# THE WATER NEWS Source 59 No. 4 J Winter 2023

# Lead Service Line Inventories Demystified! Your Questions Answered



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**PA-AWWA Executive Director** Melanie Greene 717-774-8870 melanie@paawwa.org **FEATURES** 

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The Water News Source is published quarterly by the Pennsylvania Section of the American Water Works Association. The purpose is to inform members, local and state officials, and elected representatives about water supply issues in Pennsylvania.

The ideas, opinions, concepts, procedures, etc., expressed in this publication are those of individual authors and not necessarily those of the PA-AWWA Section, its officers, general membership, or the editor. The Section maintains the right to edit all articles for clarity and space. Individuals or organizations are encouraged to submit suggestions, ideas, articles, and items for the calendar of events. Please submit as a Word file and email to melanie@paawwa.org.

Deadline to submit articles for the next newsletter is: January 19, 2024



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t was great to catch up with so many of you at our fall District Meetings across the Commonwealth. As we push this organization forward at the section level, I was so very impressed by the fresh ideas, new venues, and renewed levels of collaboration by our District volunteers to bring us all together as we near 2024 at warp speed. It is so easy for passionate people like us to get wrapped up in our projects, budgets, and maybe a year-end scramble or two. Make certain that you take some time to breathe, check in on your peers, thank a colleague who helped you accomplish a goal in 2023, and to specially make time to enjoy this season with your family.

As a quick update, please visit our website (*https://paawwa.* org/2023/11/27/wuc-support-letter<u>s</u>) to see our Section's latest efforts to address issues surrounding Senate Bills 144 and 767.

I extend a big thank you to all our volunteers and team members in the Pennsylvania Section for their dedication and contributions in support of our mission. Providing solutions to effectively manage water, the world's most important resource, is no walk in the park. Yet, together, we often make it so easy when we work together in such a great organization. I would like to especially thank our Executive Board and leadership team at Milliron & Goodman for their intensity this year and with no less than three meetings per month in their efforts to nurture our PA-AWWA 2.0 concept. Most recently, we met at our 2024 conference location, the Lancaster Marriott at Penn Square, to confirm our conference location and our fresh take on the Exhibit Hall. Chip Bilger and the Conference Committee are preparing to knock your socks off in May!

Be on the lookout for save the dates in this issue as we have so many exciting opportunities to learn and network in the planning phase for 2024. As you save place holders and reminders to your calendars, don't forget about the young professionals on your team. Also, be on the lookout for calls and emails from our Membership Committee. There are too many utility members that have unused employee memberships that are already paid for. Our committee will be reaching out to you to assist your company in filling those memberships. Please reach out to Craig Palmer, our Membership Committee Chair, Executive Director, Melanie Green, or me, if you would like to check on the current utilization of your utility membership.

My last request to you this year is to consider nominating that person in our industry or your organization for an award who really made a positive impact on vour career and life at our 2024 conference. Our Past Chair, Tim Trout, is firing up our award committees and they need candidates to review. Our next updates to the website will include our 2024 nomination forms and the details for each award and committee Our 2023 award winners and details on the awards are available on the website and can provide you with a head start. Consider taking some time to

recognize that influencer with us.

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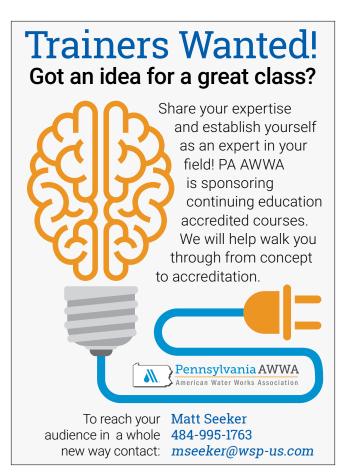
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I suggest working with a friend on the application process.

To close out the year and conclude my message, I would like to thank my leadership team at Aqua Pennsylvania, Inc. and Essential Utilities, Inc. for supporting another year of my commitment to the organization. I would also like to thank my wife, Amanda, for all of her support! I'm sure it's not easy acknowledging every water tower we drive past. I'll see you all in 2024. Have a safe and spectacular holiday season and a Happy New Year!

Zach Martin Chair







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# When Theory Works Even Better in Practice!

all has been a busy time for PA-AWWA. There have been five district conferences and I was lucky enough to attend several of them to introduce myself and meet in person with the volunteers behind each successful event.

To my delight, the online registrations worked very well and streamlined the process for everyone. Everything works in theory, but it is always a relief to know that they work in practice!

The Young Professionals held three simultaneous Quizzos across the state on October 11. Each of these was well attended and good fun for everyone. The PA-AWWA Clay Shoot in September also had a good turnout and was a beautiful day for competition.

We continue to improve the website with new content. Slides from the recent district conferences have been uploaded and are available under your membership login. If there is information that you think would be helpful if posted on the website, please contact me and we'll do our best.

#### **IMPORTANT: 2024 Membership Directory**

As we prepare for the 2024 Membership Directory, it is critical that you log in to check your membership information for accuracy – you make corrections yourself in your account.

#### SAVE THE DATES

Preparation for the 2024 Annual Conference which will take place from May 13-15 at the Lancaster Marriott continues. We are adding classes and activities to the agenda each week. This will be my team's first PA-AWWA event and we want to bowl you over with a great experience. Mark your calendar and watch your email for the registration notification.

#### CALL TO ALL MEMBERS

Our focus is now on updating our training course library and expanding it with new courses on the topics that matter now. Members will need information in 2024 on PFAS and Lead Service Line Replacement. We are also evaluating past courses to ensure that general topics are updated to include current knowledge and emerging technologies. This is a call to all members to distinguish yourself as a trainer, and share your knowledge and experience with colleagues.

#### HAVE I GOT A DEAL FOR YOU!

As you know, the PA Section closed the main office this summer and moved its operation to Harrisburg. We also moved a Toshiba copier that was less than two years into a four-year lease. We were unable to terminate the lease and so, the copier sits, unused, outside my office door.

It's a TOSHIBA e-STUDIO3515AC series with copy, print, scan, and fax features. It's an almostnew color multi-function printer, lightly used in the PA-AWWA office. I am motivated to make a deal! Email me at *melanie@ paawwa.org* if you can use a new copier at a bargain price.





Melanie Greene Executive Director





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# Prepare for 2024's Annual Clay Shoot on the Heels of a Successful 2023 Event

On September 14, 2023, the PA AWWA hosted its 7th Annual Sporting Clay Challenge at Lehigh Valley Sporting Clays, Ironton, PA. It was a great day for all attendees with great weather with more than 100 shooters in attendance.

Each participant received 100 clay targets at 17 different stations around the course. A catered lunch with door prizes and a 50-50 raffle was held after the event at the nearby Grouse Hall in Ironton, PA. A portion of the proceeds benefit the PA-AWWA Operators' Scholarships.



This event would not have been successful without our sponsors. We thank all the sponsors for their generous donations.

Be sure to mark your calendars and for our 8th Annual Sporting Clay Challenge which will be held on **September 19, 2024.** Our Clay Shoot Committee is always looking for extra help. Please contact the Section Staff with any interest.



Clay Shoot Committee members Jason Newhard – Spotts, Stevens & McCoy Luke Heist – LB Water Bob Schwalm – LB Water Steve Kerbacher – Northampton Boro Municipal Authority Erin Shulberger – Bucks County Water & Sewer Authority Bill Kasper – Rio Supply Kevin German – Lehigh County Authority







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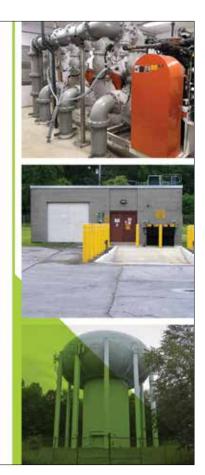
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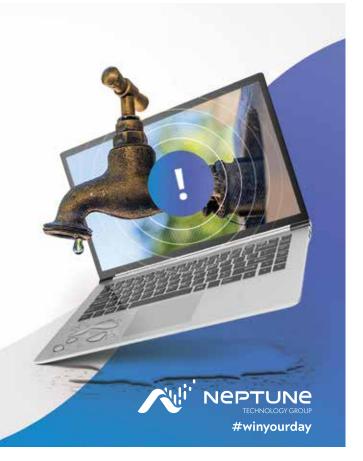


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# YPs Tour Norristown Plant and Network

In September, the PA-AWWA Young Professionals (YP) Committee sponsored a tour of the Norristown Plant in Norristown, PA, and happy hour networking event. The event drew a number of professionals eager to learn about this innovative water treatment plant.



This Pennsylvania American Water plant serves a population of around 100,000. A major challenge that operations faces is that of the plant's source, the Schuylkill River, which is prone to flash flooding during wet weather events and brief periods of high-level turbidity. Hurricane Ida in 2021 is one recent example of the severity of flooding, where the first floor was completely inundated.

Tour members were given a thorough description of all the treatment technologies in use at the plant, and were able to learn about plant upgrades to the filters. They also had the chance to check out the inside of one of the clarifiers. Thank you, PA American Water! A networking



happy hour followed the tour at Conshohocken Brewing Company in Bridgeport, PA. Young and experienced professionals were able to interact with each other and make new connections. The YP Committee hopes to build on top of yet another successful event and increase participation and membership throughout the state.

If you are interested in hosting Students and YPs at one of your facilities, please reach out to Caitlin Cavanagh, YP Chair, at *caitlin.cavanagh@aecom.com.* 

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# Schuylkill Employees Receive Prestigious PaWARN Award

Schuylkill County Municipal Authority (SCMA) Executive Director Patrick Caulfield and Assistant Executive Director Amy Batdorf, recently received the 2023 PaWARN (Pennsylvania Water/Wastewater Agency Response Network) Gold Star Award in recognition of their exceptional commitment to emergency response and their dedication to mutual aid by utilizing PaWARN during the Mt. Laurel Emergency in the fall of 2022 which affected two state correctional institutes.

Caufield's thanked PaWARN for its assistance during the complicated main break, sharing a testimonial:

"SCMA is a proud partner and member of the PAWARN network and has successfully used the system in the past to secure anomalous materials that were not readily available. We recently experienced a major water main break on a transmission main that traversed beneath Interstate I-81 and SR 61 (11 lanes total), severing service to a number of critical customers, including two state correctional institutes (4,000 inmates), an industrial business park, and numerous residential connections. Using PAWARN, we were immediately able to secure an emergency contractor to assist us with construction of a temporary, 4,000-foot-long, above-ground waterline to maintain service, while we worked with the contractor to permanently repair the line by inserting 1,500 liner feet of new piping through the existing ruptured watermain.

The permanent repair was completed in 12 days and at no time were any of our customers without potable water and fire protection. Without the networking ability provided by the PAWARN system, we would have faced a loss of service resulting in the relocation of 4,000 inmates, and a



SCMA's Patrick Caulfield and Amy Batdorf recently received PaWARN's 2023 Gold Star Award for their outstanding emergency response efforts in dealing with a complicated main break which affected two state prisons. PaWARN provided assistance during the emergency incident.

no-water situation for the other commercial and residential customers. PAWARN also provided on-site incident command to keep the critical communications with County EMA and both SCI's open and up to date until the emergency was complete".

SCMA is a 189-year-old drinking water and sanitary sewer service purveyor in east-central Pennsylvania, headquartered in Pottsville, PA. SCMA provides service to more than 40,000 residents in 26 municipalities while managing and operating 15 treatment facilities. Caulfield has served as Executive Director since 2010 before which he had held the position of Assistant Manager since 1998. Prior to his employment with SCMA, he served as a Consulting Engineer for seven years managing the design group serving over 35 municipal clients.

He is a former PMAA Region II Director and currently serves as Chairman of the PA-AWWA Water Utility Council, while he also continues to serve on multiple boards and associations in the water and wastewater industry.

Batdorf has been an employee of the SCMA since 2010 where she served as Environmental Manager until her promotion to Assistant Executive Director in January 2013. She is responsible for managing the operations of the Authority, which consists of eight drinking water treatment facilities, seven wastewater treatment facilities and all appurtenances that distribute potable water and convey sanitary sewer in 26 municipalities throughout Schuylkill County. As Assistant Executive Director, she is also responsible for managing a total of 60 staff, including the office division, water and wastewater treatment divisions, distribution/collection divisions, and meter reading division.

Prior to her employment with SCMA, Batdorf was employed by the Department of Environmental Protection for nine years in the Safe Drinking Water Program.



# Discussions Abound at the Fall Joint Central Meeting for WWOAP and PA AWWA

By Christine Gunsaullus, Entech Engineering

The Antique Automobile Club of America Museum in Hershey was a sweet location for the Central District Fall Meeting, where Water Works Operators' Association of PA (WWOAP) and PA-AWWA members gathered on November 2, 2023. Many officers from both organizations, including PA-AWWA's new Executive Director, Melanie Greene, who received a round of applause for the new online registration system we've all enjoyed for the fall meetings were in attendance. These regional meetings are a critical way for groups to share information about upcoming regulations and legislative matters of importance. It also allows the opportunity for discussion to better understand what we are all dealing with in the water industry, and, more importantly, to learn about solutions.

The agenda catered to these initiatives with two panel discussions. The first, Taste and Odor Events in 2023, featured several utilities sharing details. Serena DiMagno (SSM Group), speaking for the City of Lancaster, Chad Bingaman (Capital Region Water), and Douglas Crawshaw (The York Water Company), noted that clear communication with the community is critical during these events. The second on Mass Notification Systems for Public Notification offered many options from larger and smaller systems. Liesel Gross, CEO (Lehigh County Authority), Ben Perwien (City of Lancaster), and David Lewis (Columbia Water Company) were guided by Moderator Brian Heiser (State College Borough Water Authority) in sharing their



stories, with the audience chiming in with their own experiences. A Legislative/Regulatory Update was also provided by Serena DiMagno (SSM Group).

Liesel Gross also took us through the LCA/City of Allentown merger from a few years ago, explaining how her passion for employee engagement helped to facilitate the process and continues to yield positive results. Then, with the Lead Service Line inventory due date of October 16, 2024 looming, Rachel Govelovich (Gannett Fleming) presented a project profile on their work so far with the Schuylkill County Municipal Authority. We ended the meeting with a spirited discussion on the pros and cons of calling our product "clean water" vs. other non-litigation-inducing terms.

If you want to join in the fun with our District, contact SC District Trustee, Sarah Folk (*sfolk@gfnet.com*), or SC District Chair, Serena DiMagno (*serena.dimagno@ssmgroup.com*) to help plan our Spring 2024 meeting.

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# Fall Meeting Brings Together Water Professionals in Malvern

By Christine Gunsaullus, Entech Engineering

We were thrilled to bring the Southeast District PA-AWWA and WWOAP members to a new venue this October: Penn State Great Valley in Malvern. Almost 140 water professionals, vendors, regulators and students joined to learn from one another, starting with upcoming regulations and legislative matters of importance from Patti Kay Wisniewski (EPA Region 3) and Serena DiMagno (SSM Group). If you remember, back in the day, these updates were a quick 10 minutes right before lunch. The hour we now devote to these changes speaks to the growing complexity of our industry.

With PFAS quickly replacing lead as the new four-letter word for water systems, several presentations explained what is being done to combat this "forever chemical." Dave Hughes and Terry Funk (Gannett Fleming) dove into treatment via adsorption onto a solid media, comparing the pros and cons of granular activated carbon (GAC) and an ion exchange resin. Jinchen Chen (BCM Engineers/ Atlas) covered the future of PFAS removal and degradation.

Since all tanks will require maintenance over their lifespan, Christine Gunsaullus (Entech Engineering) explained the step-by-step process for taking water tanks offline, maintaining the operations of the distribution system during work, and how to return them to service, as well as caveats from 30 years of experience. The always entertaining Matt Seeker (Water Service Professionals) treated our operators to their own track in the afternoon, taking them through filter inspections, optimization, and compliance.

The afternoon session kicked off with Dave Rustay and Alicia Beauchamp (AQUA Pennsylvania) discussing the 2023 Delaware River chemical spill and the impacts it had on plant operations. Ian McKane (Philadelphia Water Department) later presented on the betterment project at the Flat Rock Dam in the Manayunk Canal.

We love supporting non-profit organizations in the water industry, so Bob McIntyre (Stone Hill Contracting) provided an update on Water For People and their work throughout the world, and students from Villanova Engineering Service Learning explained how they integrate theoretical knowledge from the classroom with hands-on experiential learning in underserved communities. Both organizations received generous checks of \$1,000 each to advance their efforts.

Finally, congratulations to our newly elected District Chair, Lijie Li, replacing outgoing Chair Tom Hanna, and newly elected Vice-Chair, Jing Xaio.

If you want to join in the fun with our District, contact Lijie Li (*lijie.li@kci.com*) to help plan our Spring 2024 meeting.





# How the PfSW Program Works

Partnership for Safe Water (PfSW) is a voluntary effort between six drinking water organizations (American Water Works Association, Association of Metropolitan Water Agencies, Association of Safe Drinking Water Administrators, National Association of Drinking Water Companies, U.S. EPA, and Water Research Foundation) and more than 200 water utilities. The PfSW program started in 1995 with the Treatment Plant Optimization Program. The program focused on surface water filtration plant treatment. The PA Department of Environmental Protection (PADEP), seeing the direct benefits of treatment plant optimization on protecting public health, joined as a regional partner in 1999 and, in cooperation with the PA Section of AWWA, hired representatives to promote the program and help those who enrolled in it. In 2007, the PfSW expanded into the distribution system with the Distribution System Optimization Program, which is also supported by the PADEP partnership.

To assist utilities in navigating the increasingly more stringent regulatory requirements, the PfSW, along with the local PfSW representatives, provide operators, field staff, managers and administrators tools to address the performance of treatment plants and distribution systems as well the ability to develop plans to improve water quality and performance beyond current and proposed regulatory levels. This improved performance leads to enhanced public health protection, which is the primary goal of the PfSW.

The PfSW program consists of four phases:

- Phase 1 is commitment to the program. Utilities are not required to meet PfSW goals to join the program.
- Phase 2 is the baseline data collection for each year. Daily data is put in the PfSW spreadsheet; turbidity for plants and chlorine residuals for distribution. It is important to note that all utility data is kept confidential.
- Phase 3 is for self-assessment, where systems answer questions about their processes, identify performance-

limiting factors, and target action plans to improve performance. This information is summarized in a report that is submitted to the PfSW and is reviewed by a team of utility peers and optimization experts, to ensure an effective and unbiased process. Upon



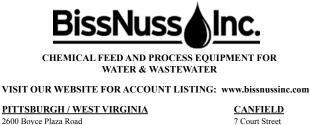
successful review, the utility receives the Director's Award. After Phase III, utilities can conduct further evaluations and conduct enhancements to their operations to achieve the optional Presidents Award. The President's Award serves as a iuncture between Phase III and Phase IV.

Phase 4 Excellence is an optional phase. Utilities must be a Director's Award winner in good standing to apply. In Phase 4, utilities have addressed all previously identified limiting factors, and have maintained the highest water quality long-term. No additional fees are required.

Participation in the program demonstrates a commitment to water quality and the protection of the health of consumers. Successful completion of the program phases earns rewards, which can be highlighted to the community, demonstrating a commitment to public health.

For more information on joining the Partnership Treatment Plant Optimization Program or the Distribution System Optimization Program, please contact Nancy Dinger at the PA-AWWA (717-774-8870). Membership applications can also be found on the PfSW website www.awwa.org/partnership. Participation in the PfSW optimization programs does require an annual fee that is utility specific based on the population served.

In future articles, we will focus on the Distribution Optimization Program and the science behind the criteria for the self-assessment, including disinfectant residual maintenance, main break frequency, and pressure maintenance.



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# Model Calibration Handbook – A Step in the Right Direction for Successfully Calibrating Water Distribution Models

By Tom Walski, Bentely Systems

Hydraulic models of water distribution systems have become an essential tool for planning, design and operation of water systems. It's hard to think of a case nowadays where engineers and operators would size an important pipe, select a pump, evaluate fire flows, or any number of other tasks without checking with their hydraulic model.

Models have become a trusted tool across the industry. The extent to which they can be trusted depends on how close the model results correspond with actual system behavior. If, e.g., the pressure at a point in the system for a given set of conditions is 65 psi, the model should calculate pressures very close to 65 psi.

How can that be assured? The key is model calibration where comparisons between real world and model results are checked. If they agree, confidence in the model increases. If there are discrepancies between the model and field data, it's time to improve the calibration of the mode or identify problems with the data.

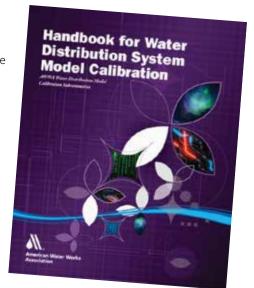
If there was only a single reason that such discrepancies exist, calibration would be easy. However, there are dozens of reasons for such discrepancies, such as incorrect pipe roughness, inaccurate pressure gauges or flow meters, water leaking in and out of adjacent pressure zones, isolation valves in the system that were not in their correct position, pump curves that have changed and many other reasons.

66-

Model calibration can look like a daunting task because it is hard to determine why the models and field data disagree. The book lays out a logical path through complicated data and hydraulics to find any problems and correct them.

The Model Calibration Subcommittee of AWWA's Engineering Modeling Applications Committee realized that the committee members had a great deal of experience in this area and wanted to share that experience with others. The committee has produced a comprehensive book, *Handbook of Water Distribution System Model Calibration*, to help others on this journey to a successfully calibrated water distribution model.

Model calibration can look like a daunting task because it is hard to



determine *why* the models and field data disagree. The book lays out a logical path through complicated data and hydraulics to find any problems and correct them. Finding the problems and correcting them sounds easy in theory, but experienced engineers can tell you that there are a lot of pitfalls and plenty of tricks for avoiding them along the way.

The process can be different depending on whether the model is being used for system planning, tank sizing, pump selection, real-time operations, water quality issues, or energy management. The basic goal, however, is still the same – creating a model that behaves like the real world. The handbook simplifies that process to get to the goal of calibration – a model that can be applied with confidence to help support decision makers.

The Handbook of Water Distribution System Model Calibration has just been made available by AWWA and can be purchased from their website at https://engage. awwa.org/PersonifyEbusiness/Bookstore/Product-Details/ productId/92298835.

#### About the Author:

Tom Walski (tom.walski@bentley.com) from Bentley Systems and the Pennsylvania Section of AWWA Water Distribution Committee was one of the co-authors of the handbook.



# Design and Backflow Prevention Considerations for Bulk Water Stations

By Anthony Carmassi, P.E., Total Engineering & Consulting Services, LLC and Paul Handke, Hach Company

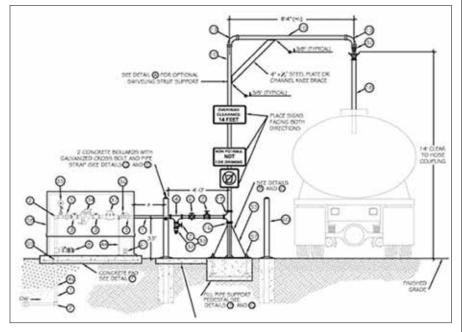
As we learned in the first series of articles on backflow prevention, which is the flow of a liquid in the opposite direction intended, preventing backflow is a key activity to maintaining a safe, reliable drinking water system. On this final article of the series, we will focus on design and backflow prevention considerations and the potential negative impacts bulk water stations may have on the distribution system if designed or sited incorrectly.

As with any high-flow activity, such as firefighting, bulk water stations can cause the same issues if not designed, operated or sited correctly. Permanent fill stations typically have more operational oversight, more controls in place, and more consideration of distribution system hydraulics prior to siting the fill station. When bulk water fill stations are temporary, such as satisfying the need for large quantities of water for construction at a specific location in the service area, the oversight, operational controls and siting considerations are not going to be as great as they are at permanent locations, but are just as critical to protect the customers of the utility.

#### **Design and Operation Considerations**

With the rise in the need to regulate bulk water loading stations, more standardized designs have been made publicly available. One such design, the standard drawing provided by the United States Department of Agriculture, and seen in Figure 1, utilizes a pressure-type fill station with a steel tower. This design effectively eliminates the possibility of contaminating the drinking water supply.

It is important to take into account several factors when choosing where to place a bulk water loading station. As per PA Code Title 25 §109: "it is



**Figure 1:** Elevation view of Pressure-Type fill station with a steel tower. (source USDA https://www.fs.usda.gov/t-d/pubs/htmlpubs/htm11732308/index.htm)

required that the chosen location is not subject to floods, fires, earthquakes, or other disasters which could cause a breakdown of the public water system or facilities, and shall be located to prevent or minimize impacts from existing potential sources of contamination."

Other considerations that should be explored are whether it is permanent or temporary, what the water will be used for, and whether it needs to be potable water. For example, when water is being used in connection with gas-well work, non-potable water may be acceptable, and a bulk water loading station can potentially draw from lakes or rivers, eliminating the impacts on the potable distribution system.

When a loading station is designed to draw from the water distribution system, it is important to analyze the Public Water Supply (PWS) network to confirm there is enough flow and pressure, and ensure there are no adverse impacts on the PWS system, both within the immediate area of the fill station or other areas that are hydraulically connected to that location. such as lower pressure zones at higher elevations. It's also important to ensure that a tested and maintained backflow prevention device, typically a double check or reduced pressure zone valve, is incorporated into the permanent fill station, or, for temporary fill stations, the device pulling off of the hydrant or standpipe within the distribution system.

Operationally, during filling operations, another protective measure is maintaining an air gap between the fill line and the liquid in the tank or vessel receiving the water. Precautions should also be taken to prevent fill station control valves from operating too quickly, as these have been shown to create damaging transient surges in the nearby distribution network. By following accepted design and operational standards, and ensuring that the water system has the flow and volume to handle a bulk loading water station, it is possible to provide water for various uses, while protecting the public water supply and keeping drinking water safe.

#### Permitting of Bulk Water Loading Stations

The Pennsylvania DEP recognized a need to ensure that all bulk water-loading stations were constructed in a manner that would protect the public and prevent bulk water loading stations like the one seen in Figure 2. This is not only from the standpoint of excess water usage leading to supply issues, but also other operational issues that can arise, such as backflow, pressure reduction and pressure loss, which led to the requirement for a minor permit for all bulk water loading stations that are owned or operated by the Public Water System, including all those associated with finished water.

Per the instructions for permit Module 15B, Bulk Water Loading Stations, "the permit amendment/approval ensures that:

- (1) the PWS has adequate quantity of water available for planned sale
- (2) adequate measures are taken to prevent potential contamination of public water system supplies;
- (3) appropriate security measures are in place, and;
- (4) no adverse impacts on the system operation will occur with the proposed taking points."

This permitting process applies to the use of fixed or mobile loading stations for potable or non-potable bulk water loading activities. It also includes mobile bulk water loading stations that may be used at multiple hydrant locations provided those hydrant locations are identified in the permit application.

Through this permitting process, the

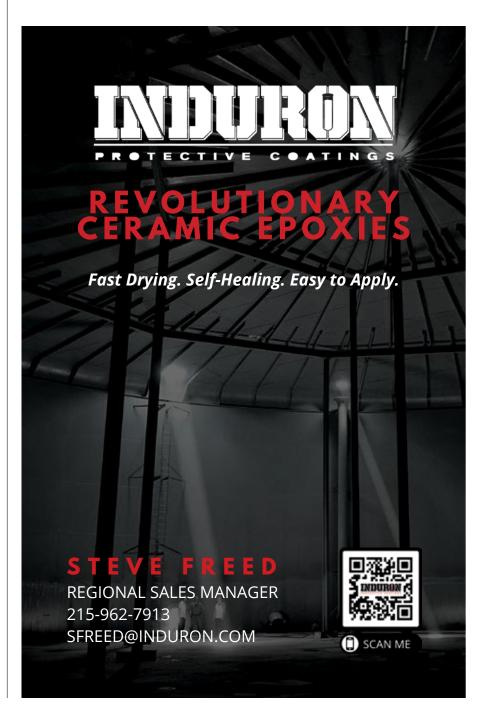


Figure 2: Four-connection manifold bulk water fill station off of a fire hydrant with no backflow protection.

applicant needs to demonstrate and implement acceptable crossconnection and backflow prevention practices, security measures, sanitary measures, filling and dispensing procedures, and measures to monitor and control operations.

For more information on the permitting process, please refer to PA DEP Module 15B, Bulk Water Loading Stations, and the PA DEP Public Water Supply Manual and regulatory references cited within Module 15B.

As we learned in this and past articles focusing on backflow in the distribution system, high flow events can occur at any time, from main breaks, firefighting events or the use of bulk water fill stations, which may impact distribution system hydraulics and cause a backflow event by creating a negative pressure condition in the distribution system. Being fully prepared to eliminate or minimize impacts from these events; through proper distribution system design and operation, implementation of a comprehensive backflow prevention program, effective communication and operational adjustments during an emergency, and properly designing and siting bulk water stations, is the key to protect your number one asset – the customers!





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# Lead Service Line Inventories Demystified! Your Questions Answered

By Tori Morgan, LO, Entech Engineering, Inc.

Many of us have been through training on the Revised Lead Service Line Rule, but as often happens with new and broadreaching regulations, we were left with many questions. So, we crafted this Q&A to help answer the questions frequently asked by water system owners.

#### 1.What is the Lead Service Line (LSL) Inventory requirement?

Per the Revised Lead and Copper Rule | U.S. EPA (RLCR), water systems must submit a service line inventory, identifying service lines as lead, non-lead, galvanized requiring replacement (GRR), or lead status unknown, and an associated LSL Replacement Plan by **October 16, 2024.** 

### 2. Should / be working on my inventory now? How long will this take?

Since each public water system is different, there is no easy answer to the amount of time that will be required. However, it is a good idea to start now to identify information gaps and begin investigation and verification methods to best deal with each unclassified service line.

# 3. What is a Service Line? For what portion is the water system responsible?

For purposes of the service line inventory, it is the entire pipe system that connects the water main to the building inlet. It may all be owned by the water system, the property owner, or both, as depicted in the graphic provided by the Pennsylvania Department of Environmental Protection (PADEP).

#### 4. What are the inventory requirements?

- Include all service lines;
- Categorize each service line with the required designations: lead, non-lead, galvanized requiring replacement (GRR), or lead status unknown;
- Identify and track each service line material(s) as they are encountered;

**Note:** there may be more than one material, so allow multiple choice in your recording method and database.

- Use water system historical records and information to help identify the material(s) of service lines;
- Include a unique location identifier for each service line;
- Update annually;

• Make the inventory publicly accessible. PADEP developed an inventory form which outlines the information required for service line identification and documentation (*https://bitly.ws/33bKg*). Use of this form is not required, but it can be a valuable tool in understanding what information must be reported. If a water system chooses to develop its own inventory system, data must be able to be exported as a CSV file and uploaded via PADEP's Greenport system.

#### 5. What is considered a Lead Service Line?

A service line where any portion of pipe that is made of lead, which connects the water main to the building inlet, must be identified as lead. However, there is an exception. Service lines with only a lead gooseneck, pigtail, or connector are not considered lead service lines under the RLCR. A galvanized service line in which any portion of the pipe was downstream of any portion of a LSL, lead gooseneck, pigtail, or connector, or service line of unknown materials is considered galvanized requiring replacement (GRR).

The weight of proof is in identifying non-lead service lines. Any service where the material is unknown is assumed to be lead until proven otherwise via the methods approved by PADEP.

#### 6. Do / need to dig up everything?

Thank goodness, no! You can prove a service line is non-lead in many ways, with excavating as a last resort. Our LSL Inventory Flow Chart (https://bitly.ws/33bKn) outlines identification methods and required documentation of non-LSL. Examples include:

Examples include:

 Installation Documentation: If documentation is available to confirm that service lines were installed/ replaced after January 6, 1991, or if a local ordinance was enacted prohibiting lead service line installation before January 6, 1991, and documentation confirms installation after the enactment of the local ordinance, this constitutes sufficient evidence that a service line is non-lead.

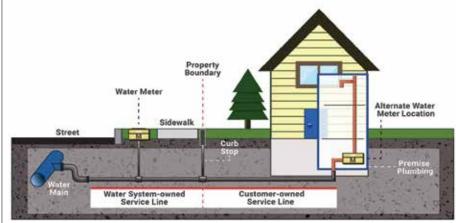


image credit: PADEP-LCRR Operator Training 2022 V3

- Modeling/Statistical Analysis: If a water system is verifying records using a field method, a statistically sound subset of service lines can be field verified rather than checking every line. PADEP recommends that systems follow the Michigan EGLE "Minimum Service Line Material Verification Requirements" to determine the statistically sound subset. PADEP will not establish modeling criteria. Instead, it is up to the water system to ensure that a statically sound model is developed and can be defended.
- Additional Acceptable Documentation
   for Non-Lead Service Lines:
  - Construction and plumbing codes, permits, local ordinances, and existing records that require non-lead materials for water system installations and maintenance
  - Meter installation records
  - Historical records of installation and maintenance, such as water company tap cards
  - Capital improvement or master plans
  - Standard Operating Procedures



Inspection records

- Municipal tax records, which typically contain the date of home construction
- Customer surveys such as the EPA's Protect Your Tap: A Quick Check for Lead

#### 7. What happens if / don't finish my inventory? What happens if / put in all "unknowns"? What happens if / do nothing?

The EPA is handling all enforcement related to the RCLR. On a federal level, failure to complete a service line inventory by the compliance date is considered a health-based violation. PADEP expects many water systems will have unknown service lines. Unknown service lines are treated like lead lines until proven otherwise, so systems must create a Lead Service Line Replacement Plan, implement risk mitigation measures after the disturbance of an unknown service line, and provide public notification to those customers served by an unknown service line.

For more information educating homeowners on LSLs:

- PSA Video: epa.gov
- English: https://youtu.be/6et78HZRqul
- Spanish: https://youtu.be/bVAcojQgfUI 🌢

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# THE LAW REGARDING Sexual Harassment in the Workplace, INCLUDING WATER SYSTEMS

Il too often, we read or hear in the media of another case of sexual harassment in the workplace. In many of those cases, careers are ended, or at least interrupted, victims suffer, including families of those involved, and the good names of employers and/ or perpetrators, become no longer good names. A very recent and high-profile example, as reported on October 20, 2023, in an article by Peter Hall of the Pennsylvania Capital-Star, is that of Governor Josh Shapiro's office paying \$295,000 in public money in a settlement involving his Legislative Affairs Secretary, Mike Vereb, who was accused of sexually harassing a former female employee. Mr. Vereb has resigned from his employment. The settlement is of a PA Human Relations Commission case. Under the terms of the settlement, there is no admission of liability by the Governor's office.

Sexual harassment in the workplace is all too common and widespread. It affects all levels of the employment hierarchy and many workplaces. Another example is former New York Governor Andrew Cuomo resigning after an inquiry found he had sexually harassed multiple women. Having represented public water systems in the defense of sexual harassment cases, I can tell you it is far better for public water systems and for their employees to have anti-sexual harassment policies in place and seriously enforced.

What is sexual harassment in the workplace? The answer is best explained by the PA Human Relations Commission ("PHRC") and the U.S. Equal Employment Opportunity Commission ("EEOC") who have very similar rules and guidelines on sexual harassment. As the PHRC's Guidelines on Sexual Harassment (the "Guidelines") explain harassment on the basis of sex is a violation of both the PA Human Relations Act and the U.S. Civil Rights Act. The stated purpose of the Guidelines is to "...help assure that everyone in Pennsylvania is permitted to work in an environment free from unsolicited and unwelcome sexual advances." The Guidelines are utilized by the PHRC in the investigation and determination of complaints of discrimination in employment on the basis of harassment because of sex.

In a nutshell, as set forth in the Guidelines, unwelcome sexual advances, requests for sexual favors and other verbal or physical conduct of a sexual nature constitute sexual harassment. The following key provisions of the Guidelines describe what constitutes sexual harassment:

- submission to such conduct is made either explicitly or implicitly a term or condition of an individual's employment,
- submission to or rejection of such conduct by an individual is used as the basis for employment decisions affecting such individual, or
- such conduct has the purpose or effect of unreasonably interfering with an individual's work performance or creating an intimidating hostile, or offensive working environment.

Several examples of sexual harassment cases in the public water sector are the following:

 In an article published by *The Eagle Tribune* on April 15, 2021, it was reported that an employee of the Methuen, MA Water Department filed a federal lawsuit against the city based on a sexual harassment claim she alleged was brought to the attention of her supervisor but never properly addressed. Her allegations included a coworker approaching her with his pants unbuttoned and unzipped on two occasions, and another coworker telling her he dreamed he engaged in sexual contact with her. She alleged when she brought this to the attention of her supervisor "his most common response was that this behavior was normal when working with men." In an article published by the

Los Angeles Times on April 21, 2022, it was reported that a state audit of the Metropolitan Water District of Southern California (MWD) found that MWD left its employees exposed to harassment. Among the examples was MWD substantiating a report of sexual harassment and promising the victim she would not have to work with the harasser again. However, several years later, the victim was directed to work "one-on-one" with the harasser. When she complained to her manager about that, she was told she had to work with the harasser. Another example in the article involves a case where an MWD manager was found to have violated a sexual harassment

policy and was given only a two-day suspension. The manager went on to retire as planned and did not serve the suspension.

A wonderful thing about our justice system in the United States is that it is built on the premise of innocence until proven guilty. So, when a harassment complaint is filed against a public water system, or an employee of a public water system that presumption applies. The reason I raise this point is because public water systems should not rush to judgement when a claim of harassment is made. What they should do is rush to look at the record as whole and at the totality of the circumstances, such as the nature of the sexual advances and the context in which the alleged incidents occurred. The appropriate action within a prompt time period should then be taken. Remember, justice delayed is justice denied. Those words of wisdom also apply to sexual harassment cases.

In conclusion, as the Guidelines state "...Prevention is the best tool for the elimination of sexual harassment. An employer should take all steps necessary



to prevent sexual harassment from occurring, such as affirmatively raising the subject, expressing strong disapproval, developing appropriate sanctions, informing employees of their right to raise and how to raise the issue of harassment under Title VII and the Pennsylvania Human Relations act, and developing methods to sensitize all concerned." If that is done consistently, the workplace should have a welcome, rather than hostile, environment in which to work.

#### CUSTOMERS IN CONNECTICUT FILE CLASS ACTIONS AGAINST WATER SYSTEMS REGARDING PFAS

In the October 23, 2023 issue of CT News Junkie, it was reported that groups of water customers in Connecticut are seeking class action certification in lawsuits against both Aquarion Water Company and the Connecticut Water Company "...over claims the suppliers sold water containing dangerous levels of PFAS chemicals." Across the country, many water systems have sued manufacturers of PFAS chemicals. In these two Connecticut cases, it is customer groups who are suing water systems regarding PFAS. The customer group in Connecticut Water's case contend because that water system sued suppliers of PFAS chemicals this means the water company was aware or should have been aware PFAS chemicals are toxic and harmful to human health. The water companies contend there are currently no federal or Connecticut enforceable standards for the treatment of PFAS substances.

#### About the Author



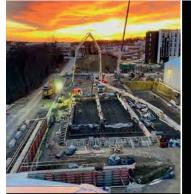
Michael D. Klein is a Senior Counsel in the Harrisburg, PA, and Washington D.C. offices of Cozen O'Connor. He practices in the areas

of utility and environmental law. He can be reached at *mklein@cozen.com* and 717-703-5903. This column is intended to be a discussion of legal issues in the water industry. It is not intended to be legal advice, or to establish any attorneyclient relationships. Before making any legal decisions regarding anything discussed in this column you should always consult with an attorney.



Erik Ross, left, Senior Associate at Milliron & Goodman Government Relations, LLC and Mike Snyder, right, PaWARN Coordinator, were recently honored at the Water Works Operators Association of Pennsylvania's Annual Conference. Michael Klein, center, Senior Counsel with Cozen O'Connor, conducted a timely presentation at the conference entitled "Impacts of Attacks on Power Systems Affecting Public Water Systems." Erik Ross received the Harry J. Krum Award for "Distinguished Service in the Water Supply Field" while Mike Snyder received the Fred G. Eckardt Award for "Outstanding Service to the Water Industry in Pennsylvania." Erik Ross and Michael Klein have served for more than 30 years on PA-AWWA's Water Utility Council, while Mike Snyder served as PA-AWWA's Security/Emergency Preparedness Coordinator for 19 years. 🕸





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## Spill Reporting Continues to be on the Agenda –

### Legislation, Technical Guidance & Regulation

uring the past few sessions of the Dennsylvania General Assembly, the Pennsylvania Section - American Water Works Association's Water Utility Council (WUC) has paid close attention to legislation sponsored by Senate Environmental Resources & Energy Committee Chairman Gene Yaw (R-Lycoming) and proposed technical guidance from the Department of Environmental Protection (DEP) regarding spill reporting. We've seen a back and forth between the legislative and regulatory proposals, but no real resolution. This article will provide a review of the proposals and highlight a new twist that recently occurred on the regulatory front.

#### Legislation

Senate Bill 286<sup>i</sup> (Yaw-R) amends the Clean Streams Law adding a new section providing for notice of discharge endangering public health or environment.

**Status**: Senate Environmental Resources & Energy, 1/31/2023 – Reported, 6/21/2023 – 1st Consideration, 6/21/2023 – Laid on Table, 9/20/2023

Under this legislation, a person who spills, discharges or releases a substance

into the waters of this Commonwealth, or on a location from which the substance is likely to enter the waters of this Commonwealth, taking into account any control and remedial measures, shall notify the department if the spill, discharge or release is not authorized by a permit from the department and is likely to render the receiving waters harmful to public health or the environment as determined by reportable quantities or other readily ascertainable standards adopted by regulation.

In addition, it requires the Environmental Quality Board (EQB), no later than 60 days after the effective date of the new section, to publish for public comment proposed regulations establishing reportable quantities or other readily ascertainable standards by which a person may determine whether a spill, discharge or release is likely to render receiving waters harmful to public health or environment.

Finally, it requires the EQB, no later than 180 days after the effective date, to publish final regulations.

Opposition to the bill surrounds the elimination of critical safeguards in the Clean Streams Law that protect waterways from spills. The concern is that this bill will allow polluters to decide whether their spill should be reported to DEP; therefore, DEP has opposed the bill.

Also, on October 23, 2018, America's Water Infrastructure Act (AWIA) was signed into law, amending numerous provisions of the Safe Drinking Water Act. AWIA also amended the Emergency Planning and Community Right-to-Know Act (EPCRA). The revisions to EPCRA require that community water systems (1) receive prompt notification of any release of a hazardous substance that potentially affects their source water, and (2) have access to hazardous chemical inventory data. These requirements went into effect immediately upon signing the law.

While this legislation has made it out of the Senate and through the committee process in the House over the past few legislative sessions, it has never made it across the finish line by being sent to the Governor.

#### Technical Guidance

On October 16, 2021, the DEP published notice in the *Pennsylvania Bulletin*<sup>#</sup> inviting comments on proposed new technical guidance on "Notification Requirements for Spills, Discharges and Other Incidents That Threaten to Cause Pollution of the Waters of the Commonwealth as required by the state Clean Streams Law." (DEP ID: 383-4200-003)

#### Description of Draft Final Technical Guidance

Section 401 of The Clean Streams Law provides: "It shall be unlawful for any person or municipality to put or place into any of the waters of the Commonwealth or allow or permit to be discharged from property owned or occupied by such person or municipality into any of the waters of the Commonwealth, any substance of any kind or character resulting in pollution as herein defined. Any such discharge is hereby declared to be a nuisance."

On April 21, 2022, DEP presented its Draft Final Technical Guidance Document<sup>iv</sup> to the Public Water System Technical Assistance Center (TAC) Board. Some of the revisions of concern made to the document included:

- DEP notification is not required for incidents where substances truly have no possibility of reaching a water of the Commonwealth (including the possibility of the substance flowing or being washed into waters of the Commonwealth) in a way that would cause or threaten pollution of water of the Commonwealth, endanger downstream users, or damage property.
  - Immediate DEP notification is required for potable water main breaks discharging chloraminated water. Even when dechlorinated, chloraminated water will contain ammonia, which cannot be readily removed or inactivated, and which can have adverse impacts on aquatic life and other protected water uses.
  - Immediate DEP notification is not required for potable water main breaks, water system maintenance, or hydrant flushing where a Preparedness, Prevention, and Contingency (PPC) Plan is in place and implemented, where the discharge can be dechlorinated, and where chloramine is not in use. In addition, conditions must exist that the discharge will not cause ponding,

damage to vegetation, or soil erosion, and has no risk of reaching waters of the Commonwealth, directly or indirectly, in a way that would endanger downstream users, would otherwise result in pollution, or create a danger of pollution, or would damage property. For example, this could be discharges to vegetated areas/fields for infiltration.

 Immediate DEP notification may be required for discharges of other chlorinated water, such as from a swimming pool or spa, if the discharge is not dechlorinated and appropriately managed. Immediate notification to DEP may not be necessary where the discharge can be dechlorinated and will not reach waters of the Commonwealth, directly or directly, in a way that would endanger downstream users, would otherwise result in pollution, or create a danger of pollution, or would damage property.

As you can imaging, the TAC took exception to the characterization that finished drinking water treated with chloramines could be considered "pollution" by DEP's Bureau of Clean Water. Therefore, TAC met again with DEP's Bureau of Clean Water at its October 27, 2022, meeting where sample data on ammonia levels in a stream after a main break were presented. TAC made the case that it would take a massive spill (over 500,000 gallons) for ammonia levels in chloraminated water to be harmful. In addition, the sample data factored in ammonia levels as the finished water leaves the plant and does not account for dissipation through the distribution system or spill event, so the sample data was a very conservative estimate of ammonia levels.

**Status**: Early in 2023, DEP indicated that they were waiting for guidance from the new administration, as Governor Josh Shapiro was elected Governor, and DEP's Non-Regulatory Agenda, issued in March 2023, indicated that they intended to publish as final in Quarter 3 of 2023.

#### Draft Proposed Rulemaking

As the water industry awaited word from DEP on the publication of the

Draft Final Technical Guidance, we were somewhat surprised when, on September 21, 2023, DEP brought forward a draft proposed rulemaking entitled: "Notification Requirements for Unauthorized Discharges to Waters of the Commonwealth" before the Water Resources Advisory Committee (WRAC) <sup>v</sup> for discussion. However, WRAC did not entertain a Motion to support this draft proposed rulemaking.

#### Summary – Notification Requirements for Unauthorized Discharges to Waters of the Commonwealth – Draft Proposed Rulemaking

The draft proposed amendments to 25 Pa. Code § 91.33 detail factors relevant to determining if an unauthorized discharge will endanger downstream users or would otherwise result in pollution or create a danger of pollution of waters of this Commonwealth.

An activity or incident described in subsection (a) involving a quantity of substance greater than the reportable quantity listed in 40 CFR 117.3 (relating to determination of reportable quantities) must be immediately reported to the DEP.

### § 91.33. Incidents causing or threatening pollution.

It proposes to amend § 91.33 (a)<sup>vi</sup> regarding immediate notification to DEP of a spill with qualifying language:

- If the risk of pollution to waters of the Commonwealth, property damage or endangering downstream users is unknown or uncertain, it is the responsibility of the person at the time in charge of the substance or owning or in possession of the premises, facility, vehicle, or vessel from or on which the substance is discharged or placed to immediately notify the DEP.
- When deciding under the above whether an incident would endanger downstream users, result in pollution, or create a danger of pollution, or would damage property, a person shall consider the following factors:
  - The properties of the substance or substances involved, including but not limited to:
- The effects on protected water uses of each substance individually and any synergistic or cumulative effects

of multiple substances, including toxicity to humans and aquatic life.

- Persistence in the environment, including the substance's ability o be transformed or degraded by biological, chemical, or physical processes.
- The mobility of the substance in soil and water.
- The concentration and quantity of the substance.
- An activity or incident described in subsection (a) involving a quantity of substance greater than the reportable quantity listed in 40 CFR 117.3 (relating to determination of reportable quantities) must be immediately reported to the DEP.
- An activity or incident described in subsection (a) involving a quantity of substance less than the reportable quantity listed in 40 CFR 117.3 or a substance not listed in 40 CFR 117.3 must be comprehensively evaluated using the factors described in paragraph (2) to determine if the properties of the substance could endanger downstream users of the waters of the Commonwealth or would otherwise result in pollution or create a danger of pollution of the waters of the Commonwealth.
- The location or locations involved, including but not limited to:
  - Proximity to nearby waters of

the Commonwealth, including groundwater and surface waters.

- Characteristics of nearby waters of the Commonwealth, including but not limited to:
  - ▶ The protected uses of the water.
  - ▶ The flow of the waters.
- Land use, soils and geology.
- The presence and qualities of relevant infrastructure, such as spill containment systems.
  - The weather conditions before, during and after the incident.
  - The presence and implementation of adequate response plans, procedures, sor protocols.
- The duration of the discharge.
- If requested by the DEP, a person who claims that the DEP need not have been notified of an incident under this section shall explain in a signed statement, under penalty of law, why the incident would not endanger downstream users, result in pollution, or create a danger of pollution, or damage property, based on the factors listed above.

**Status**: On October 26, 2023, DEP brought this draft proposed rulemaking before the Public Water System Technical Assistance Center (TAC) for discussion.

Although TAC members asked the question in different ways, DEP's Bureau of Clean Water staff would not



specifically say whether, under this proposed rulemaking, finished drinking water treated with chloramines could be considered "pollution." However, the general tone of the presentation led TAC to believe that the intent of the proposed rulemaking is to address substances greater than the reportable quantities listed in 40 CFR 117.3 (relating to determination of reportable quantities), which must be immediately reported to the DEP.

Therefore, TAC voted unanimously to send the proposal to the EQB for consideration.

Please be assured that we will keep you apprised of this proposed rulemaking, technical guidance and legislation addressing spill reporting.

#### About the Author:



Erik A. Ross is a Senior Associate at Milliron Goodman, and a regular contributor to *The Water News Source.* 

- Senate Bill 286 PN 260 https://www.legis.state. pa.us/cfdocs/billinfo/billinfo.cfm?syear=2023&sind= 0&body=S&type=B&BN=0286
- Availability of Technical Guidance, "Guidance on Notification Requirements for Spills, Discharges, and other Incidents of a Substance Causing or Threatening Pollution to Waters of the Commonwealth Under Pennsylvania's Clean Streams Law," Pennsylvania Bulletin, 10/16/2021 https://www.pacodeandbulletin.gov/Display/ pabull?file=/secure/pabulletin/data/vol51/51-42/1730.html
- Notification Requirements for Spills, Discharges and Other Incidents That Threaten to Cause Pollution of the Waters of the Commonwealth as required by the state Clean Streams Law https://www.depgreenport.state.pa.us/elibrary/ GetDocument?docld=3963581&DocName=GUI DANCE%200N%20N0TIFICATION%20REQS%20 FOR%20SPILLS%2C%20DISCHARGES%2C%20 %26amp%3B%200THER%20INCIDENTS%20 OF%20A%20SUBSTANCE%20CAUSING%20 OF%20A%20SUBSTANCE%20CAUSING%20 OF%20THREATENING%20POLLUTION%20TO%20 WATERS%20DF%20THE%20SOMMONWEALTH%20 UNDER%20PA%26%2339%3BS%20CLEAN%20 STREAMS%20LAW.PDF
- BCW Presentation on TGD1 https://files.dep. state.pa.us/PublicParticipation/Advisory%20 Committees/AdvCommPortalFiles/TAC/2022/ BCW\_Presentation\_TGD1.pdf
- V Notification Requirements for Unauthorized Discharges to Waters of the Commonwealth - Draft Proposed Rulemaking https://files.dep.state.pa.us/ PublicParticipation/Advisory%20Committees/ AdvCommPortalFiles/WRAC/2023/9-21-23/DRAFT-PROPOSED-91.33-AMENDMENTS---SLIDES.pdf
- Chapter 91.33 Proposed Rulemaking Annex https://files.dep.state.pa.us/PublicParticipation/ Advisory%20Committees/AdvCommPortalFiles/ WRAC/2023/9-21-23/DRAFT-PROPOSED-91.33-AMENDMENTS---ANNEX.pdf



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# **Penn Township Wastewater:** A Case Study in Operational Excellence

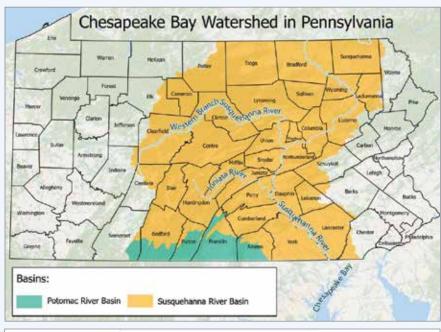
At Aqua Pennsylvania, we know that wastewater treatment is essential. It protects public health, supports a safe environment, and helps to preserve source water, supports outdoor recreation, safeguards wildlife, and ensures that our communities thrive every day.

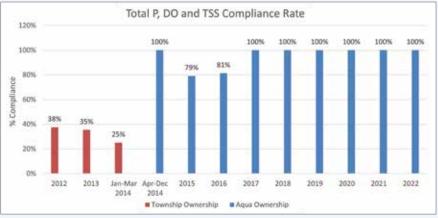
Reliable wastewater service starts with sustainable operations and ready-to-serve infrastructure. Unfortunately, much of our water and wastewater infrastructure, such as pipelines, is underground and easily forgotten. When our critical infrastructure is neglected, it can cause irreparable damage that affects all of us.

In 2014, Aqua purchased the Penn Township wastewater treatment system. At the time, the wastewater treatment plant had a compliance rate of just 35%, failing on three key parameters of its National Discharge Elimination System permit that contribute to local environmental degradation and to the Chesapeake Bay.

The southwestern part of Chester County, which includes Penn Township, is part of the Susquehanna River basin, the largest tributary of the Chesapeake Bay, providing more than half of the total freshwater flow. The Chesapeake Bay is the nation's largest estuary and faces serious problems due to pollutants discharging into the environment, impacting source water quality for drinking water treatment plants downstream and leading to fish kills and changes in aquatic biodiversity. Phosphorus, dissolved oxygen, and sediment are three major contributors to the poor health of our waterways. According to the DEP, the water quality of the Chesapeake cannot be restored without Pennsylvania's help, and that starts with our local streams.

Properly treated wastewater is a major factor in improving the ecological health of the Bay, reducing nitrogen and phosphorus pollution, which fuels algae growth in the water and blocks sunlight from reaching underwater





# Properly treated wastewater is a major factor in improving the ecological health of the Bay...

grasses that serve as food and habitat.

Immediately after purchasing Penn Township wastewater treatment operations our engineers and operations personnel began working on resolving the many problems it faced. Over the course of eight years, we've invested \$11 million and completed 15 improvement projects which have increased the safety of our employees and improved operations and now reliably serves local businesses, neighborhoods, and the community. Our investment in Penn Township corrected issues of high levels of total phosphorous and suspended solids in the nearby streams that discharge into the Chesapeake Bay.

Since 2017, our compliance rate has been 100%. It is a privilege to serve Penn Township and to help protect the Chesapeake Bay.

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# **PfSW Upcoming Events**

#### Save the Date

Please plan on attending our annual Partnership for Safe Water Mixer at the upcoming State Conference to be held at the Lancaster Marriott in May, 2024. The PA Section honors utilities who have reached milestones in the Treatment and Distribution programs (Director's. President's and Excellence awards) and also recognizes utilities that have continually met the goals of the program with presentations of longevity awards. It is also a great time to meet the Partnership team and learn more about how being an active member can improve your operation. Planning is currently underway for the Mixer, so please be sure to check

our website (*www.paawwa.org*) under the Conferences section for further details of the exact date and time of the event. We look forward to seeing you there!



Chester Water Jeff DeRusso\_Sharon, Fillmann Brandi Railing, Keith Johnston, Paul Zielinski



communications@arroconsulting.com | 717.569.7021





PAWC Clarion Bob Larson, Kate O'Neill

#### AQUA Matt Miller and Mike McFadden

#### **Training Inquiry**

Our National Partnership for Safe Water team is interested in conducting a web training session for all current members on how to set up and navigate through the online Treatment and Distribution annual data reporting required by both programs. The web-based reporting systems allow utilities to directly upload their annual reports, negating any possible errors in manual submittals through email. The training would most likely occur during the second guarter of 2024 immediately prior to June when the 2024 annual reporting is due. If your utility is interested in participating, send email to Paul Zielinski (paulzielinski@comcast.net), or text or phone 717-645-2636.



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Browns Hill Sand

# PA-AWWA 2024 Buyers' Guide

- 1. A categorical listing of products and services, and the companies that provide them
- 2. An alphabetical listing of the companies appearing in the first section; including contact information and company websites

### LISTINGS BY CATEGORY

#### Activated Carbon

AqueoUS Vets Browns Hill Sand, Inc.

#### AMR/AMI/MDM/AMI

Communications Core & Main LP Neptune Technology Group USG Water Solutions

#### **Asset Management**

ARRO Consulting Dixon Engineering, Inc. Entech Engineering, Inc. Herbert, Rowland & Grubic, Inc. M.E. Simpson Co., Inc.

**Bypass Pumping Services** FieldForce Equipment Sales & Rentals, LLC

#### Certification Training/

Health & Safety Training Duquesne University Sherwood Logan

Chemical Processing & Feed Systems BissNuss, Inc. Sherwood Logan

#### Coagulation & Flocculation/ Solids Separation Coyne Chemical Environmental Services Sherwood Logan

Contractors Fox Tapping, Inc.

Fox Tapping, Inc. Induron Protective Coatings

#### Corrosion Control/CSO/SSO Controls

Coyne Chemical Environmental Services Gwin, Dobson and Foreman, Inc. HDR Engineering, Inc. Induron Protective Coatings Shannon Chemical Corp.

#### DBP Removal

Shannon Chemical Corp.

#### **Dechlorination** Integra Clear – Vita-D-Chlor Co.

#### Design/Design-Build Services

Atlas Technical Consultants, LLC Carroll Engineering Corp. Entech Engineering, Inc. Gibson-Thomas Engineering Hazen and Sawyer JHA Companies Mott MacDonald RETTEW Associates, Inc. Whitman, Requardt and Associates, LLP

#### Disinfection/Equipment/Management

BissNuss, Inc. Coyne Chemical Environmental Services

#### Education/Continuing Education for Water/Wastewater Professionals Duquesne University PA Coalition for Oral Health

#### **Electrical**, Instrumentation/

Controls/Generators HDR Engineering, Inc. KLH Engineers, Inc. Kraft Power Corp.

#### Environmental Containment Treatment AqueoUS Vets

#### Engineers/Consultants

Atlas Technical Consultants, LLC ARRO Consulting Buchart Horn, Inc. Carollo Engineers Carroll Engineering Corp. Dixon Engineering, Inc. EDR Entech Engineering, Inc. Fox Tapping, Inc. Gibson-Thomas Engineering Gwin Dobson & Foreman, Inc. Hazen and Sawyer Herbert, Rowland & Grubic, Inc. Induron Protective Coatings JHA Companies KLH Engineers, Inc. Lennon, Smith, Souleret Engineering, Inc. Mott MacDonald **RETTEW Associates, Inc.** Whitman, Requardt and Associates, LLP

#### **Fire Hydrant Flow Testing**

Integra Clear – Vita-D-Chlor Co. M.E. Simpson Co., Inc.

Filter Media/Filtration AqueoUS Vets Browns Hill Sand, Inc.

**Fluoridation Equipment Grants** PA Coalition for Oral Health



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General Industrial Kraft Power Corp.

GIS and MS4 Lennon, Smith, Souleret Engineering, Inc.

Hot Taps, Wet Taps, Line Stop Fox Tapping, Inc.

Infrastructure Rehabilitation Carollo Engineers

Leak Detection M.E. Simpson Co., Inc. Neptune Technology Group Sherwood Logan

Legal Services Cozen O'Connor

Membrane Bio-Reactors Sherwood Logan

Meters/Meter Testing/Reading M.E. Simpson Co., Inc. Valtronics

Odor Control Shannon Chemical Corp.

**Operation Services** PA Partnership for Safe Water

#### Pipe & Appurtenances/Pipe Cleaning & Televising/Pipe Freezes/Pipeline Products/Assessments/Rehab/Repair

Core & Main LP The Ford Meter Box Co., Inc. Fox Tapping, Inc. M.E. Simpson Co., Inc. USG Water Solutions

Programs/Construction Management Atlas Technical Consultants, LLC Hazen and Sawyer Mott MacDonald

#### Pumps/Pump Systems/Pump Booster Stations & Meter Vaults

BissNuss, Inc. Buchart Horn, Inc. FieldForce Equipment Sales & Rentals, LLC Lennon, Smith, Souleret Engineering, Inc. Pumpman Pittsburgh Reiner Pump Systems Valtronics Rental Equipment FieldForce Equipment Sales & Rentals, LLC

Sewer Inspection Services Gibson-Thomas Engineering

Solids Separation Coyne Chemical Environmental Services

Storage Tanks/Reservoir Systems/ Water/Wastewater Storage Tanks Dixon Engineering, Inc.

Stormwater Detention/Runoff/ RETTEW Associates, Inc.

#### Stormwater/Stormwater Treatment & Conveyance

ARRO Consulting Carollo Engineers JHA Companies KLH Engineers, Inc.

**Utility Tools** PA Partnership for Safe Water

**UV Disinfection** BissNuss, Inc.

#### Valves/Valve Boxes/

Insertion Valves/Brass Valves The Ford Meter Box Company, Inc. Fox Tapping, Inc. Valtronics

Water Main/Infrastructure Rehabilitation/Water Resources Integra Clear – Vita-D-Chlor Co.

#### Water Quality/Water Quality Monitors

Hazen and Sawyer Shannon Chemical Corp. USG Water Solutions

#### Water Resources

ARRO Consulting Gwin, Dobson and Foreman, Inc. Hazen and Sawyer JHA Companies

#### Water, Sewage Billing & Collections Software Carollo Engineers

Gibson-Thomas Engineering

#### Water Tank Engineering/ Maintenance/Inspection

Atlas Technical Consultants, LLC Browns Hill Sand, Inc. Carroll Engineering Corp. Dixon Engineering, Inc. Entech Engineering, Inc. Herbert, Rowland & Grubic, Inc. Pittsburg Tank & Tower Maintenance Co. Pumpman Pittsburgh USG Water Solutions Whitman, Requardt and Associates, LLP

### Water/Wastewater Collection and Distribution Systems

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Waterworks Brass Core & Main The Ford Meter Box Co., Inc.

#### Water/Wastewater Treatment/

**Optimization/Chemicals/Systems** AqueoUS Vets ARRO Consulting BissNuss. Inc. Browns Hill Sand, Inc. Carroll Engineering Corp. Core & Main LP Coyne Chemical Environmental Services Entech Engineering, Inc. Gibson-Thomas Engineering Gwin, Dobson and Foreman, Inc. Herbert, Rowland & Grubic, Inc. Induron Protective Coatings Integra Clear - Vita-D-Chlor Co. JHA Companies Kraft Power Corp. Lennon, Smith, Souleret Engineering, Inc. Mott MacDonald PA Partnership for Safe Water Pumpman Pittsburgh RETTEW Associates, Inc. Shannon Chemical Corp. Whitman, Requardt and Associates, LLP

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#### Browns Hill Sand, Inc.

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#### Buchart Horn, Inc.

445 W. Philadelphia St. York, PA 17401 717-852-1400 info@bucharthorn.com www.bucharthorn.com

Carollo Engineers jmarie@carollo.com www.carollo.com

#### Carroll Engineering Corp.



949 Easton Rd. Warrington, PA 18976 215-343-5700 jardman@carrollengineering.com www.carrollengineering.com

#### Core & Main LP



597 Salem Rd. Etters, PA 17319 717-938-8693 www.coreandmain.com

#### Coyne Chemical Environmental Services



3015 State Rd. Croydon, PA 19021-6997 215-785-3000 dmaugle@coynechemical.com www.coyneenvironmental.com

#### Cozen O'Connor

17 N. St., Ste 1410 Harrisburg, PA 17101 717-703-5903 mklein@cozen.com www.cozen.com

#### Dixon Engineering, Inc.

789 Lafayette Rd Medina, OH 44256 330-983-0062 shannon.vidika@dixonengineering.net www.dixonengineering.net

#### **Duquesne University – Center for Environmental Research & Education** 600 Forbes Ave.

Pittsburgh, PA 15282 412-396-4095 envscience@duq.edu www.duq.edu/cere

#### EDR



34 Northeast Dr., Ste 1B Hershey, PA 17033 717-298-1059 info@edrdpc.com www.edrdpc.com

#### Entech Engineering, Inc.

201 Penn St. Ste 3 Reading, PA 19601 610-373-6667 info@entecheng.com www.entecheng.com

#### FieldForce Equipment Sales & Rentals, LLC



34 N.E. Dr. Hershey, PA 17033 717-508-0550 sales@fieldforcerentals.com https://fieldforcerentals.com

#### Ford Meter Box Co., Inc., The

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#### Fox Tapping, Inc.

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#### **Induron Protective Coatings**



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#### Integra Clear – Vita-D-Chlor Company

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# JHA Companies



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#### Kraft Power Corp.

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#### Mott MacDonald

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#### Neptune Technology Group



1600 Alabama Hwy 229 Tallassee, AL 36078 800-633-8754 marketing@neptunetg.com www.neptunetg.com

#### **PA Coalition for Oral Health**



P.O. Box 242 Delmont, PA 15626 724-972-7242 info@paoralhealth.org www.paoralhealth.org

#### **PA Partnership for Safe Water**



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#### **RETTEW Associates, Inc.**



3020 Columbia Ave. Lancaster, PA 17603 800-738-8395 jlshenk@rettew.com www.rettew.com

#### Shannon Chemical Corp.



Shannon Chemical Corp.

P.O. Box 376 Malvern, PA 19355 610-363-9090 hspencer@shannonchem.com www.shannonchem.com

#### Sherwood Logan



2140 Renard Ct. Annapolis, MD 21401 410-841-6810 splummer@sherwoodlogan.com

#### **USG Water Solutions**



1230 Peachtree St. NE, STE 1100 Atlanta, GA 30309 855-526-4413 customerservice@usgwater.com www.usgwater.com

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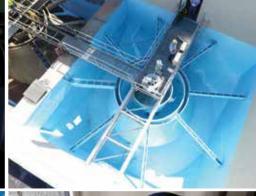
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Browns Hill Sand	12	800-854-7263	www.brownshillsand.com
Buchart Horn, Inc.	7	800-274-2224	www.bucharthorn.com
Carollo Engineers	11	800-523-5826	www.carollo.com
Carroll Engineering Corporation	9	215-343-5700	www.carrollengineering.com
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Coyne Environmental Services	3, 9	215-785-3000	www.coyneenvironmental.com
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EDR	13	717-298-1059	www.edrdpc.com
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Gibson-Thomas Engineering Co., Inc.	10	724-539-8562	www.gibson-thomas.com
Gwin, Dobson, & Foreman, Inc.	26	814-943-5214	www.gdfengineers.com
Hazen and Sawyer	13	215-592-0600	www.hazenandsawyer.com
HDR	7	412-497-6000	www.hdrinc.com
Herbert, Rowland & Grubic, Inc. (HRG)	29	717-564-1121	www.hrg-inc.com
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Partnership for Safe Water	36	303-347-6169	www.awwa.org/resources-tools/programs/ partnership-for-safe-water
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RETTEW	35	800-738-8395	www.rettew.com
Shannon Chemical Corporation	24	800-860-9090	www.shannonchem.com
Sherwood Logan & Associates	4	610-207-3200	www.sherwoodlogan.com
USG Water Solutions	43	(855) 526-4413	www.usgwater.com
Valtronics Sales	18	304-273-5356	www.valtronicssales.com
Whitman, Requardt & Associates, LLP	12	443-224-1531	www.wrallp.com

















**Asset Management** 

steel & concrete tanks | treatment plants pipes | meters

### Water Quality in Distribution Systems

in-tank water mixers trihalomethane removal systems disinfectant residual control systems

### **Smart Metering Services**

Advanced Metering Infrastructure (AMI) smart meters | managed services performance guarantees Contact Your Local Water System Consultant

Dan Frum | Rob Mourlas Nick Rapagnani

> 855-526-4413 usgwater.com





# Removing PFAS from the Redwoods to the Jersey Shore

AV is building on our momentum as the PFAS solutions market leader in the Western US. From the water source to the water connection, we deliver fully integrated custom solutions across the treatment chain. We're now delivering solutions "back east" with installations in PA, NJ, MA, SC and WI. Engineers, contractors and water utilities across the country trust the team that can engineer, fabricate and install everything on the pad from Concept to Commission.



Scan to watch the video! Swedesboro, NJ - LoPro system for PFAS treatment

#### Never trade your long term goals for the short-term goals of a vendor or contractor.

#### 2017

First PFAS potable water treatment plant in CA 1.3 MGD

#### 2019

Largest PFAS treatment plant in the US 8 MGD

#### 2021 Largest PFAS treatment plant in the US again! 25 MGD

#### 2022 Largest US

Aquec JSVETS

1,4-Dioxane, peroxide quenching application 82 MGD



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