(10) and 141.88(a)(1)(iv) (relating to inorganic chemical sampling and analytical requirements; organic chemicals **[other than total trihalomethanes]**, sampling and analytical requirements; and monitoring requirements for lead and copper in source water) except:

* * * * *

Subchapter D. PUBLIC NOTIFICATION

§ 109.408. Tier 1 public notice—categories, timing and delivery of notice.

(a) *General violation categories and other situations requiring a Tier 1 public notice*. A public water supplier shall provide Tier 1 public notice for the following circumstances:

* * * * *

(2) Violation of the MCL for nitrate, nitrite or total nitrate and nitrite, as defined in § 109.202(a)(2), or when the water supplier fails to take a confirmation sample within 24 hours of the system's receipt of the first sample showing an exceedance of the nitrate or nitrite MCL, as specified in **[§ 109.301(7)(ii)(C)(V)] § 109.301(7)(ii)(C)(IV)**.

* * * * *

(6) Violation of a treatment technique requirement for pathogenic bacteria, viruses and protozoan cysts as defined in § 109.202(c), resulting from **[a]:**

(i) A single exceedance of the maximum allowable turbidity limit.

(ii) A failure to meet the minimum log inactivation for more than 4 hours.

(iii) A failure to maintain the minimum entry point disinfectant residual for more than 4 hours and a failure to calculate the log inactivation in accordance with § 109.301(1)(v) and (vi).

(7) Violation of a treatment technique requirement for *Cryptosporidium* as defined in § 109.1203 (relating to bin classification and treatment technique requirements), resulting from a failure to provide the level of treatment appropriate for the systems bin classification.

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Subchapter G. SYSTEM MANAGEMENT RESPONSIBILITIES

§ 109.701. Reporting and recordkeeping.

(a) *Reporting requirements for public water systems.* Public water systems shall comply with the following requirements:

* * * * *

(2) *Monthly reporting requirements for performance monitoring.* **In addition to the reporting requirements specified in paragraph (1), public water systems shall report performance monitoring data as follows:**

(i) The test results of performance monitoring required under § 109.301(1) (relating to general monitoring requirements) for public water suppliers providing filtration and disinfection of surface water or GUDI sources must include the following at a minimum:

* * * * *

(B) For performance monitoring of the residual disinfectant concentration of the water being supplied to the distribution system:

(I) The date, time and lowest value each day the residual disinfectant concentration remains equal to or greater than the required minimum.

(II) The initial date, time and value for each occurrence that the residual disinfectant concentration is less than the required minimum, and the subsequent date, time and value that the residual disinfectant concentration is equal to or greater than the required minimum.

(III) The date the entry point is not in operation.

[(C) For performance monitoring of the residual disinfectant concentration at representative points in the distribution system report the following:

(I) The number of monthly routine samples required.

(II) The number of monthly routine samples collected and analyzed.

(III) The number of samples in which the residual disinfectant concentration was less than 0.02 mg/L.

(IV) For samples in which the residual disinfectant concentration was less than 0.02 mg/L: the date, time and value of each sample.]

(C) For performance monitoring of the log inactivation for Giardia, public water systems shall report as follows:

(I) The date, time and lowest log inactivation value for each day the value remains equal to or greater than the required minimum.

(II) The initial date, time and value for each occurrence that the log inactivation is less than the required minimum, and the subsequent date, time and value that the log inactivation is equal to or greater than the required minimum.

(III) The date the entry point is not in operation.

(D) For performance monitoring of the log inactivation for viruses, public water systems using a disinfectant other than chlorine to achieve log inactivation of viruses shall report as follows:

(I) The date, time and lowest log inactivation value for each day the value remains equal to or greater than the required minimum.

(II) The initial date, time and value for each occurrence that the log inactivation is less than the required minimum, and the subsequent date, time and value that the log inactivation is equal to or greater than the required minimum.

(III) The date the entry point is not in operation.

(ii) The test results of performance monitoring required under § 109.301(2) for public water suppliers using unfiltered surface water or GUDI sources shall include the following, at a minimum:

* * * * *

(B) For performance monitoring of the residual disinfectant concentration of the water being supplied to the distribution system:

(I) The date, time and lowest value each day the concentration is less than the residual disinfectant concentration required under § 109.202(c)(1)(iii) **(relating to State MCLs, MRDLs and treatment technique requirements)**.

(II) If the concentration does not fall below that required under § 109.202(c)(1)(iii) during the month, report the date, time and lowest value measured that month.

[(C) For performance monitoring of the residual disinfectant concentration at representative points in the distribution system, report the following:

(I) The number of monthly routine samples required.

(II) The number of monthly routine samples collected and analyzed.

(III) The number of samples in which the residual disinfectant concentration was less than 0.02 mg/L.

(IV) For samples in which the residual disinfectant concentration was less than 0.02 mg/L: the date, time and value of each sample.

(D)] **(C)** For performance monitoring of the **[fecal coliform]** ***E. coli*** or total coliform density determinations on samples of the source water immediately prior to disinfection: the date, time and value of each sample.

(iii) The test results from performance monitoring required under § 109.301(8)(v) of the residual disinfectant concentration of the water in the distribution system shall include the date, time and value of each sample.

[(iv) The test results of heterotrophic plate count measurements taken under § 109.710(b) (relating to disinfectant residual in the distribution system) shall include the date, time and value of each sample.]

(3) *One-hour reporting requirements*. A public water supplier shall report the circumstances to the Department within 1 hour of discovery for the following violations or situations:

* * * * *

(7) *Form.* Reports required by this chapter shall be submitted in a manner or form acceptable to the Department.

[(8) *Reporting requirements for disinfectant residuals.* In addition to the reporting requirements specified in paragraph (1), public water systems shall report MRDL monitoring data as follows:

(i) Systems monitoring for chlorine dioxide under § 109.301(13) shall report the number of days chlorine dioxide was used at each entry point during the last month.

(ii) Systems monitoring for either chlorine or chloramines under § 109.301(13) shall report the following:

(A) The number of samples taken during the month.

(B) The arithmetic average of all distribution samples taken in the last month.]

(8) *Reporting requirements for disinfectant residuals.* In addition to the reporting requirements specified in paragraph (1), public water systems monitoring for disinfectant residuals under § 109.301 shall submit to the Department a written sample siting plan by _____ (*Editor's Note*: The blank refers to 6 months after the effective date of adoption of this proposed rulemaking.). A public water system that begins operation after _____ (*Editor's Note*: The blank refers to the effective date of adoption of this proposed rulemaking.), shall submit the sample siting plan prior to serving water to the public. At a minimum, the sample siting plan must include the following:

(i) A list of representative sample site locations in the distribution system to be used for disinfectant residual monitoring. Representative locations include, but are not limited to, the following:

(A) Dead ends.

(B) First service connection.

(C) Finished water storage facilities.

(D) Interconnections with other public water systems.

(E) Areas of high water age.

(F) Areas with previous coliform detections.

(ii) Whether the sample site location is also used as a coliform, disinfection byproducts, or lead and copper sampling location.

(iii) A water supplier shall revise and resubmit its sample siting plan within 30 days of notification by the Department that a sample siting plan fails to meet the criteria in subparagraphs (i) and (ii).

(iv) The water supplier shall notify the Department of subsequent revisions to a sample siting plan as they occur. Revisions to a sample siting plan shall be submitted in written form to the Department within 30 days of notifying the Department of the revisions.

(9) *Noncompliance report.* Except where a different reporting period is specified in this chapter, the water supplier shall report to the Department within 48 hours the failure to comply with any National Primary Drinking Water Regulation, including the failure to comply with any monitoring requirement set forth in this chapter.

* * * * *

§ 109.710. Disinfectant residual in the distribution system.

(a) A **community water system using a chemical disinfectant or that delivers water that has been treated with a chemical disinfectant shall maintain a minimum** disinfectant residual **[acceptable to the**

Department shall be maintained] throughout the distribution system **[of the community water system]** sufficient to assure compliance with the microbiological MCLs and the treatment technique requirements specified in § 109.202 (relating to State MCLs, MRDLs and treatment technique requirements). **[The Department will determine the acceptable residual of the disinfectant considering factors such as type and form of disinfectant, temperature and pH of the water, and other characteristics of the water system.] The minimum disinfectant residual is 0.2 mg/L measured as free chlorine for systems using chlorine, 0.2 mg/L measured as total chorine for systems using chloramines or another level approved by the Department for systems using an alternate oxidizing disinfection treatment.**

[(b) A public water system that uses surface water or GUDI sources or obtains finished water from another permitted public water system using surface water or GUDI sources shall comply with the following requirements:

(1) As a minimum, a detectable residual disinfectant concentration of 0.02 mg/L measured as total chlorine, combined chlorine or chlorine dioxide shall be maintained throughout the distribution system as demonstrated by monitoring conducted under § 109.301(1) and (2) or (8)(v) (relating to general monitoring requirements).

(2) Sampling points with nondetectable disinfectant residuals which have heterotrophic plate count (HPC) measurements of less than 500/ml are deemed to be in compliance with paragraph (1).

(3) When the requirements of paragraph (1) or (2) cannot be achieved, the supplier shall initiate an investigation under the Department's direction to determine the cause, potential health risks and appropriate remedial measures.]

(b) A nontransient noncommunity water system that has installed chemical disinfection or a transient noncommunity water system that has installed chemical disinfection in accordance with § 109.202(c)(1) or § 109.1302(b) (relating to treatment technique requirements) shall maintain a minimum disinfectant residual throughout the distribution system sufficient to assure compliance with the microbiological MCLs and the treatment technique requirements specified in § 109.202. The minimum disinfectant residual is 0.2 mg/L measured as free chlorine for systems using chlorine, 0.2 mg/L measured as total chorine for systems using chloramines or another level approved by the Department for systems using an alternate oxidizing disinfection treatment.

(c) Compliance with the disinfectant residual treatment technique will be based on samples collected as specified in the system distribution sample siting plan submitted to the Department under § 109.701(a)(8) (relating to reporting and recordkeeping). Compliance will be determined as follows:

(1) For a public water system that serves 33,000 or fewer persons, if no more than 1 sample collected per month is less than the minimum level specified in subsection (a) or (b) for 2 consecutive months, the system is in compliance with the treatment technique.

(2) For a public water system that serves more than 33,000 persons, if no more than 5% of the samples collected per month are less than the minimum level specified in subsection (a) or (b) for 2 consecutive months, the system is in compliance with the treatment technique.

(3) A public water system that experiences a treatment technique violation shall notify the Department within 1 hour of discovery of the violation in accordance with § 109.701(a)(3) and issue a Tier 2 public notice in accordance with § 109.409 (relating to Tier 2 public notice—categories, timing and delivery of notice).

(4) In addition to the requirements in paragraphs (1)—(3), a public water system that fails to meet the minimum level specified in subsection (a) or (b) at any sample location for 2 consecutive months or more shall conduct an investigation to determine the cause and appropriate corrective actions and shall submit a written report to the Department within 60 days.

[(c)] (d) Public water systems may increase residual chlorine or chloramine, but not chlorine dioxide, disinfectant levels in the distribution system to a level that exceeds the MRDL for that disinfectant and for a time necessary to protect public health or to address specific microbiological contamination problems caused by circumstances such as, but not limited to, distribution line breaks, storm runoff events, source water contamination events or cross-connection events.

(*Editor's Note*: The following section is new and printed in regular type to enhance readability.)

§ 109.715. Nitrification control plan.

(a) A public water system that uses chloramines or purchases water that contains chloramines shall develop a nitrification control plan. The plan must conform to the guidelines in industry standards such as the American Water Works Association's M56 Manual on Nitrification and contain at least the following information:

(1) A system-specific monitoring plan that includes, at a minimum:

(i) The list of parameters that will be monitored such as pH, free ammonia, total chlorine, monochloramine, HPC, nitrite and nitrate.

(ii) The monitoring locations.

(iii) The monitoring schedule.

(2) A response plan with expected water quality ranges and action levels.

(b) The public water system shall implement the nitrification control plan in accordance with accepted practices of the water supply industry.

(c) The public water system shall review and update the plan as necessary.

(d) The plan shall be retained onsite and shall be made available to the Department upon request.

Subchapter J. BOTTLED WATER AND VENDED WATER SYSTEMS, RETAIL WATER FACILITIES AND BULK WATER HAULING SYSTEMS

§ 109.1002. MCLs, MRDLs or treatment techniques.

(a) Bottled water and vended water systems, retail water facilities and bulk water hauling systems shall supply drinking water that complies with the MCLs, MRDLs and treatment technique requirements under

§§ 109.202 and 109.203 (relating to State MCLs, MRDLs and treatment technique requirements; and unregulated contaminants). **Bottled water systems, vended water systems, retail water facilities and bulk water hauling systems using surface water or GUDI sources shall comply with the requirements in § 109.204 (relating to disinfection profiling and benchmarking).** Bottled water systems, vended water systems, retail water facilities and bulk water hauling systems shall provide continuous disinfection for groundwater sources. Water for bottling labeled as mineral water**[,]** under § 109.1007 (relating to labeling requirements for bottled water systems, vended water systems and retail water facilities) shall comply with the MCLs except that mineral water may exceed the MCL for total dissolved solids.

* * * * *

(c) Bottled water and vended water systems, retail water facilities and bulk water hauling systems shall comply with the treatment technique requirements under Subchapter L **[(relating to bin classification and treatment technique rule)] (relating to long-term 2 enhanced surface water treatment rule)**.

* * * * *

§ 109.1003. Monitoring requirements.

(a) *General monitoring requirements.* Bottled water and vended water systems, retail water facilities and bulk water hauling systems shall monitor for compliance with the MCLs **[and MRDLs in accordance with § 109.301 (relating to general monitoring requirements) and shall comply with § 109.302 (relating to special monitoring requirements). The monitoring requirements shall be applied], MRDLs and treatment techniques** as follows, except that systems which have installed treatment to comply with **a** primary MCL shall conduct quarterly operational monitoring for the contaminant which the **[facility] treatment** is designed to remove:

(1) Bottled water systems, retail water facilities and bulk water hauling systems, for each entry point shall:

* * * * *

(ix) *TTHM and HAA5 Stage 2 DBP Rule.* Beginning October 1, 2013, monitor annually for TTHM and HAA5 if the system uses a chemical disinfectant or oxidant to treat the water, or obtains finished water from another public water system that uses a chemical disinfectant or oxidant to treat the water as follows:

(A) *Routine monitoring.* Systems shall take at least one dual sample set per year per entry point during the **peak historical** month **[of warmest water temperature]**.

(B) *Increased monitoring.* If any sample results exceed either a TTHM or HAA5 MCL, the system shall take at least one dual sample set per quarter **(every 90 days)** per entry point. The system shall return to the sampling frequency of one dual sample set per year per entry point if, after at least 1 year of monitoring, each TTHM sample result is no greater than 0.060 mg/L and each HAA5 sample result is no greater than 0.045 mg/L.

(x) Beginning January 1, 2004, monitor daily for chlorite if the system uses chlorine dioxide for disinfection or oxidation. Systems shall take at least one daily sample at the entry point. If a daily sample exceeds the chlorite MCL, the system shall take three additional samples within 24 hours from the same lot, batch, machine, carrier vehicle or point of delivery. The chlorite MCL is based on the average of the required daily sample plus any additional samples.

(xi) Beginning _____ (*Editor's Note*: The blank refers to the effective date of adoption of this proposed rulemaking.), a system using chlorine dioxide shall take one sample per day at each entry point. If any daily sample exceeds the MRDL, the system shall collect chlorine dioxide check samples as follows:

(A) A bottled water system shall take at least one sample from the same lot or batch and a bulk water hauler shall take at least one sample from the same tanker load.

(B) A vended or retail water system shall take at least one sample as soon as possible but within 24 hours.

(C) A violation of the chlorine dioxide MCL occurs when any check sample result exceeds the chlorine dioxide MCL following a routine sample result that exceeds the MCL.

[(xi)] (xii) Beginning January 1, 2004, monitor monthly for bromate if the system uses ozone for disinfection or oxidation.

(A) *Routine monitoring.* Systems shall take one sample per month for each entry point that uses ozone while the ozonation system is operating under normal conditions.

(B) *Reduced monitoring.*

(I) Until March 31, 2009, systems shall reduce monitoring for bromate from monthly to quarterly if the average source water bromide concentration is less than 0.05 mg/L based upon representative monthly bromide measurements for 1 year. Systems on reduced monitoring shall continue monthly source water bromide monitoring. If the running annual average source water bromide concentration, computed quarterly, is equal to or exceeds 0.05 mg/L, the system shall revert to routine monitoring as prescribed by clause (A).

(II) Beginning April 1, 2009, a system required to analyze for bromate may reduce monitoring from monthly to quarterly, if each sample result is less than or equal to 0.0025 mg/L based on monthly measurements as prescribed in clause (A) for the most recent 12 months. Systems qualifying for reduced bromate monitoring under subclause (I) may remain on reduced monitoring as long as each sample result from the previous 12 months is less than or equal to 0.0025 mg/L. If any sample result exceeds 0.0025 mg/L, the system shall resume routine monitoring as prescribed under clause (A).

(xiii) Beginning _____ (*Editor's Note*: The blank refers to the effective date of adoption of this proposed rulemaking.), a system that provides filtration of surface water or GUDI sources shall comply with the following:

(A) Maintain a residual at the entry point as specified in § 109.202(c)(1)(ii) (relating to State MCLs, MRDLs and treatment technique requirements).

(B) Monitor disinfectant residual at the entry point in accordance with § 109.301(1)(i)(C).

(C) Report the results in accordance with § 109.701(a)(2) (relating to reporting and recordkeeping).

(xiv) Beginning _____ (*Editor's Note*: The blank refers to the effective date of adoption of this proposed rulemaking.), a system that uses or obtains finished water from another permitted public

water system using surface water or GUDI sources shall comply with the following requirements:

(A) As a minimum, a detectable residual disinfectant concentration of 0.2 mg/L measured as total chlorine, combined chlorine, chlorine dioxide or another level approved by the Department for systems using an alternate oxidizing disinfection treatment shall be maintained at the entry point as demonstrated by monitoring conducted under § 109.301(1) and (2) or (8)(v).

(B) Sampling points with nondetectable disinfectant residuals which have heterotrophic plate count measurements of less than 500/ml are deemed to be in compliance with clause (A).

(C) When the requirements of clause (A) or (B) cannot be achieved, the supplier shall initiate an investigation under the Department's direction to determine the cause, potential health risks and appropriate remedial measures.

(2) Vended water systems shall monitor in accordance with paragraph (1) except that vended water systems qualifying for permit by rule under § 109.1005(b), for each entry point shall:

(i) Monitor monthly for microbiological contaminants.

(ii) Monitor annually for total dissolved solids, lead and cadmium.

(iii) Conduct special monitoring as required by the Department.

(iv) Beginning _____ (*Editor's Note*: The blank refers to the effective date of adoption of this proposed rulemaking.), a system that obtains finished water from another permitted public water system using surface water or GUDI sources shall also monitor in accordance with subparagraph (a)(1)(xiv).

(b) *Sampling requirements.*

* * * * *

(2) For the purpose of determining compliance with the monitoring and analytical requirements established under this subchapter, the Department will consider only those samples analyzed by a laboratory **[certified] accredited** by the Department, except that measurements of turbidity, fluoridation operation, residual disinfection concentration, temperature and pH may be performed by a person meeting the requirements of § 109.1008(c) (relating to system management responsibilities).

* * * * *

(5) Compliance monitoring samples required under subsection (a)(1)(iii) may be composited in accordance with 40 CFR 141.24(g)(7) (relating to organic chemicals **[other than total trihalomethanes]**, sampling and analytical requirements) except:

* * * * *

(v) Samples obtained from an entry point which contains water treated by a community water supplier or nontransient noncommunity water supplier to specifically meet an MCL for a VOC listed under 40 CFR 141.61(a) may not be composited with other entry point samples.

(6) Sampling and analysis shall be performed in accordance with analytical techniques adopted by the EPA under the Federal act or methods approved by the Department.

(c) *Repeat monitoring for microbiological contaminants.*

* * * * *

(e) *A bulk water hauling* **[*or*] *system,*** *vended water system* ***or retail water facility*** *that serves at least 25 of the same persons over 6 months per year.* A bulk water hauling **[or] system,** vended water system **or retail water facility** that is determined by the Department to serve at least 25 of the same persons over 6 months per year shall comply with the monitoring requirements for nontransient noncommunity water systems in accordance with § 109.301.

(f) *Additional monitoring requirements for surface water and GUDI sources.* Bottled water and vended water systems, retail water facilities and bulk water hauling systems shall comply with the monitoring requirements under Subchapter L (relating to long-term 2 enhanced surface water treatment rule).

(g) *Additional monitoring requirements for groundwater sources.* Bottled water and vended water systems, retail water facilities and bulk water hauling systems shall comply with the monitoring requirements under Subchapter M (relating to additional requirements for groundwater sources).

(h) *Compliance determinations.* Compliance with MCLs, MRDLs and treatment techniques shall be determined in accordance with §§ 109.202 and 109.301.

(i) *Special monitoring requirements.* Bottled water and vended water systems, retail water facilities and bulk water hauling systems shall comply with § 109.302 (relating to special monitoring requirements).

§ 109.1004. Public notification.

(a) *General public notification requirements.* A bottled water **[or retail water]** supplier shall give public notification in accordance with this section. A bulk water **[or] hauler,** vended water supplier **or retail water supplier** shall give public notification in accordance with Subchapter D (relating to public notification **[requirements]**). For the purpose of establishing a bulk **[water or] hauling,** vended **or retail** water supplier's responsibilities under Subchapter D, a bulk water supplier shall comply with the public notification requirements specified for a community water system and a vended **or retail** water supplier shall comply with the public notification requirements specified for a noncommunity water system.

(1) A bottled water **[or retail water]** supplier who knows that a primary MCL or an MRDL has been exceeded or treatment technique performance standard has been violated or has reason to believe that circumstances exist which may adversely affect the quality of drinking water, including, but not limited to, source contamination, spills, accidents, natural disasters or breakdowns in treatment, shall report the circumstances to the Department within 1 hour of discovery of the problem.

(2) If the Department determines, based upon information provided by the bottled water **[or retail water]** supplier or other information available to the Department, that the circumstances present an imminent hazard to the public health, the water supplier shall issue a water supply warning approved by the Department and, if applicable, initiate a program for product recall approved by the Department under this subsection. The

water supplier shall be responsible for disseminating the notice in a manner designed to inform users who may be affected by the problem.

* * * * *

§ 109.1008. System management responsibilities.

* * * * *

(b) *Operation and maintenance plan requirements.* Bottled water, vended water, retail water and bulk water suppliers shall develop an operation and maintenance plan for each system. The operation and maintenance plan shall conform to the guidelines contained in Part III of the Department's *Public Water Supply Manual* which is available from the Bureau of **[Water Standards and Facility Regulation] Safe Drinking Water**, Post Office Box 8467, Harrisburg, Pennsylvania 17105-8467. The water supplier shall implement the operation and maintenance plan in accordance with this chapter, and if appropriate in accordance with accepted practices of the bottled water, vended water, retail water facility or bulk water hauling industry. The plan shall be reviewed and updated as necessary to reflect changes in the operation or maintenance of the water system. The plan shall be bound and placed in locations which are readily accessible to the water system's personnel, and shall be presented upon request to the Department.

* * * * *

(f) *Cross-connection control program.* At the direction of the Department, the bottled water, vended water, retail water or bulk water supplier shall develop and implement a comprehensive control program for the elimination of existing cross-connections or the effective containment of sources of contamination, and prevention of future **[cross connections] cross-connections**. A description of the program, including the following information, shall be submitted to the Department for approval:

(1) A description of the methods and procedures to be used.

(2) An implementation schedule for the program.

(3) A description of the methods and devices which will be used to protect the water system.

(g) *Significant deficiencies.* Bottled water and vended water systems, retail water facilities and bulk water hauling systems shall comply with § 109.705(d) and (e) (relating to sanitary surveys).

(h) *Stage 2 Disinfectants/Disinfection Byproducts Rule monitoring plan and operational evaluation levels.* A bulk water hauling system, vended water system or retail water facility that is determined by the Department to meet the definition of a community or nontransient noncommunity public water system and that uses a chemical disinfectant or that obtains finished water from another public water system that uses a chemical disinfectant or oxidant shall comply with § 109.701(g)(2).

Subchapter K. LEAD AND COPPER

§ 109.1103. Monitoring requirements.

* * * * *

(c) *Follow-up monitoring after construction or modification of corrosion control treatment facilities.* A system which completes construction or modification of corrosion control treatment facilities in accordance with § 109.1102(b)(2) shall conduct the applicable monitoring specified in this subsection. A system which exceeds the lead action level after construction or modification of corrosion control treatment facilities shall begin lead service line replacement in accordance with § 109.1107(d) (relating to system management responsibilities).

(1) *Lead and copper tap monitoring.* A system shall monitor for lead and copper at the tap during each specified monitoring period at the number of sample sites specified in subsection (a)(1)(v).

* * * * *

(ii) A small or medium water system shall monitor during each of two consecutive 6-month monitoring periods beginning no later than 60 months from the **[date an action level was exceeded] end of the monitoring period in which the action level was exceeded**. The water supplier shall submit within 30 days of the end of the second monitoring period a request for the Department to designate optimal corrosion control treatment performance requirements for the system. Upon approval of the request, the Department will designate water quality parameter performance requirements in accordance with § 109.1102(b)(5) or source water treatment performance requirements in accordance with § 109.1102(b)(4). A small or medium water system that does not exceed the lead and copper action levels during each of two consecutive 6-month monitoring periods may reduce the number of sample sites and reduce the frequency of sampling to once per year in accordance with subsection (e)(1)(i). Systems not eligible for reduced monitoring under subsection (e)(1) shall monitor in accordance with subsection (d)(1).

* * * * *

(d) *Monitoring after performance requirements are established.* A system shall conduct the applicable monitoring under this subsection beginning no later than the next 6-month monitoring period that begins on January 1 or July 1 following the Department's designation of optimal corrosion control treatment water quality parameter performance requirements under § 109.1102(b)(5) or source water performance requirements under § 109.1102(b)(4). **A system which exceeds the lead action level after construction or modification of corrosion control treatment facilities shall begin lead service line replacement in accordance with § 109.1107(d).**

* * * * *

(e) *Reduced monitoring.*

* * * * *

(3) *Reduced monitoring revocation.*

(i) *Reduced monitoring revocation for large water systems.* A large water system authorized to conduct reduced monitoring under this subsection that fails to meet the lead or copper action level during any 4-month monitoring period or that fails to operate within the range of performance requirements for the water quality parameters specified by the Department under § 109.1102(b)(5) on more than any 9 days in a 6-month period shall comply with the following:

* * * * *

(C) **[The] If either the lead or copper action level is exceeded, the** water supplier shall conduct source water monitoring in accordance with subsection (d)(3). Monitoring is required only for the parameter for which the action level was exceeded. For systems on annual or less frequent monitoring, the end of the

monitoring period is September 30 of the calendar year in which sampling occurs, or, if the Department has designated an alternate monitoring period, the end of the monitoring period is the last day of the 4-month period in which sampling occurs.

* * * * *

(g) *Sample site location plan.* The water supplier shall complete a sample site location plan which includes a materials evaluation of the distribution system, lead and copper tap sample site locations, water quality parameter sample site locations**[,]** and certification that proper sampling procedures are used. The water supplier shall complete the steps in paragraphs (1)—(3) by the applicable date for commencement of lead and copper tap monitoring under subsection (a)(1) and the step in paragraph (4) following completion of the monitoring. The water supplier shall keep the sample site location plan on record and submit the plan to the Department in accordance with § 109.1107(a)(1).

* * * * *

(2) *Lead and copper tap sample site selection.* Lead and copper tap sampling sites are classified as tier 1, tier 2 or tier 3. Tier 1 sites are the highest priority sample sites.

* * * * *

(v) *Sample sites with lead service lines.* A system that has a distribution system containing lead service lines shall draw 50% of the samples it collects during each monitoring period from sites that contain lead pipes or copper pipes with lead solder, and 50% of **[those samples] the samples it collects during each monitoring period** from sites served by a lead service line. If a water system cannot identify a sufficient number of sampling sites served by a lead service line, the system shall collect first draw samples from each site identified as being served by a lead service line.

* * * * *

(k) *Monitoring waivers for small systems.* A small system that meets the criteria of this subsection may apply to the Department to reduce the frequency of monitoring for lead and copper under this section to once every 9 years if it meets all of the materials criteria specified in paragraph (1) and all of the monitoring criteria specified in paragraph (2). A system that meets the criteria in paragraphs (1) and (2) only for lead, or only for copper, may apply to the Department for a waiver to reduce the frequency of tap water monitoring to once every 9 years for that contaminant only.

* * * * *

(6) *Requirements following waiver revocation.* A water system whose waiver has been revoked is subject to the corrosion control treatment, and lead and copper tap water monitoring requirements as follows:

* * * * *

(ii) If the system meets both the lead and copper action levels, the system shall monitor for lead and copper at the tap no less frequently than once every 3 years **[using] in accordance with the frequency, timing and** the reduced number of sample sites specified in subsection (e).

§ 109.1107. System management responsibilities.

* * * * *

(d) *Lead service line replacement.*

* * * * *

(4) *Conditions of replacement.* The water supplier shall replace the portion of the lead service line that it owns. In cases where the system does not own the entire lead service line, the system shall notify the owner of the line, or the owner's authorized agent, that the system will replace the portion of the service line that the system owns and shall offer to replace the owner's portion of the line. A system is not required to **bear the cost of replacing the privately-owned portion of the line or to** replace the **privately-owned portion of the** line if the owner refuses to pay for the cost of replacement of the privately owned portion of the line, or if any laws prohibit this replacement. A system that does not replace the entire length of service line shall complete the following tasks:

* * * * *

Subchapter L. LONG-TERM 2 ENHANCED SURFACE WATER TREATMENT RULE

§ 109.1202. Monitoring requirements.

(a) *Initial round of source water monitoring.* A system shall conduct the following monitoring on the schedule in subsection (c) unless it meets the monitoring exemption criteria in subsection (d):

* * * * *

(4) Filtered systems serving less than 10,000 people shall sample their source water for *Cryptosporidium* at least twice per month for 12 months or at least monthly for 24 months if they meet one of the following subparagraphs, based on monitoring conducted under paragraph (3):

(i) For systems using lake/reservoir sources, the annual mean *E. coli* concentration is greater than **[10] 100** *E. coli*/100 mL.

(ii) For systems using flowing stream sources, the annual mean *E. coli* concentration is greater than **[50] 100** *E. coli*/100 mL.

* * * * *

(i) *Source water sample collection period.* Systems shall collect samples within 2 days before or 2 days after the dates indicated in their sampling schedule (that is, within a 5 day period around the schedule date) unless one of the conditions of **[subsection (b)(1) or (2)] paragraph (1) or (2)** applies.

* * * * *

Subchapter M. ADDITIONAL REQUIREMENTS FOR GROUNDWATER SOURCES

§ 109.1302. Treatment technique requirements.

(a) *Community groundwater systems.* Community groundwater systems are required to provide continuous disinfection under **[§ 109.202(c)(2)] § 109.202(c)(3)** (relating to **[state] State** MCLs, MRDLs and treatment technique requirements) and in addition shall:

* * * * *

[Pa.B. Doc. No. 16-278. Filed for public inspection February 19, 2016, 9:00 a.m.]

STATE BOARD OF OCCUPATIONAL THERAPY EDUCATION AND LICENSURE

[49 PA. CODE CH. 42]

Code of Ethics

The State Board of Occupational Therapy Education and Licensure (Board) proposes to amend § 42.24 (relating to code of ethics) to read as set forth in Annex A.

Effective Date

This proposed rulemaking will be effective upon final-form publication in the *Pennsylvania Bulletin*.

Statutory Authority

Section 5(b) of the Occupational Therapy Practice Act (act) (63 P. S. § 1505(b)) authorizes the Board to promulgate and adopt rules and regulations not inconsistent with the act as it deems necessary for the performance of its duties and the proper administration of the act.

Background and Purpose

Section 16(a) of the act (63 P. S. § 1516(a)) authorizes the Board to discipline licensees who are guilty of unprofessional conduct which has or is likely to endanger the health, welfare or safety of the public. Section 16(a)(2) of the act further defines "unprofessional conduct" to include conduct that violates a code of ethics adopted by the Board. In 1992, the Board adopted a code of ethics in § 42.24 which was essentially an adaptation and codification of the Code of Ethics promulgated by the American Occupational Therapy Association (AOTA) in 1988. Subsequently, in 2001, the Board updated its regulations to reflect the 1994 version of the AOTA Code of Ethics, which is the version that currently appears in § 42.24.

Beginning in 2011, the Board undertook a review of the language in § 42.24 and compared it to the AOTA *Occupational Therapy Code of Ethics and Ethics Standards* (Code and Standards) promulgated in 2010. As a result of its review, the Board determined that it should update § 42.24 by adopting the 2010 AOTA Code and Standards and voted in 2013 to begin the process to update § 42.24. While the proposed rulemaking was pending, the AOTA updated its Code of Ethics in 2015. At its June 3, 2015, meeting, the Board reviewed the AOTA *Occupational Therapy Code of Ethics (2015)* (Code of Ethics), which the Board now finds to be the minimum standard of ethical conduct for occupational therapists and occupational therapy assistants in this Commonwealth, and voted to revise the proposed rulemaking to adopt the 2015 Code of Ethics. The AOTA Code of Ethics not only reflects the Board's own view of ethical practice, but will also keep the Commonwealth's ethical standards consistent with the National standards. Rather than copy the standards verbatim into § 42.24, the Board proposes to adopt the Code of Ethics by reference. A copy of the 2015 AOTA Code of Ethics may be found on the AOTA web site at http://www.aota.org/-/media/Corporate/Files/Practice/Ethics/Code-of-Ethics.pdf and was attached to the Regulatory Analysis Form provided to the Independent Regulatory Review Commission (IRRC). A copy is available upon request. The Board intends to place a copy of the 2015 AOTA Code of Ethics on its web site when the final-form rulemaking is promulgated.

Description of Amendments

The Board would delete the current language in § 42.24. In its place, the Board proposes to add subsections (a)—(c).

Subsection (a) would provide that licensees shall adhere to the AOTA Code of Ethics, except as provided in subsections (b) and (c). Subsection (b) would require licensees to adhere to Federal and State law whenever there is a conflict between the AOTA Code of Ethics and Federal and State law. Likewise, subsection (c) would require licensees to adhere to this chapter whenever there is a conflict between the AOTA Code of Ethics and the Board's regulations.

If the AOTA later updates its Code of Ethics, the Board will review future updates to determine whether to adopt them. If the Board decides not to adopt future updates to the AOTA Code of Ethics, the Board may decide to retain the 2015 Code of Ethics or adopt other ethical standards.

Fiscal Impact and Paperwork Requirements

There are no fiscal impacts or paperwork requirements for this proposed rulemaking. Once this proposed rulemaking becomes effective, the Board will place a copy of the 2015 AOTA Code of Ethics on the Board's web site. The cost of doing so will be de minimis.

Sunset Date

The Board continuously monitors the effectiveness of its regulations. Therefore, a sunset date has not been assigned.

Regulatory Review

Under section 5(a) of the Regulatory Review Act (71 P. S. § 745.5(a)), on February 5, 2016, the Board submitted a copy of this proposed rulemaking and a copy of a Regulatory Analysis Form to IRRC and the Chairpersons of the House Professional Licensure Committee (HPLC) and the Senate Consumer Protection and Professional Licensure Committee (SCP/PLC). A copy of this material is available to the public upon request.

Under section 5(g) of the Regulatory Review Act, IRRC may convey comments, recommendations or objections to the proposed rulemaking within 30 days of the close of the public comment period. The comments, recommendations or objections must specify the regulatory review criteria in section 5.2 of the Regulatory Review Act (71 P. S. § 745.5b) which have not been met. The Regulatory Review Act specifies detailed procedures for review, prior to final publication of the rulemaking, by the Board, the General Assembly and the Governor of comments, recommendations or objections raised.

Public Comment

Interested persons are invited to submit written comments, recommendations or objections regarding this proposed rulemaking to Regulatory Counsel, State Board of Occupational Therapy Education and Licensure, P. O. Box 69523, Harrisburg, PA 17106-5923 or RA-STRegulatoryCounsel@pa.gov within 30 days following publication of this proposed rulemaking in the *Pennsylvania Bulletin*. Reference No. 16A-6710 (code of ethics) when submitting comments.

KERRI L. HAMPLE, OTC, OTR/L,
Chairperson

Fiscal Note: 16A-6710. No fiscal impact; (8) recommends adoption.

Annex A

TITLE 49. PROFESSIONAL AND VOCATIONAL STANDARDS

PART I. DEPARTMENT OF STATE

Subpart A. PROFESSIONAL AND OCCUPATIONAL AFFAIRS

CHAPTER 42. STATE BOARD OF OCCUPATIONAL THERAPY EDUCATION AND LICENSURE

MINIMUM STANDARDS OF PRACTICE

§ 42.24. Code of **[Ethics] ethics**.

[*Purpose*. The Board adopts the following Code of Ethics to establish and maintain a high standard of integrity and dignity in the profession and to protect the public against unprofessional conduct on the part of licensees. The Code of Ethics is adapted with permission from the "Occupational Therapy Code of Ethics" of the American Occupational Therapy Association (revised July 1994).

(1) *Principle 1*. Licensees shall demonstrate a concern for the well-being of the recipients of their services. (beneficence)

(i) Licensees shall provide services in an equitable manner for all individuals.

(ii) Licensees shall maintain relationships that do not exploit the recipient of services sexually, physically, emotionally, financially, socially or in any other manner. Licensees shall avoid those relationships or activities that interfere with professional judgment and objectivity.

(iii) Licensees shall take all reasonable precautions to avoid harm to the recipient of services or to his property.

(2) *Principle 2*. Licensees shall respect the rights of the recipients of their services. (autonomy, privacy, confidentiality)

(i) Licensees shall collaborate with service recipients or their surrogates, or both, in determining goals and priorities throughout the intervention process.

(ii) Licensees shall fully inform the service recipients or their surrogates, or both, of the nature, potential risks and outcomes of any interventions.

(iii) Licensees shall obtain written informed consent from subjects involved in research activities indicating they have been fully advised of the potential risks and outcomes.

(iv) Licensees shall respect the individual's right to refuse professional services or involvement in research or educational activities.

(v) Licensees shall protect the confidential nature of information gained from educational, practice, research and investigational activities.

(3) *Principle 3*. Licensees shall achieve and continually maintain high standards of competence. (duties)

(i) Licensees shall use procedures that conform to the standards of acceptable and prevailing occupational therapy practice.

(ii) Licensees shall take responsibility for maintaining competence by participating in professional development and education activities.

(iii) Licensees shall perform their duties on the basis of accurate and current information.

(iv) Licensees shall protect service recipients by ensuring that duties assumed by or assigned to other licensees are commensurate with their qualifications and experience.

(v) Licensees shall provide appropriate supervision to individuals for whom the licensees have supervisory responsibility.

(vi) Licensees shall refer recipients to other service providers or consult with other service providers when additional knowledge and expertise are required.

(4) *Principle 4*. Licensees shall comply with laws and regulations governing the practice of occupational therapy in this Commonwealth. (justice)

(i) Licensees shall understand and abide by applicable local, State and Federal laws.

(ii) Licensees shall inform employers employees, and colleagues about those laws and regulations that apply to the profession of occupational therapy.

(iii) Licensees shall require those they supervise in occupational therapy related activities to adhere to this chapter.

(iv) Licensees shall accurately record and report all information related to professional activities.

(5) *Principle 5*. Licensees shall provide accurate information about occupational therapy services. (veracity)

(i) Licensees shall accurately represent their qualifications, education, experience, training and competence.

(ii) Licensees shall disclose any affiliations that may pose a conflict of interest.

(iii) Licensees shall refrain from using or participating in the use of any form of communication that contains false, fraudulent, deceptive or unfair statements or claims.

(6) *Principle 6*. Licensees shall treat colleagues and other professionals with fairness, discretion and integrity. (fidelity, veracity)

(i) Licensees shall safeguard confidential information about colleagues and staff members.

(ii) Licensees shall accurately represent the qualifications, views, contributions and findings of colleagues.

(iii) Licensees shall report any breaches of the Board's law and this chapter to the Board.]

(a) Licensees shall adhere to the American Occupational Therapy Association (AOTA) *Occupational Therapy Code of Ethics (2015)*, except as provided in subsections (b) and (c).

(b) Whenever there is a conflict between the AOTA *Occupational Therapy Code of Ethics (2015)* and Federal or State law, licensees shall adhere to Federal and State law.

(c) Whenever there is a conflict between the AOTA *Occupational Therapy Code of Ethics (2015)* and this chapter, licensees shall adhere to this chapter.

[Pa.B. Doc. No. 16-279. Filed for public inspection February 19, 2016, 9:00 a.m.]

[49 PA. CODE CH. 42]
General Revisions

The State Board of Occupational Therapy Education and Licensure (Board) proposes to amend §§ 42.13—42.16, 42.25 and 42.51—42.58 and add §§ 42.61—42.63 (relating to professional liability insurance requirement; notifications; and automatic suspension) to read as set forth in Annex A.

Effective Date

This proposed rulemaking will be effective upon final-form publication in the *Pennsylvania Bulletin*.

Statutory Authority

Section 5(b) of the Occupational Therapy Practice Act (act) (63 P. S. § 1505(b)) authorizes the Board to promulgate and adopt rules and regulations not inconsistent with the act as it deems necessary for the performance of its duties and the proper administration of the act. Section 8(5)(vi) of the act (63 P. S. § 1508(5)(vi)) requires the Board to promulgate regulations governing self-insurance. Section 15(a) of the act (63 P. S. § 1515(a)) further provides that "[t]he board may establish additional requirements for license renewal designed to assure continued competency of the applying occupational therapist or occupational therapy assistant."

Background and Purpose

The act of July 5, 2012 (P. L. 1132, No. 138) (Act 138) amended the act to, among other things, require the maintenance of professional liability insurance by occupational therapists, provide for the imposition of civil penalties in accordance with the act of July 2, 1993 (P. L. 345, No. 48), permit the Board to participate in the Bureau of Professional and Occupational Affairs' impaired professionals program and authorize the Board to establish additional requirements for licensure renewal designed to ensure continued competency for occupational therapy assistants. The Board established continued competency regulations for occupational therapists at 43 Pa.B. 3350 (June 22, 2013). This proposed rulemaking implements the professional liability insurance and continued competency provisions of Act 138.

Description of Amendments

Professional liability insurance

Section 3 of Act 138 added a requirement that an occupational therapist obtain and maintain professional liability insurance as a condition of licensure effective with the next biennial period following the effective date of Act 138. Act 138 took effect on September 4, 2012. The next biennial period following that date began on July 1, 2013. Therefore, the Board proposes the following amendment to implement the new professional liability insurance requirement.

The Board proposes to amend §§ 42.13—42.15 (relating to application for licensure; foreign-educated applicants; and application for temporary license) to require applicants for licensure as an occupational therapist to submit proof that the applicant has professional liability insurance as required under the act. In addition, Act 138 provides that it is sufficient for an applicant to file a copy of a letter from the applicant's professional liability insurance carrier indicating that the applicant will be covered against professional liability upon issuance of the license, or a certification from the applicant that the applicant will be covered by an employer's professional liability insurance at the beginning of employment, so long as the applicant follows up with actual proof of insurance within 30 days after issuance of the license or beginning of employment. The proposed amendments to §§ 42.13—42.15 implement these provisions as part of the application process.

Because Act 138 requires an occupational therapist to maintain professional liability insurance, the Board also proposes to amend § 42.16 (relating to biennial renewal; inactive status; failure to renew) to include the requirement that upon renewal a licensed occupational therapist shall certify both completion of the continued competency requirements and maintenance of professional liability insurance. Section 42.16 would also be amended to provide that an occupational therapist applying to reactivate an inactive license would need to provide proof of liability insurance coverage. The Board is also proposing additional amendments to this section to improve clarity.

The Board proposes to add §§ 42.61—42.63 to implement the remaining provisions in Act 138 regarding professional liability insurance. Section 42.61 sets forth the general requirement that an occupational therapist is required to obtain and maintain professional liability insurance in the minimum amount of $1 million per occurrence or claims made. Subsection (b) would prescribe the type of proof required to demonstrate professional liability insurance coverage. Subsection (c) would provide that an occupational therapist who does not maintain professional liability insurance as required may not practice occupational therapy in this Commonwealth.

Section 42.62 would incorporate the provision in Act 138 that requires an occupational therapist to notify the Board within 30 days of a failure to maintain the required professional liability insurance, and the provision that requires an occupational therapist whose license was issued in reliance on a letter from the insurance carrier or an applicant's certification of coverage by an employer to provide proof on insurance within 30 days after the date of issuance of the license or beginning of employment. Section 42.63 incorporates the provisions of Act 138 that provide for the automatic suspension of an occupational therapist license during any period in which the occupational therapist fails to maintain professional liability insurance.

Continued competency

Act 138 also amended the act to provide the authority to the Board to establish continued competency requirements for occupational therapy assistants. The Board established continued competency regulations for occupational therapists at 43 Pa.B. 3350. At this time, the Board proposes to extend those requirements to occupational therapy assistants by replacing "occupational therapist" with the more general "licensee" throughout §§ 42.51—42.58 (relating to continuing competency). As the Board only licenses occupational therapists and occupational therapy assistants, the term is all-inclusive and the regulations would then apply the continued competency requirements to both classes of licensee.

The continued competency requirements for occupational therapists were effective beginning with the July 1,

2013, to June 30, 2015, biennium. Therefore, occupational therapists were required to complete 24 hours of approved continued competency activities by June 30, 2015, as a condition of biennial renewal. The Board is proposing that the continued competency requirements will begin for occupational therapy assistants in the 2015—2017 biennium. Therefore, § 42.53(a) (relating to continued competency requirements) would be amended to provide that "[b]eginning with the July 1, 2015—June 30, 2017, biennium, an occupational therapy assistant shall complete a minimum of 24 contact hours in each biennial period in acceptable continued competency activities" as a condition of licensure renewal.

Additionally, in considering the continued competency requirements for occupational therapists, the Independent Regulatory Review Commission (IRRC) suggested that, should an opportunity arise, § 42.56 (relating to waivers of continued competency requirements; extension of time to complete) should be clarified to explain the process for requesting an "extension" to complete the continued competency requirements, noting that the first and only time the concept of an extension appears is in § 42.57(b)(2) (relating to documentation and reporting of continued competency activities), which provides that a licensee "who has not completed the required hours of continued competency activities will not be eligible for renewal until the hours are completed, unless a waiver *or extension* has been granted." (Emphasis added.) Therefore, the Board proposes to amend § 42.56 to include the process for a licensee to request, and the Board to grant, an extension of time to complete the continued competency activities.

Fiscal Impact and Paperwork Requirements

To implement the statutory requirements of Act 138 and this regulation, the Board must amend its applications for initial licensure, biennial renewal and reactivation. There may be other costs associated with increased prosecutions if occupational therapists fail to obtain and maintain professional liability or occupational therapy assistants fail to complete the continued competency requirements. The Board has determined that it has sufficient funds to absorb these costs without a fee increase at this time. Occupational therapists who wish to become licensed or maintain their licenses must either obtain professional liability insurance, self-insure or have their employers provide coverage. It is estimated that the annual premium for the required professional liability insurance ranges from $85 to $230 annually. They will also be subject to increased paperwork requirements because occupational therapists will be required to provide documentary proof that they have obtained the required insurance upon initial licensure and upon reactivation of an inactive license. Occupational therapy assistants will also be subject to additional paperwork requirements because they will be required to maintain a professional continued competence portfolio and make it available to the Board.

Sunset Date

The Board continuously monitors the effectiveness of its regulations. Therefore, a sunset date has not been assigned.

Regulatory Review

Under section 5(a) of the Regulatory Review Act (71 P. S. § 745.5(a)), on February 5, 2016, the Board submitted a copy of this proposed rulemaking and a copy of a Regulatory Analysis Form to IRRC and the Chairpersons of the House Professional Licensure Committee (HPLC) and the Senate Consumer Protection and Professional Licensure Committee (SCP/PLC). A copy of this material is available to the public upon request.

Under section 5(g) of the Regulatory Review Act, IRRC may convey comments, recommendations or objections to the proposed rulemaking within 30 days of the close of the public comment period. The comments, recommendations or objections must specify the regulatory review criteria in section 5.2 of the Regulatory Review Act (71 P. S. § 745.5b) which have not been met. The Regulatory Review Act specifies detailed procedures for review, prior to final publication of the rulemaking, by the Board, the General Assembly and the Governor of comments, recommendations or objections raised.

Public Comment

Interested persons are invited to submit written comments, recommendations or objections regarding this proposed rulemaking to Regulatory Counsel, State Board of Occupational Therapy Education and Licensure, P. O. Box 69523, Harrisburg, PA 17106-5923 or RA-STRegulatoryCounsel@pa.gov within 30 days following publication of this proposed rulemaking in the *Pennsylvania Bulletin*. Reference No. 16A-6711 (general revisions) when submitting comments.

KERRI L. HAMPLE, OTC, OTR/L,
Chairperson

Fiscal Note: 16A-6711. Costs associated with the regulation are minimal; the Board has sufficient revenue in its augmentation account to absorb the costs without increasing fees; (8) recommends adoption.

Annex A

TITLE 49. PROFESSIONAL AND VOCATIONAL STANDARDS

PART I. DEPARTMENT OF STATE

Subpart A. PROFESSIONAL AND OCCUPATIONAL AFFAIRS

CHAPTER 42. STATE BOARD OF OCCUPATIONAL THERAPY EDUCATION AND LICENSURE

LICENSURE

§ 42.13. Application for licensure.

(a) To apply for licensure, an applicant shall pay the required fee and submit evidence satisfactory to the Board on forms provided by the Board that the applicant meets the following criteria:

* * * * *

(4) Has passed the licensure examination or has qualified for a waiver of the licensure examination under § 42.12 (relating to waiver of licensure examination).

(b) In addition to the requirements in subsection (a), an applicant for an occupational therapist license shall submit one of the following:

(1) Proof that the applicant has professional liability insurance as set forth in § 42.61 (relating to professional liability insurance requirement).

(2) A letter from the applicant's insurance carrier indicating that the applicant will be covered against professional liability in the amount specified in § 42.61(a) upon the issuance of the applicant's license to practice occupational therapy in this Commonwealth.

(3) A certification from the applicant indicating that the applicant will be covered by an employer against professional liability in the amount speci-

fied in § 42.61(a) effective upon the beginning of employment as an occupational therapist.

§ 42.14. Foreign-educated applicants.

* * * * *

(b) The foreign-educated applicant may be licensed by the Board, if he has complied with subsection (a) and has met one of the following criteria:

(1) Passed the licensure examination.

(2) Qualified for a waiver of the licensure examination under § 42.12 (relating to waiver of licensure examination).

(c) In addition to the requirements in subsections (a) and (b), a foreign-educated applicant for an occupational therapist license shall submit one of the following:

(1) Proof that the foreign-educated applicant has professional liability insurance as set forth in § 42.61 (relating to professional liability insurance requirement).

(2) A letter from the foreign-educated applicant's insurance carrier indicating that the applicant will be covered against professional liability in the amount specified in § 42.61(a) upon the issuance of the applicant's license to practice occupational therapy in this Commonwealth.

(3) A certification from the foreign-educated applicant indicating that the applicant will be covered by an employer against professional liability in the amount specified in § 42.61(a) effective upon the beginning of employment as an occupational therapist.

§ 42.15. Application for temporary license.

* * * * *

(c) The Board may also issue a temporary license to an applicant who:

* * * * *

(4) Certifies that the applicant will perform services for not longer than a 6 consecutive month period in a calendar year, in association with an occupational therapist licensed under the act.

(d) In addition to the requirements in subsection (a) or (c), an applicant for a temporary license as an occupational therapist shall submit one of the following:

(1) Proof that the applicant has professional liability insurance as set forth in § 42.61 (relating to professional liability insurance requirement).

(2) A letter from the applicant's insurance carrier indicating that the applicant will be covered against professional liability in the amount specified in § 42.61(a) upon the issuance of the applicant's temporary license.

(3) A certification from the applicant indicating that the applicant will be covered by an employer against professional liability in the amount specified in § 42.61(a) effective upon the beginning of employment.

§ 42.16. Biennial renewal; inactive status; failure to renew.

* * * * *

(b) Biennial renewal forms and other forms and literature to be distributed by the Board will be forwarded to the last mailing address given to the Board by the licensee. **[Whenever the licensee changes his mailing address of record, he shall notify the Board, in writing, within 10 days after making the address change.] The licensee has the responsibility to notify the Board of changes to the mailing address of record in writing within 10 days after making the address change.**

(c) **[To retain the right to engage in practice, the licensee shall renew his license in the manner prescribed by the Board and pay the required fee prior to the expiration of the next biennium.] To retain the right to engage in practice, the licensee shall renew the licensee's license biennially as follows:**

(1) An occupational therapist shall complete the biennial renewal application, pay the required fee and certify completion of the continued competence requirement as specified in § 42.53 (relating to continued competency requirements) and maintenance of the required professional liability insurance coverage as specified in § 42.61 (relating to professional liability insurance requirement).

(2) An occupational therapy assistant shall complete the biennial renewal application, pay the required fee and certify completion of the continued competence requirement as specified in § 42.53.

(d) **[When a license is renewed beyond June 30 of an odd numbered year, a penalty fee of $5 for each month or part of a month that the licensee has engaged in practice beyond the renewal date will be charged in addition to the renewal fee.] As set forth in section 225 of the Bureau of Professional and Occupational Affairs Fee Act (63 P. S. § 1401-225), a licensee who has engaged in practice beyond the renewal date without renewing the license will be charged a fee of $5 for each month or partial month of practice during which the license was not renewed, in addition to the biennial renewal fee.**

* * * * *

(g) A licensee who is applying to return to active status is required to pay fees which are due**[, submit a] and submit:**

(1) A sworn statement stating the period of time during which **[he] the licensee** was not engaged in practice in this Commonwealth**[, submit a].**

(2) A resume of professional activities since the most recent licensure**[, and submit a].**

(3) A letter of good standing from another state or territory where **[he] the licensee** is currently licensed or registered to practice**, if applicable**.

(4) Proof of professional liability insurance coverage as set forth in § 42.61 if applying to reactivate an occupational therapist license.

(h) The applicant for licensure renewal will not be assessed a fee or penalty for preceding biennial periods in which the applicant did not engage in practice in this Commonwealth.

(i) **[If the applicant] An applicant who** has failed to renew **[his] a** license and has not practiced for longer

than 4 years**[, the applicant]** shall pass the licensure examination or qualify for a waiver of examination under § 42.12 (relating to waiver of licensure examination) before **[his] the** license is renewed. In addition, the Board may require the applicant to do one or more of the following:

* * * * *

(k) A licensee who has engaged in practice during a period in which **[he was not licensed] the licensee's license was not active** may be subject to criminal prosecution under section 16(c) of the act (63 P. S. § 1516(c)).

CONTINUED COMPETENCY

§ 42.51. Purpose.

The purpose of §§ 42.52—42.58 is to implement section 15(a) of the act (63 P. S. § 1515(a)), which authorizes the Board to establish additional requirements for licensure renewal to ensure continued competency to achieve the legislative purpose in section 2 of the act (63 P. S. § 1502) to ensure the highest degree of professional care and conduct on the part of **[occupational therapists] licensees**.

§ 42.52. Definitions.

The following words and terms, when used in **[§§ 42.51 and 42.53—42.58] in this chapter**, have the following meanings, unless the context clearly indicates otherwise:

* * * * *

Continued competency—The multidimensional process by which **[an occupational therapist] a licensee** demonstrates the development and maintenance of the knowledge, skills, attitudes, judgment, abilities and ethics necessary to practice occupational therapy in a variety of roles and settings.

* * * * *

Mentor—A person who holds a current license, certificate or registration in a health-related or education field, or who is otherwise exempt by statute from the requirement to hold a license, certificate or registration, who is engaged in a one-on-one or group teaching/coaching relationship with **[an occupational therapist] a licensee** for the stated purpose of imparting specific knowledge and skills that will advance the **[occupational therapist's] licensee's** competency in occupational therapy.

Mentorship—Participation in a formalized, one-on-one or group teaching/learning relationship for the purposes of building **[an occupational therapist's] a licensee's** capacity to practice occupational therapy.

* * * * *

Professional continued competence portfolio—A document that evidences the **[occupational therapist's] licensee's** completion of the continued competency requirement in § 42.53 (relating to continued competency requirements).

Protégé—**[An occupational therapist] A licensee** who is engaged in a one-on-one or group relationship with a mentor for the stated purpose of acquiring specific skills and knowledge related to the practice of occupational therapy.

* * * * *

§ 42.53. Continued competency requirements.

(a) Beginning with the July 1, 2013—June 30, 2015, biennium, an occupational therapist shall complete a minimum of 24 contact hours in each biennial period in acceptable continued competency activities listed in § 42.55 (relating to acceptable continued competency activities) as a condition of licensure renewal. **Beginning with the July 1, 2015—June 30, 2017, biennium, an occupational therapy assistant shall complete a minimum of 24 contact hours in each biennial period in acceptable continued competency activities listed in § 42.55 as a condition of licensure renewal.**

(b) **[An occupational therapist] A licensee** is exempt from complying with subsection (a) for the first biennial renewal **period** following initial licensure.

(c) **[An occupational therapist] A licensee** seeking to reactivate a lapsed or inactive license shall show compliance with the continued competency contact hour requirement during the 2-year period immediately preceding application for reactivation.

(d) As a condition of reinstatement, **[an occupational therapist] a licensee** hose license has been suspended or revoked shall complete the required continued competency contact hours for each licensure biennium in which the license was suspended or revoked.

§ 42.54. Education program providers.

(a) *General.* Educational courses offered by preapproved and Board-approved providers will be accepted as satisfying the continued competency requirement. It is the responsibility of the **[occupational therapist] licensee** to ascertain the approval status of the provider before undertaking a course.

* * * * *

(e) *Individual course approval.*

(1) **[An occupational therapist] A licensee** may request approval of contact hours for educational courses not otherwise approved by submitting an application for approval to the Board no later than 90 days before the end of the biennial renewal period that includes the following:

* * * * *

§ 42.55. Acceptable continued competency activities.

* * * * *

(b) The following activities are acceptable as long as the specific activity complies with subsection (a):

* * * * *

(3) Fieldwork supervision.

(i) **[An occupational therapist] A licensee** may earn:

* * * * *

(4) Professional writing.

(i) **[An occupational therapist] A licensee** ay earn the following contact hours, up to a maximum aggregate of 15 per biennium, for professional writing:

* * * * *

(5) Editing.

(i) **[An occupational therapist] A licensee** may earn the following contact hours, up to a maximum aggregate of 15 per biennium, for editing:

* * * * *

(6) Presentation and instruction.

(i) **[An occupational therapist] A licensee** may earn 2 contact hours, up to a maximum aggregate of 12 per biennium, for each 60-minute oral or poster presentation or instruction related to occupational therapy.

* * * * *

(7) Unpaid service.

(i) **[An occupational therapist] A licensee** may earn:

* * * * *

§ 42.56. Waivers of continued competency requirements**; extension of time to complete**.

(a) The Board may waive all or part of the continued competency activity requirements**, or grant an extension of time to complete the requirements,** in the case of a serious illness, injury or emergency which prevents a licensee from completing the continued competency requirements.

(b) **[An occupational therapist] A licensee** seeking a waiver **or extension of time** shall submit a written request **[for a waiver]** and provide documentary evidence to the satisfaction of the Board of the serious illness, injury or emergency which would preclude the completion of the continued competency requirements.

(c) The request for a waiver **or extension of time** shall be filed with the Board 60 days before the end of the biennium in which the contact hours are being accrued unless the **[occupational therapist] licensee** proves to the satisfaction of the Board that it was impracticable to do so.

§ 42.57. Documentation and reporting of continued competency activities.

* * * * *

(b) **[An occupational therapist] A licensee** shall:

* * * * *

(2) Verify completion of the required contact hours of continued competency activities when the license is renewed. **[An occupational therapist] A licensee** who has not completed the required hours of continued competency activities will not be eligible for renewal until the hours are completed, unless a waiver or extension has been granted.

* * * * *

§ 42.58. Disciplinary action.

[An occupational therapist] A licensee who fails to comply with the continued competency activity requirements or the audit requirements or submits false documents in connection with the continued competency requirement will be subject to disciplinary action under section 16 of the act (63 P. S. § 1516).

PROFESSIONAL LIABILITY INSURANCE

(*Editor's Note*: Sections 42.61—42.63 are new and printed in regular type to enhance readability.)

§ 42.61. Professional liability insurance requirement.

(a) Effective July 1, 2013, an occupational therapist shall obtain and maintain professional liability insurance coverage in the minimum amount of $1 million per occurrence or claims made.

(b) Proof of professional liability insurance coverage may include:

(1) A certificate of insurance or copy of the declaration page from the insurance policy setting forth the effective date, expiration date and dollar amounts of coverage.

(2) Evidence of a plan of self-insurance approved by the Insurance Commissioner of the Commonwealth under regulations of the Insurance Department in 31 Pa. Code Chapter 243 (relating to medical malpractice and health-related self-insurance plans).

(c) An occupational therapist who does not maintain the professional liability insurance required under subsection (a) may not practice occupational therapy in this Commonwealth.

§ 42.62. Notifications.

(a) An occupational therapist shall notify the Board within 30 days of a failure to maintain the required professional liability insurance.

(b) An occupational therapist whose license was issued in reliance on a letter or certificate as permitted under section 8(5)(iv)(A) and (B) of the act (63 P. S. § 1508(5)(iv)(A) and (B)) in accordance with §§ 42.13(b)(2) or (3), 42.14(c)(2) or (3) or 42.15(d)(2) or (3) (relating to application for licensure; foreign-educated applicants; and application for temporary license) shall provide the Board with proof of professional liability insurance coverage as set forth in § 42.61 (relating to professional liability insurance requirement) within 30 days after the date of issuance of the license or beginning of employment, as applicable.

(c) Failure to notify the Board within 30 days as required in subsection (a) or (b) constitutes unprofessional conduct and subjects the occupational therapist to disciplinary action under section 16(a)(2) of the act (63 P. S. § 1516(a)(2)).

§ 42.63. Automatic suspension.

(a) An occupational therapist's license shall be automatically suspended during any period in which the occupational therapist fails to maintain professional liability insurance.

(b) A license that has been automatically suspended under subsection (a) will be reinstated only upon receipt of a copy of documentation demonstrating that the occupational therapist has the required professional liability insurance as set forth in § 42.61 (relating to professional liability insurance requirement).

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