

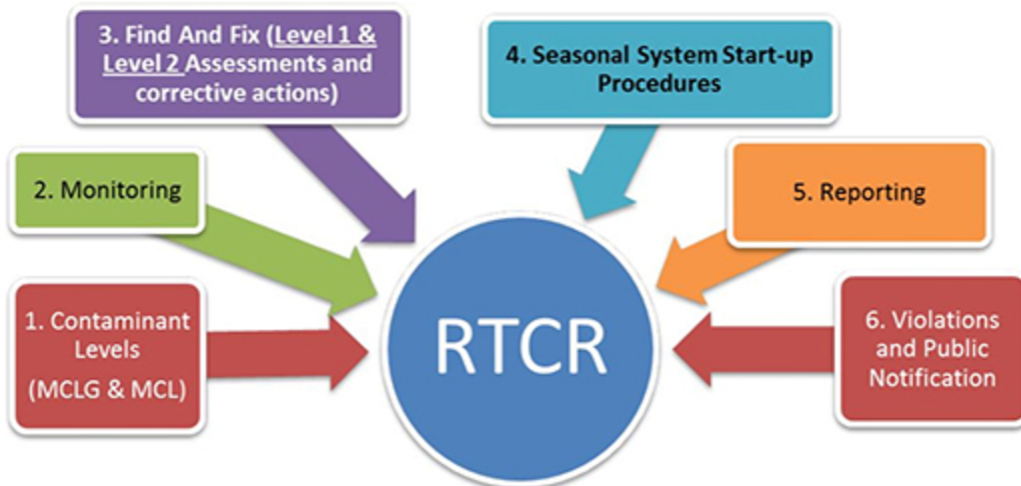


TOM WOLF, GOVERNOR • PATRICK MCDONNELL, DEP SECRETARY

New RTCR Responsibilities for Systems and Laboratories

John Cairnes, Compliance Assistance Specialist, Southeast Region

The Revised Total Coliform Rule (RTCR) has brought new challenges to public water suppliers and DEP-accredited drinking water laboratories, with its focus on the EPA's "find and fix" approach to potential sources of contamination. DEP is aware that many public water suppliers, especially owners of small, transient noncommunity water systems, are not well-versed in state drinking water regulations, and will require DEP's assistance in understanding their responsibilities under these regulations.



Public water suppliers in Pennsylvania monitor their plumbing or distribution systems for total coliform on at least a monthly basis. If a routine drinking water sample tests positive for either total coliform or *E. coli*, water suppliers are required to take action as set forth in 25 Pa. Code, Chapter 109 as stated below.

- Water suppliers must report all routine positive total coliform and *E. coli* results to DEP within one hour of notification by their accredited laboratory. As a service to their customers, some laboratories may already be doing this on their clients' behalf. However, water suppliers should be aware that they are still required to contact DEP within one hour of the notification they receive from the laboratory.
- Three check samples must be collected for each routine positive total coliform or *E. coli* result within 24 hours of confirmation of the coliform positive result. If there is any reason why the check samples cannot be taken within 24 hours of notification, DEP should be informed of the situation as soon as possible.
- Systems that do not have 4-log treatment of viruses are required to collect a source water sample for each source active at the time of a routine positive total coliform or *E. coli* result and have it analyzed for the presence of *E. coli*.
- A failure to collect check samples following a routine positive total coliform or *E. coli* result will trigger either a Level 1 or Level 2 assessment, to be completed by the system. It is the responsibility of the water supplier to ensure that check samples are collected.
- Multiple total coliform and/or *E. coli* positive results will also trigger either a Level 1 or Level 2 assessment.
- Assessments must be completed by appropriate personnel within 30 days of triggering the assessment. Because RTCR is relatively new, many public water suppliers are unaware of this new requirement, and may need DEP's assistance to comply. To best serve the needs of the water supplier, **it is crucial that all one-hour reporting requirements are rigorously followed.**

In addition to the above, DEP would also like to remind all water suppliers, certified operators, and accredited labs of reporting classifications for total coliform and *E. coli* samples. RTCR has created new reporting protocols for sample results:

- Routine coliform samples shall be reported as Distribution (“D”) samples. Location ID shall be taken from a system’s RTCR sample siting plan and will be a three-digit number between 700 and 999.
- Check samples shall be reported using the “C” code. **Location ID for check samples shall be the same as the routine positive sample that necessitated them.**
- Source water samples shall be reported as raw (“R”) samples. Location ID shall be the three-digit source ID number between 001 and 099. If a water supplier is uncertain of a source’s ID number, it can be obtained from DEP.
- Samples collected as part of a Level 2 assessment shall be reported as Special (“S”) samples. Location ID will be provided to the labs by the Assessor.
- Samples collected by seasonal systems as part of their seasonal startup procedure shall be reported as “A” samples. Most location IDs will be taken from the system’s RTCR sample siting plan.

The Revised Total Coliform Rule entails more than what is summarized in this article. Water suppliers, operators and laboratory representatives are encouraged to direct any questions to their regional or district Safe Drinking Water Program for more information.



Common RTCR Deficiencies and Corrective Actions in Northeastern PA

Peter A. Mengak, Compliance Assistance Specialist, Northeast Region

DEP staff in the Northeast Region have noted some common deficiencies when reviewing Revised Total Coliform Rule (RTCR) Level 2 Assessment Forms. They have also tracked the corresponding corrective actions that public water systems have implemented to help address and correct those deficiencies.

In identifying **Distribution System** issues, staff found deficiencies ranging from hoses that needed to be repaired, replaced or completely removed from the system; fittings, lines and service connections that were leaking in various locations; and the lack of proper disinfection procedures when making repairs or replacements to system components such as lines, pumps or tanks. In some instances, sampling sites were not suitable and needed to be disinfected or even replaced with more suitable sampling locations.

Poor water age caused by water remaining in lines for long periods due to low usage or infrequent high demand periods was offset by distribution system flushing.

In assessing and identifying issues with **Sources**, staff found many instances where wells were not properly sealed due to well caps not allowing for a proper seal because of holes, missing gaskets or

gaps. A few instances found well caps without vents or vents that had screens that were not completely intact. Deficiencies were also found when well casings were not extended the necessary 18 inches above the ground surface. In such cases, corrective actions were to install properly fitted sanitary seal well caps and to extend casings an acceptable amount above grade. Sloping the ground in a direction away from the casing to prevent water from collecting around the casing was also found to be an acceptable form of corrective action.

Some well sources were located in a pit. In situations where the pit was not dry and the condition could not be corrected, the elimination of the pit and an extension of the well casing 18 inches above grade was the corrective action listed.

In cases where work on the well was necessary, disinfection of the well source and sanitizing of the well pump and lines were used as corrective actions.

Common **Treatment** deficiencies were ultraviolet light lamp intensities where the bulb was losing effectiveness due to age or mineral buildup on the quartz sleeve. Corrective actions associated with this issue were to replace the lamp or clean the sleeve. Issues with water softeners and cartridge filters were generally associated with a lack of maintenance and typical corrective actions were to clean and maintain the brine solution tank and routine filter replacement along with filter housing disinfection. Malfunctioning chlorinators were found to be a common deficiency and corrective actions associated were to routinely monitor chlorine residuals and a general maintenance of the feed pump and associated plumbing.



Northeastern PA is not unique. The RTCR deficiencies most often found in this corner of the Commonwealth are found in all 67 counties. The corrective actions to address those deficiencies are common too. The proper installation, use and maintenance of sources, distribution systems and treatments can help avoid RTCR deficiencies and reduce time, money and violations in the long run.



Important DWELR Update

Jason Minnich, Operations and Monitoring, Central Office

Some of you may have heard that the EPA has developed a new portal for submission of sample results called the Compliance Monitoring Data Portal (CMDP). At this time, Pennsylvania does not have plans to move to the new CMDP. Laboratories and water systems will continue to use the Drinking Water Electronic Lab Reporting (DWELR) web application to report drinking water sample results for public water systems regulated under Pennsylvania's Safe Drinking Water Act. If Pennsylvania decides to migrate to the CMDP in the future, laboratories and water systems will be notified in advance to allow time to transition to the new system.



Permitting Requirement Reminder

Sheryl Martin, Compliance Assistance Specialist, Southcentral Region

Not sure if your upcoming project will require a permit? This is a reminder to public water systems that it is the obligation of the responsible owner/operator to first obtain a public water supply permit amendment **prior** to making substantial modifications to your system. The Safe Drinking Water Regulations, Title 25, Chapter 109§109.501(b), state that it is unlawful for any person to substantially modify a permitted public water system without first obtaining a construction permit from DEP. Further, 109.501(d) prohibits operation of a substantially modified facility without having first obtained an amended operation permit from DEP.




Section 109.1 defines “substantial modification” as a change that may affect the quantity or quality of the water served to the public. **If you are not sure if your project will require a permit or the type of permit required, please contact your Technical Services Section Chief for your region prior to making any changes or preparing your application.** There is no fee for that consultation and the time spent will help you to understand any permitting requirements, and help you to understand what is needed to submit a complete permit application. Complete permit applications can be reviewed more quickly.

DEP will determine whether a particular modification is a substantial modification or whether a given proposal will require a major or minor amendment. Some examples of major amendments include: new sources, additions or deletions of treatment processes, pumping stations and storage reservoirs. Examples of minor amendments include: changes in chemicals, replacement of tank linings, tank repainting, covering of reservoirs, standpipes, transmission mains and changes in legal status.

Public Water Supply Application forms and Water Supply Modules can be found [on our eLibrary](#).

The time needed to process your permit application will depend upon the kind of permit needed, the complexity of the proposal, and the accuracy and completeness of your application. More information on DEP’s permit review process and our Permit Guarantee Policy can be found [here](#).



Small Water System Resource: Contracting a Certified Water Operator (Circuit Rider) is Now Available on eLibrary

Cathy Port, Outreach Assistance Program Coordinator, Central Office

If you are an owner or responsible official of a manufactured home community, nursing home, school, large restaurant, business, or manufacturing plant, providing drinking water may not be your principle business or mission. Your main business may be renting property, preparing and serving food to customers, educating children, caring for patients, or manufacturing a product. However, drinking water is a necessity for your operations, and if you provide drinking water via your own on-site water system, complying with safe drinking water regulations is a cost of doing business and important for the public health and safety of residents, employees, students, and visitors.

In Pennsylvania, all community and nontransient non-community public water systems are required to employ and identify a Certified Water Operator with the responsibility, knowledge and experience needed to produce and maintain safe drinking water. Because operating a small public water system may not be a full-time job, an owner or responsible official may choose to contract with a certified operator or company, often referred to as a “circuit rider.” A circuit rider may operate multiple water systems and share some responsibilities for operating a water system with the owner or responsible official.

DEP has developed a publication to assist owners/responsible officials and contract operators by explaining the responsibilities of operating a public water system and providing tools to navigate the circuit rider or contract operator process to achieve the goal of protecting public health through safe drinking water. The publication includes a list of responsibilities for each of the parties, an interview tool, and some recommendations for establishing written agreements or contracts to delineate responsibilities. The publication also includes resources for additional information. The publication is available on [eLibrary](#) or visit www.dep.pa.gov and select “Data and Tools,” “ELIBRARY.” Then enter the publication number: **3910-BK-DEP4647** in the Search Box.



Preventing Asbestos Exposure While Repairing AC Pipe

Joe Mattucci, Capability Enhancement Chief, Southcentral Region

Asbestos cement (AC), also referred to as transite, was a popular distribution pipe material in the 1940s and saw continued use into the 1970s. It is lightweight, resistant to corrosion, and simple to install. By the late 1970s the risks associated with exposure to asbestos fibers became more recognized and the production of AC pipe in the United States stopped. While it was available, many public water systems and engineers chose to use AC; it has been estimated that approximately 15% of current distribution and transmissions lines in the US are AC.

AC pipe has an expected lifespan of about 50 to 70 years. This means most of the AC pipe currently in the ground today is at the end of its design life. As AC ages, it becomes brittle and breaks more easily, creating a greater chance of ruptured or leaking water mains. Asset management plans should budget for AC pipe replacement, but until those projects are completed, repairs will be needed and workers should take steps to keep themselves and those around them safe.



Asbestos containing materials fall into two main categories – friable and nonfriable. Friable asbestos materials can be crumbled by hand when dry. When these friable materials are disturbed, they release asbestos fibers into the air which can lead to an increased inhalation risk. Nonfriable asbestos materials, like those in AC pipes, are more sturdy and cannot be crumbled by hand when dry. However, during activities like grinding, sanding, cutting, or drilling, these materials become friable and release asbestos fibers into the air.

Because of the established dangers of mesothelioma, asbestosis, and lung cancer, the Occupational Safety and Health Administration (OSHA) has set the Permissible Exposure Level (PEL) for asbestos at 0.1 fibers per cubic centimeter (f/cc) of air as an 8-hour time-weighted average, and an Excursion Level (EL) of 1.0 f/cc in any 30-minute period. **Dry cutting AC pipe can expose workers to as much as 1,000 f/cc, which is 10,000 times the OSHA PEL.**

Individuals working with AC pipe need to protect themselves by limiting the release of asbestos fibers into the environment around them. Some general actions that can be done to minimize the risk of exposing yourself and others to asbestos fibers are:

- Use personal protective equipment such as a respirator with the appropriate canister, coveralls, gloves, head coverings, and boots.
- Personal protective equipment should be disposed of as asbestos-containing waste after any exposure. **DO NOT TAKE POTENTIALLY CONTAMINATED CLOTHING HOME AND PUT IT IN THE LAUNDRY.**
- Do not use dry pipe cutting methods; all cuts should be made wet. There are some special wetting agents available for use when cutting AC.
- HEPA vacuums should be used to collect dust during cutting and other work.
- Clean-up, double-bag, and properly dispose of all asbestos-containing waste and debris.
- Do not use compressed air or leaf blowers to clean up any dust.
- Do not do any dry sweeping, dry shoveling, or any other dry clean-up methods of dust and debris.
- AC debris, including abandoned pipe, cannot be left in the trench and backfilled over once repairs are complete.

As a reminder, notification to Federal and State asbestos regulators is needed if the repair work will make the AC pipe friable and exceed 260 linear feet, 160 square feet, or 35 cubic feet of asbestos containing material. These amounts are calculated only using the actual disturbed portion of the pipe, such as the immediate area around a cut. Please also check with your local regulators if you have any questions about the requirements you may need to meet when working with AC pipe.

Go to the DEP [Bureau of Air Quality website](#) for information on asbestos, working with asbestos and asbestos abatement.



Water Rates: A Measure of Your Water System's Past, Present and Future

Mike Obal, Midwest Assistance Partnership (reprinted with permission)



Most water systems have been told by technical assistance providers, lenders, and an occasional board member, that they need to raise rates. To non-community members, it sounds so easy to just raise the rate a couple bucks or more a month, but for citizens and boards, it does not seem so simple.

The purpose of your water system is to provide safe, aesthetically pleasing water, at an affordable rate. This means that your water needs to be clean, and meet all EPA regulations. It needs to taste good and look good, and all this needs to be done while achieving an affordable rate. The water system needs to be thought of as a product, service, and a business.

So why do we need to raise rates? Anybody that has been around for a few years knows that no product ever goes down in price. Wages, fuels, interest rates, and general equipment are always on the increase with some increasing at a faster rate than others. The cost to produce the water you use every month is always increasing, and must be met with an increasing rate so that the water system can maintain its financial capacity.

When we talk about what needs to be covered in a rate increase, we need to include every little thing that is needed to run the water system. This includes all wages and benefits for employees, as well as system requirements, such as chemicals, maintenance, and repairs. The older the system is, the more problems you are going to run into, and the more costly this system will be in the end.

An efficient way for a water system to look at its rates is to compare incomes to expenses. A general rule of thumb is that for every dollar you spend on the water system, you should be bringing in one dollar and twenty-five cents in revenue. This will ensure that your system is saving some money for future expenses. Looking at these figures, a clerk can quickly calculate each month if the system rates are where they need to be.

So, after looking at all these factors and deciding that it may be a good time to raise the water rate, the community may need to hold a public outreach meeting, or a simple letter from the mayor may suffice. One of the best ways to increase the rate is to do it slowly over time, that way the citizens do not experience a sticker shock on their bill. As a final thought, if you determine that your water rates are in good standing, it may be a wise decision to pass an ordinance to increase rates annually at a set percentage of the water bill. A good rule of thumb would be somewhere between two and four percent.



Screens for Finished Water Storage Tank Overflows and Vents

Jill Anderson, Compliance Assistance Specialist, Southcentral Region

The Public Water Supply Manual – Part II Community System Design Standards details specific requirements for finished water storage tank design and construction. This includes requirements for screens on tank overflows and vents. Screens provide a critical barrier to contamination. If not properly protected with an appropriate screen, storage tank overflows and vents provide a direct pathway for contaminants to enter the tank.

According to the standards, an overflow or vent for a ground-level storage tank must be protected with a 24-mesh noncorrodible screen. This means that the screen material must have 24 openings per linear inch. The size of each opening is dependent on the diameter of the wire that makes up the screen. For example, a 24-mesh screen made of wire with 0.014-inch diameter produces openings of only 0.0277 inches.



Figure 1: A storage tank overflow grate with large openings

Why is this important? Screens protect storage tanks from contamination due to entry of living organisms, including rodents, birds, and other small animals.

However, many insects, including flies, mosquitos, and no-see-ums (biting midges), can also carry viruses and pathogenic bacteria, including Salmonella, and protozoa, such as *Cryptosporidium* and

Giardia. It is important for public health protection to keep these disease-carrying insects out of finished water storage tanks. No-see-ums can be as small as 1 mm (0.039 inch). A 24-mesh screen with 0.0277-inch openings will prevent even these tiny insects from entering a ground level tank.



Figure 2: A storage tank overflow with a compromised screen

For elevated tanks, the standards require a 4-mesh noncorrodible screen on overflows and vents. A 4-mesh screen, with 4 openings per linear inch, has openings of approximately 0.2 inch. While 4-mesh screen still protects from birds and small mammals, the openings are large enough for many insects to enter, including small flies. Most insects can fly high enough to enter elevated tanks. Therefore, a 24-mesh screen is most protective for all finished water storage tank vents and overflows. If using a fine mesh screen on an elevated tank vent, an automatically resetting pressure-vacuum relief mechanism must also be installed.

The standards also require that a screen is installed within the overflow pipe or vent in order to make it less susceptible to damage or vandalism. A 24-mesh screen that becomes damaged or otherwise compromised cannot provide the proper protection of the tank. Screens should be inspected frequently to make sure they remain intact. Also, a metal grate with openings larger than what is required by these standards is not an acceptable alternative for any type of storage tank. An improperly protected storage tank vent or overflow provides a direct pathway of contamination into your water system.

For more information, please refer to the [Public Water Supply Manual – Part II Community System Design Standards](#), located on eLibrary.



RTCR and 1-Hour Reporting

Jamie Estep, Compliance Assistance Specialist, Southwest Region

With the implementation of the Revised Total Coliform Rule in April 2016, the importance of 1-hour notification to DEP has become particularly important. By following the 1-hour reporting requirements, public water systems (PWS) may avoid errors that could be time consuming and costly. There are several circumstances that require PWS to contact DEP within 1-hour of discovery. (DEP has developed 1-hour reporting reference posters for surface water and groundwater systems and the links can be found below.)

Note: Although laboratories are required to contact DEP for positive total coliform and *E. coli* sample results, the laboratory reporting to DEP does not replace the requirement for the PWS to contact the Department.

Under RTCR, sample results that require the collection of check samples and any sample results that are *E. coli*-positive require 1-hour reporting to DEP. Therefore, any positive bacteriological result will require the PWS to contact DEP within one-hour of being notified by their laboratory of the positive result.



Besides being required by regulation, there are benefits to consulting with DEP about positive bacteriological results in a timely manner, including avoiding triggering multiple assessments and additional sampling that is not required. There are several factors influencing compliance with the RTCR including the number of samples (routine and check), the timing of samples (routine and check) and completing the appropriate assessments. Juggling these components can be difficult and consultation with DEP can help.

There are two types of assessments for RTCR, Level 1 Assessments and Level 2 Assessments. DEP has developed a RTCR Assessments Fact Sheet with information on the types of assessments and how they are triggered. (A link to the fact sheet can be found below.)

There are many ways to trigger assessments and each trigger is evaluated separately under the rule. For example, if a PWS that collects less than 40 routine bacteria samples per month has a total coliform-positive routine sample, and then only takes one check sample, the system will trigger a Level 1 Assessment. If the one check sample comes back total coliform-positive, the system will trigger another Level 1 Assessment and two Level 1 Assessments within a 12-month rolling period triggers a Level 2 Assessment. Because Level 2 Assessments take more time and require an appropriately certified operator, the system will need to expend more resources to complete the assessment. Consulting with DEP Safe Drinking Water staff will help reduce the number of errors when taking check samples and help avoid triggering additional assessments.



Another thing to consider is the change in repeat monitoring. Under the old total coliform rule, a PWS would need to continue taking check samples until either total coliforms are not detected or the MCL for total coliform was exceeded resulting in public notification. Under RTCR, a PWS continues to collect sets of check samples until either total coliforms are not detected or the system determines that an assessment has been triggered. Consultation with DEP after every round of check sampling will help the PWS determine if additional sets of check samples are needed or if the system should stop collecting check samples and begin completing an

assessment. This will have a cost savings to the system and help clarify the type of assessment and the date it is due.

It's important to make 1-hour notification to DEP a routine practice at your water system. Not only is it required by regulation in many instances, it can also help ensure that your time and money are being well spent.

- [1-Hour Reporting Surface Water Poster](#)
- [1-Hour Reporting Ground Water Poster](#)
- [RTCR Assessment Fact Sheet](#)



Don't Let Your Reporting Be Revolting

Tom Blair, Sanitarian Supervisor, Northwest Region

Proper sampling techniques and timely sampling are critical in obtaining valid sample results. Correct reporting of those results is also important. Reporting errors can result in violations for the water system and they may also increase monitoring frequency. Here are some guidelines for how to correctly report sample results.

The most important reporting issue is to report the results, electronically, no later than the 10th of the month following the month in which the results were received or no later than the 10th of the month following the end of the monitoring period, whichever is shorter. As an example, if the monitoring period is anytime during the year and the sample is analyzed in July, the results need to be reported by August 10. If that annual sample was collected December 31, it would need to be reported by January 10 of the next year.

A groundwater system without 4-log disinfection is required to sample from each source connected to the system, prior to any treatment, for each positive distribution coliform sample. This sample needs to be reported as a raw “R” type sample. The source number is usually sequentially numbered 001, 002, etc. The lab needs to verify the source code though the Drinking Water Reporting System (DWRS) since what the water system calls Well 2 may be code 001 or 003. Failure to report a raw sample from each permanent source in the system will result in a violation. Raw (source) coliform samples collected in response to a distribution positive coliform result need to be reported as 3114, *E. coli*. **Reporting the raw as 3100, total coliform, is not required.**

The correct analysis method for chlorine whether entry point or distribution is 301. Entering any other analysis code or leaving the analysis method blank will result in a violation.

A system that has numerous entry points needs to sample for SOCs, VOCs, and IOCs at each entry point. Numerous violations are generated because nitrate samples from 2 different entry points are both reported as EP 101. Each sample needs to be reported as its own entry point.

Location IDs for check samples must match location IDs for the original D coliform positive sample.

Entry point chlorine residuals are reported as “E” type samples, not “D”.

All times are reported using the 24-hour clock; for example, 3:00 p.m. must be reported as 1500.

For a system with a 4- log permit, if the entry point free chlorine residual is less than the required minimum, typically 0.40 mg / L, the system must report the reading below the minimum and the next time the entry point residual is above the minimum. If there is more than 4 hours before the chlorine residual is above minimum, the system is required to issue a Boil Water Advisory.



For VOCs and IOCs, there is a Method Detection Limit (MDL) which is the lowest level that the method can detect. Any result less than the MDL is reported as zero (0). For example, if the MDL for a certain VOC is 0.0002 mg/L and the monitoring result is 0.0001, report it as zero. Reporting it as 0.0001 will trigger further monitoring when it is not required.

For Total Coliform and TTHM / HAA5 samples, sample sites must match what was listed in the sampling plans and listed in the DEP database. As an example, if a system listed sites 801 – 805 in its coliform sampling plan, reporting site 806 will not count as a valid sample.



Distribution Water Quality

Laura Blood, Compliance Assistance Specialist, Southwest Region

There have been a lot of recent and proposed regulations involving distribution system water quality! The new Revised Total Coliform Rule, which became effective in April 2016, involves triggered assessments, including an evaluation of the distribution system. The proposed [Minimum Disinfectant Residual Rule](#) (published in the *PA Bulletin* in February 2016) aims at protecting public health through a multiple barrier approach against microbial contamination.

A [2016 Environmental Protection Agency \(EPA\) paper](#) on the current state of research indicates that some of the distribution system issues with the potential to impact public health are:

- Cross connections and backflow of contaminated water
- Contamination due to storage facility design, operation or maintenance
- Contamination due to main installation, repair or rehabilitation
- Contamination due to pressure conditions and physical gaps in infrastructure
- Biofilm and microbial growth
- Nitrification issues
- Accumulation and release of contaminants from distribution scales and sediments

Here are a few free resources to help you evaluate your system, improve water quality, and comply with these regulations.

- *Backflow* - DEP's Policy for Determining Loss of Positive Pressure can be used by water systems to develop a way to identify, record and respond to loss of positive pressure situations and their associated risk for contamination. The document can be found [here](#). Additionally, in 2010, the Water Research Foundation published a study indicating that backflow sensing water meters are a great tool to detect areas of potential health concern. The study can be accessed [here](#).
- *Storage Tanks* - Did you know that the DEP Optimization website has a free tool that will estimate storage tank turnover for you? It will also allow you to enter your current and proposed tank cycling set points to see how operational changes may impact pressure conditions and volume exchange. The operational guideline for full volume turnover in a storage tank is 3-5 days. This spreadsheet tool, as well as several others, can be found [here](#).
- *Biofilm and Nitrification* - If your water system is a chloraminated system and you would like to get ready for a potential nitrification control plan, a great resource is Texas Commission on Environmental Quality's (TCEQ) 2015 Nitrification Action Plan Summary. It includes a spreadsheet to help you track your data and can be accessed [here](#). PLEASE NOTE: PA state requirements may be different than those required by Texas.
- *Optimized Corrosion Control* - In 2016, EPA came out with new guidance and associated spreadsheets, on which parameters to monitor for when evaluating your corrosion control treatment. The guidance and associated spreadsheets can be accessed [here](#).

- *Hydrant Sampler* - In order to make it easier for you to do some of the water quality monitoring you'd like to – and should – do, EPA's Technical Support Center has posted a parts list to assemble your own hydrant sampling apparatus and an instructional video on using the hydrant sampler [here](#).



If you have any questions about the resources described in this article, feel free to contact the author at lablood@pa.gov or call the Bureau of Safe Drinking Water at (717)787-9633 and ask for the Distribution Optimization staff in the Technical Assistance Division.



Process Control Plans

Joanne Nardone, Operations and Monitoring, Central Office

DEP's Chapter 302 regulations on the administration of the Water and Wastewater Systems Operator Certification Program within Pennsylvania's Water and Wastewater Systems Operators' Certification Act defines and sets forth requirements for a Process Control Plan to be developed for each water or wastewater system.

A Process Control Plan is a plan developed by a system's Available Operator and outlines the facilities, methods, activities and treatment alternatives necessary to meet the system's permit requirements and provide long-term and reliable system operations.

Types of information that would be found in a Process Control Plan may include:

- A flow diagram of the entire treatment process
- The anticipated level of treatment provided by each treatment unit
- A description of the average and seasonal characteristics of the raw water influent
- Any standard operating procedures
- The location of daily operation logs
- The methods to be used to monitor and adjust treatment processes
- The identification of the key processes of the system and the equipment associated with each of those processes
- The trigger parameters for each unit that requires a process control decision
- A preventative and emergency maintenance plan for all process control-related equipment, including a replacements parts inventory and emergency repair method
- The procedures for emergency operations when security has been breached or natural disasters threaten public safety, the environment or system property

A Process Control Plan should be easy-to-read and understandable to any operator onsite. It should outline the complete operations of the system, including daily, weekly, monthly and yearly operational activities. A template for a Process Control Plan can be found in Appendix E of the Drinking Water and Wastewater Operator Certification Program Handbook ([DEP Technical Guidance #391-2300-001](#)).



Consumer Confidence Report Reminder

It's that time of year again. Did you get your CCR out on time? Every community water system must distribute its annual CCR to each customer, and to DEP, **on or before July 1 of each year**. Each report is based on data from the previous calendar year.

On or before October 1 of each year, community water systems must deliver a CCR Certification Form to DEP. The form certifies that the CCR was distributed, and that its information is correct and consistent with the compliance monitoring data previously submitted to the state. The certification form is available on DEP's website [here](#).



We're so glad you asked!



DEP receives a lot of good questions from water system operators and officials so, in each edition of our newsletter, we share some of the most common questions we receive in hopes of helping more water systems and certified laboratories.

Q: Where can I find information about operator certification exams?

A: Please visit the [Drinking Water Management – Operator Information Center website](#) for details on exam dates and locations.

Q: My water system recently changed operators. How do I notify DEP?

A: Per Chapter 302.1202(c), Administration of the Water and Wastewater Systems Operators' Certification program, "A system owner shall notify DEP in writing within 10 calendar days of the addition, loss, change or replacement of an available operator. The owner shall provide at that time the name, client ID, and class and subclassification of all operator changes." Updates to the Available Operator Report [can be made electronically](#). Select "Change of Available Operator" form from the sidebar menu.

Q: My water system has received numerous "paperwork" violations for things like late reports and missed monitoring. Why is this a big deal?

A: What you believe are minor paperwork violations are significant problems. Missed monitoring is not just a "paperwork" issue. If you fail to monitor during the specified periods, you have no way of

knowing if the water is safe or not. Since you didn't monitor correctly, you are required to issue a Tier 3 Public Notice to your customers. Late reports create a lot of unnecessary work for sanitarians and the water system. Failure to submit the monitoring results on time causes a violation to be automatically generated. If the late report shows any type of MCL exceedance, action to resolve the problem is delayed. Other problems that can result from late reporting are increased monitoring frequencies and possible enforcement actions and penalties.



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