

**Association of Metropolitan Water Agencies
2023 Environmental Justice and Equity Utility Management Award:**

Pittsburgh Water & Sewer Authority's Community Lead Response

1. Utility Profile

Governance Background

The Pittsburgh Water & Sewer Authority (PWSA) is a municipal authority created in 1984 by the City of Pittsburgh (the City) under the Pennsylvania Municipal Authorities Act. In the state of Pennsylvania, a municipal authority is defined as a body politic and corporate created to finance and/or operate specific public works projects without tapping the general taxing powers of the municipality. Modern day PWSA absorbed the City water department in 1995 and became the sole proprietor of the sewer system in 1999. We are responsible for providing sewer and stormwater service to the entire city and water service and treatment for a portion of the city and some surrounding municipalities. We are a wholesaler and retailer. PWSA is governed by a nine-member board appointed by the City of Pittsburgh Mayor and confirmed by City Council.

On December 21, 2017, the Pennsylvania legislature enacted Act 65 of 2017 (Act 65), placing the PWSA under the jurisdiction of the Pennsylvania Public Utility Commission (PA PUC) pursuant to the Pennsylvania Public Utility Code (the Public Utility Code). Act 65 applies most of the provisions of the Public Utility Code to the PWSA in the same manner as a "public utility," resulting in regulation of the Authority's rate making, its operating effectiveness, debt issuances and other aspects of conducting its business like the way the PA PUC regulates investor-owned utilities. Therefore, PWSA is in the unique position of being the only municipal authority under PUC jurisdiction in the state of Pennsylvania.

Water and Wastewater System

With a capital budget of \$349 million in 2023, PWSA provides service to 116,365 customers and a regional population of approximately 500,000. PWSA inherited the City's infrastructure, much of which was built in the late 1800s and early 1900s. The Allegheny River has served as its water source since 1828. With a workforce of over 400 employees, PWSA operates and maintains a 117 million gallon per day (MGD) rapid sand type water treatment plant, a 26 MGD microfiltration plant, approximately 964 miles of water mains, over 32,000 valves and fire hydrants, 1 raw water pump station, 10 finished water pump stations, 4 in-ground reservoirs, 10 storage tanks, approximately 1,220 miles of sanitary, storm and combined sewers, 29,000 manholes, 30,000 catch basins and inlets, 38 combined sewer overflow outfalls, 185 storm outfalls, and four wastewater pump stations. PWSA is not responsible for wastewater treatment.

Pittsburgh Economic Statistics

Median value of owner-occupied housing units	\$147,600
Bachelor's degree or higher	45.7%
Median household income	\$54,306
Persons in poverty	19.7%

2. Environmental Justice and Equity Mission, Vision, or Policy Statements

PWSA is on a transformation journey – centered on a renewed emphasis on public health, the environment, and its responsibility to serve as steadfast stewards of the vital water services the region relies on each day. In October of 2021, PWSA embarked on a Strategic Planning Project to define its mission, vision, and core values for the first time in the utility’s recent history. We held six collaborative workshops with a cross-section of employees facilitated by a third-party consultant. We also sent out a company-wide survey to collect insights and feedback from the broader workforce. Employee responses to the survey were synthesized with information gathered during the employee collaborative planning sessions and discussions with PWSA’s leadership team to produce a final mission statement, organizational vision, and set of core values announced in March 2022.

Mission

To support our region by protecting public health and the environment through the delivery of safe and reliable water services with a commitment to future generations.

Vision Statement

To transform Pittsburgh’s water system while being recognized by customers as a trusted service provider and a steadfast steward of a vital public asset.

Core Values

Stewardship: As a public utility, we are responsible for serving as mindful stewards of our water system and continuing to provide essential and dependable water services now and for generations to come. We’re making decisions that will impact Pittsburgh for the next 100 years.

Ethics & Integrity: We act ethically and with integrity in all instances, both as individuals and as an organization. This means modeling honesty, transparency, and professionalism in everything we do.

Accountability: We are all held accountable, both individually in our everyday roles and as one organization. Only by doing what we promised can we rebuild trust with the community.

Safety: We ensure a safe working environment for employees, the safety of our infrastructure assets, and the safety of the millions of gallons of water delivered to customers every day.

Equity: We strive to deliver quality and affordable water services to every community in our service area, and to create a workplace that reflects the diversity of those communities.

3. Assessment and Planning

Community Lead Response Overview – Developing Equitable Policy from the Ground Up

PWSA's Community Lead Response was created in 2016 to address the risk of lead service lines within the PWSA water service area. After lead level testing showed elevated lead levels in drinking water, PWSA developed a three-tiered approach to addressing the issue of lead in drinking water.

- First, it developed a comprehensive education program that went into dozens of neighborhoods across the water service territory explaining the risks of lead, the source of lead in drinking water, and everyday precautions residents could take to protect themselves, like taking free lead test samples or flushing their pipes.
- Second, it pursued a new corrosion control treatment to reduce lead levels for all customers with lead service lines or plumbing.
- Third, it set out on a multi-year effort to create a comprehensive inventory for lead lines and replace them at no direct cost to customers.

Over the past seven years, PWSA's Community Lead Response has become a standard bearer in the industry due to its comprehensive operating procedures and ease of participation for customers. To-date, it has replaced over 10,200 public and over 7,000 private lead lines, putting it over halfway to its goal of replacing all lead in the service area.

This year, PWSA was tapped by the Biden Administration to represent a successful lead remediation model as part of its Get The Lead Out Partnership and was used as a case study in creating a lead inventory by the US Environmental Protection Agency (EPA). The project team regularly consults with public and private water entities across North America, sharing best practices, communications materials, and lessons-learned over the life of the program.

Baseline Environmental Justice and Equity Assessments

In April of 2018, PWSA transitioned to oversight by the PA PUC, making it the only public utility in Pennsylvania to be regulated by the Commission. The PA PUC provides guidance and oversight with respect to customer service, operations performance, and ratemaking. Out of this oversight, PWSA and the PA PUC negotiated a Community Lead Response Tariff Settlement.

While PWSA met or exceeded many industry standards prior to the tariff, the settlement ensured that these policies were maintained and reported out on a regular basis now and into the future of the Community Lead Response. Those initiatives committed to in the settlement include:

- Continue to prioritize residences for lead line replacement based on children’s blood lead levels, the prevalence of children under six and persons of child-bearing age, income, and density of lead lines in a given area.
- Formation of a Community Lead Response Advisory Committee, comprised of community advocates, academic and industry experts, and public health officials, to oversee policies implemented by PWSA and provide feedback when necessary to make the Community Lead Response an equitable and successful program.
- Develop and implement plans to encourage greater participation in lead line replacement efforts and free lead sampling programs.
- Provide transparent and easily-accessible lead service line inventory information to the public.
- Put protocols in place for elevated lead samples to ensure customers are immediately provided safe drinking water while flushing measures are taken to reduce lead levels.
- Make good-faith efforts to pursue alternative funding mechanisms for lead line replacement, including state and federal funding sources, to reduce the burden on ratepayers.

Developing Long-term Environmental Justice and Equity Goals

PWSA has the goal of replacing all public lead service lines in its water system by 2026, a goal set by leadership early in the program. As with all capital improvement initiatives undertaken by a public utility, adequate funding is required to reach these goals. For this reason, PWSA has aggressively pursued low-interest loans and grant money to support its Community Lead Response.

PWSA will continue to pursue these alternative funding sources and advocate for more grant money to be available for PWSA’s efforts, and for lead line replacement programs across Pennsylvania.

Prioritization of Lead Line Replacement Efforts

When the Community Lead Response began in 2016, there were an estimated 16,000-18,000 lead service lines throughout the water service territory to be replaced. While the construction process for lead service line replacement is straightforward, much consideration had to be paid to which lead lines would be replaced first. To answer this question, PWSA developed a prioritization model to make this determination in an equitable and standardized way.

PWSA’s overarching goal was to replace lead lines first in neighborhoods where they posed an exacerbated risk. Research has shown that lead impacts the developing brains of young children and can impact fetuses during gestation. Additionally, placing the financial burden of replacement on homeowners disproportionately impacts low income residents.

With these factors in mind, PWSA developed a prioritization model with the following four criteria:

1. Census tract data of income levels by neighborhood within the PWSA water service area.
2. Census tract data of concentrations of children under the age of six and persons of childbearing age, by neighborhood.

3. Blood lead levels of children within PWSA's water service area, obtained through the Allegheny County Health Department's universal, mandatory testing program.
4. Concentrations of lead service lines or service lines of an unknown material, per PWSA's lead line inventory.

While the initial prioritization model assigned equal weight to each of these factors, further refinement of the process included weighing each metric to ensure the most-at risk residents are considered for lead line replacement first. The current weighting, developed in consultation with Community Lead Response Advisory Committee, is as follows:

1. Income: 10%
2. Children under six and persons of childbearing age: 40%
3. Blood lead level data: 40%
4. Lead line/unknown line inventory records: 10%

In 2021, as the EPA made the Environmental Justice (EJ) mapping tools available for public use, PWSA began to incorporate this metric as a fifth criteria, further enhancing the goals of the prioritization model. PWSA evaluates all census tracts within the water service area and ranks them from highest priority to lowest priority. If some neighborhoods are tied in the ranking model, PWSA then looks to neighborhoods in Environmental Justice areas, and further rank those by income level.

This equity-based formula has been used across dozens of construction projects, including lead line identification and replacement projects as well as PWSA's annual water main replacement program, which upgrades anywhere from 6-12 miles of water lines per year.

PWSA Lead Help Desk and Lead Liaisons

PWSA is required to work one-on-one with customers to receive approval to work on private property and gain access to the private side of the service line. To make the replacement process as easy and professional as possible, PWSA recognized the need to employ highly knowledgeable and approachable team members that could walk customers through every step of the replacement process.

To address these potential barriers to participation, it created the Lead Help Desk, a wing of Customer Service whose only focus is working with customers who are to potentially receive a lead line replacement. They manage the agreement documentation required to complete replacements and service line material verifications, follow up with customers who are unresponsive to pre-construction mailings, schedule in-person coordination with customers, and answer any lead-related questions customers may have. This personal touch and expertise puts customers at ease when they are faced with a property upgrade being initiated by a public utility, which is uncommon in Pittsburgh.

The Lead Help team is also comprised of Lead Liaisons, which are field workers who act as the PWSA representative and customer advocate during the construction process. They meet with every homeowner impacted by the project, introduce the construction team responsible for the work, describe the process in clear terms, and answer questions. In neighborhoods that show higher

trepidation about the program, they canvass all unresponsive locations to encourage participation and answer outstanding questions about the process, sometimes on evenings and weekends. PWSA has found that this personal, friendly touch has paid dividends in areas where trust in the public water utility has faltered due to systemic inequity and historic neglect.

4. Equity in Access and Costs

Policy Changes Lead to More Equitable Outcomes

PWSA quickly recognized that only replacing the public side of a lead service line was not only a health risk to residents, but an economic one as well. When the Community Lead Response began, it was unclear if state law allowed for funding private side replacements using PWSA funds. Under this assumption, only the public side of the service line could be replaced by PWSA. Replacing only a portion of a lead line can increase lead levels in the short term, putting residents at higher risk of lead ingestion. Furthermore, the burden of coordinating a private-side lead line replacement at the same time as the utility replaces the public side put an undue financial burden on low-income residents and diminished participation in the program.

In 2017, PWSA entered a consent order with the Pennsylvania Department of Environmental Protection (DEP) to replace seven percent of its lead lines per year. A decision was made by leadership within the organization that pausing the program until lead lines could be replaced in full was more important than working towards seven percent replacement within the current policy parameters. The program was halted in late 2016 and efforts were directed towards developing more common-sense, equitable policy.

PWSA, with the help of local leaders, quickly lobbied for state legislators to amend the law and allow PWSA to use public funds to replace lead lines on private property. This amendment passed unanimously in both chambers of the Pennsylvania General Assembly, allowing for PWSA to resume its program, replacing the full lead service lines at no direct cost to customers while avoiding harmful partial replacements. This meant that regardless of economic status, customers received the same end result of a lead-free service line. PWSA then worked with DEP regulators to extend the deadline and allow PWSA to make up for lost time replacing lead lines. Thereafter, PWSA met every regulatory deadline for replacements until the overall lead level in the system came back into compliance in summer 2020.

Alternative Funding Sources to Reduce Burden on Ratepayers

While prioritization policies for lead line replacements are crucial, so are funding considerations when planning a construction program of this scale. Since 2018, PWSA has aggressively pursued alternative funding methods, outside of ratepayer dollars, for its lead program. Low-interest loans through PENNVEST, Pennsylvania state revolving fund, versus traditional funding models, saves ratepayers millions over the life of the loan. PENNVEST also makes some grant money available to utilities, saving ratepayers outright.

To date, PWSA has received over \$52 million in grants and approximately \$48 million in loans, totaling approximately \$100 million in alternative funding sources towards lead service line programs.

Funding the Community Lead Response through other sources allows PWSA to continue to focus on several different water and sewer infrastructure goals, like rehabilitating aging sewer pipes, designing and implementing green stormwater solutions throughout the service area, and restoring aging pumping, storage, and transmission water infrastructure for future generations.

5. Civic Involvement in Decision Making

PWSA, under the guidance of the PA PUC, began a Community Lead Response Advisory Committee in 2019, bringing together water experts, community activists, industry experts, and its regulators to provide guidance and feedback on PWSA's lead program. The group meets quarterly and receives a comprehensive update on construction activities, water quality monitoring, policy decisions, and community outreach efforts. All meeting minutes are made publicly available one week after the meeting is held, allowing citizens access to a detailed report on the program on a regular basis.

The advisory committee allows for local advocates of lead-safe environments a seat at the table with PWSA to ensure the organization is developing policies with the best interest of Pittsburgh's most at-risk populations in mind. Many suggestions from committee members have been incorporated into PWSA's practices shortly after they were presented at committee meetings.

The Community Lead Response Advisory has convened 22 times since its inception in January 2019, and will continue to meet until 2026, as per the PA PUC Settlement requires.

6. Integrative Strategies

Lead Service Line Reimbursement Program

While PWSA has a goal of replacing all public lead service lines in the system by 2026, it acknowledges that some customers may wish to replace known lead lines at their homes proactively. For this reason, PWSA established the Lead Line Reimbursement Program, which allows homeowners to work with private plumbers to replace private-side lead service lines and be reimbursed by PWSA.

Reimbursement is based on a tiered income system which starts at 300% of the Federal Poverty Level (FPL), or \$74,580 annual income for a family of three. This income threshold aligns with other PWSA customer assistance programs.

- Customers at 300% of FPL or below receive 100% reimbursement of eligible costs
- 300-400% of FPL – 75% reimbursement of eligible costs
- 400-500% of FPL – 50% of eligible costs
- 500% of FPL or above - \$1,000 stipend towards cost of work

PWSA's Lead Help Desk Staff walks customers through the process to receive reimbursement, which includes a basic income check as well as providing estimates, final invoices, and final plumbing inspections. To date, 105 homeowners have completed the private reimbursement process, with approximately 50% of those homeowners at or below the 300% FPL range.

Customer Assistance Programs – Breaking Down Barriers to Enrollment and Providing High-Quality Service

PWSA has developed a comprehensive Customer Assistance Program, which aims to provide financial relief for income-qualified residential customers who are having difficulty paying their water, sewer, and stormwater bill. Since its inception, PWSA uses Environmental Justice data to target these programs to customers, and attempts to enroll as many customers as possible who interact with PWSA, whether that be on the phone to Customer Service or at a community event where PWSA has a presence. Some of the customer assistance offerings include:

- Bill Discount Program for those at or below 150% of the Federal Poverty Level (FPL)
- Hardship Grant Program which grants a one-time, \$300 payment to those at or below 150% of the FPL
- Flexible payment plans
- Arrearage forgiveness
- Special protections for victims of domestic abuse
- Moratorium on shutoffs during winter months

The Lead Line Reimbursement Program falls under PWSA's umbrella of Customer Assistance offerings, allowing for Customer Service representatives to start the income process for reimbursement while customers are signing up for other types of assistance. Customers are seamlessly transferred to the Lead group for further coordination, making the process simple for those seeking help.

In Spring 2021, PWSA created the Pgh2o Cares team, a dedicated team which focuses on connecting low-income customers with available resources to lessen the burden of water bills. The team provides information to residents interested in customer assistance programs, ensures easy sign-up to applicable programs, reviews water usage to identify leaks or other problems that contribute to a high water bill, and teaches customers how to use PWSA's online water usage portal. The team has attended 85 community events, like farmers markets and neighborhood meetings, to increase enrollment and spread this useful information.

To date, 6,657 customers have enrolled in the Bill Discount Program, resulting in each eligible account receiving approximately \$500 in annual savings for PWSA's most at-risk customers.

Free Lead Testing and Pitcher Filter Program

PWSA has always provided free lead testing kits to its water customers. Since its EPA lead action level exceedance in 2016, the demand for testing has increased. PWSA soon realized it did not have the in-house capacity to process a high volume of kits and partnered with a lead testing company to provide

easy, timely, and free lead testing. Today, kits can be requested online or by phone and will be received by the customer in 2-3 weeks. Testing kits arrive with pre-paid return postage, removing the cost barrier of submitting the kit to a lab. After taking a sample and sending the kit, customers can expect a letter containing the results in 4-6 weeks. Lead sampling in the home is a crucial first step in understanding water quality concerns in the home.

PWSA also provides lead-filtering pitchers and replacement filters at no cost in the following circumstances:

- Those who received any type of construction work on their lead service line, including inspection of the pipe, replacement of one or both sides of the lead service line, or a water meter replacement where lead was observed. They are also provided with six months of replacement filters.
- Those who have a lead test kit sample result over 10 parts per billion (ppb), which is five ppb less than the EPA action level for lead.
- Customers with a sample result over 50 ppb will receive a case of bottled water per day until a PWSA representative can visit the home to flush the service line. After flushing, the customer will be eligible for a free pitcher filter and replacement filters.

7. Contact Information and Application Checklist

Name: Mora McLaughlin

Title: Construction Communications Project Manager

Organization: Pittsburgh Water & Sewer Authority

Phone: 412-689-4137

Email: mmclaughlin@pgh2o.com

Email application in .pdf format: Complete, attached to email

250-word summary in .doc format: Complete, attached to email

Press contact name: PWSA media on-call service

Phone: 412-430-3898

Email: mmclaughlin@pgh2o.com

Utility Executive: William Pickering

Utility Executive Title: Chief Executive Officer

High resolution photo of executive: Complete, attached to email

High resolution program photos: Complete, attached to email