



Pittsburgh
Water & Sewer
Authority

Media Kit 2016

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What is PWSA?

- The Pittsburgh Water & Sewer Authority (PWSA) is a municipal water authority serving more than 300,000 people throughout Pittsburgh and surrounding areas.
- PWSA is the largest combined water and sewer authority in Pennsylvania, producing an average of 70 million gallons of water daily.
- Our 250 employees are city residents and PWSA customers with expertise in engineering, operations, maintenance, water quality, customer service, safety, green infrastructure and a number of other disciplines.
- We strive to constantly improve our operations to enhance the way we do business in a safe, sustainable and customer-friendly manner.

Sewers

- The PWSA sewer system is composed of 1,200 miles of sewer lines, approximately 25,000 catch basins and four pump stations.
- The sewer collection system is primarily a combined collection system that serves the entire City of Pittsburgh. It also serves as a conveyance system for portions of flows from 24 neighboring municipal communities.
- The wastewater collected by the PWSA system is conveyed to the Allegheny County Sanitary Authority (ALCOSAN) for treatment.

Quality Drinking Water

- We work hard to provide safe, reliable drinking water at the lowest possible cost.
- The PWSA drinking water system contains 965 miles of water lines, five reservoirs and 11 tanks.
- We draw water from the Allegheny River, treating and monitoring it to ensure all local, state and federal regulations are met or exceeded.
- We constantly test for contaminants in the source water prior to treatment. Results of the tests enable us to adjust the treatment process in order to maximize the reduction and removal of contaminants.
- In the more than 30 years PWSA has been operating, we have had zero water quality violations.

The Early Days

The first documented effort to establish a public water system in Pittsburgh occurred in 1802 when an ordinance was passed authorizing construction of four 47-foot deep public wells, with pumps, on Market Street. As time passed, systems of public and private wells became inadequate to satisfy the needs of the growing population. Because of the increasing need for water, the city constructed a pumped water system utilizing Allegheny River water and put it into service in 1828.

As the city expanded throughout the 19th century, the water system was forced to expand as well. Two major additions were made to the water system with the consolidation of the City of Pittsburgh and the City of Allegheny (Northside) in 1907, and the purchase of the Monongahela Water System (Southside) in 1908. The three waterworks were merged into a greater city waterworks.

New Technologies

At the end of the 19th century, contamination of the Allegheny River and the risk of waterborne diseases like typhoid fever and cholera had prompted residents and officials to press for the institution of a water purification system. In 1905, after years of intense argument concerning the design of the plant, construction was begun on a slow-sand-filtration plant that included a river pumping station, a receiving basin, two sedimentation basins, 46 covered slow-sand filters and an underground filtered water basin or clearwell. Pre-filtration systems and the use of chlorine for disinfection were added in subsequent years, the benefits of which were quickly apparent. By 1911, the annual cases of typhoid fever had dramatically dropped.

By the mid-1950s, the slow-sand filters had become old and less effective. The requirement to continue to provide safe water pointed to a need for a modern rapid sand-filtration plant. This structure, constructed in 1962, provided for the first time complete chemical treatment and filtration for removal of iron, manganese, tastes, odors and colors, and for enhancement of subsequent filtration.

Creation of PWSA

The Pittsburgh Water and Sewer Authority (PWSA) was created in 1984. At the time, the primary function of PWSA was to oversee a \$200 million capital improvement program designed to refurbish the infrastructure of the entire water system, including the treatment plant and distribution system. This project was to ensure that the water system met the requirements of the state and federal Safe Drinking Water Acts. One of the first major responsibilities of PWSA was to cover all existing open water reservoirs or replace them with closed tanks. Currently, all of our reservoirs are covered except for the Highland Reservoir No. 1, which uses a membrane filtration plant to ensure the requirements of the state and federal Safe Drinking Water Acts are fulfilled.

In 1995, the City of Pittsburgh's Water Department became a part of the PWSA, making the Authority responsible for producing and supplying the water for Pittsburgh residents and to maintain and operate the water infrastructure. In 1999, PWSA became responsible for operating and maintaining the entire City of Pittsburgh sewer system.

Toward the Future

PWSA currently provides quality water and services to more than 300,000 customers throughout the City of Pittsburgh and surrounding areas. PWSA's vision is to provide water and wastewater services that meet or exceed regulations and customer expectations at the lowest possible cost. PWSA is striving to market water to communities outside of the City of Pittsburgh service area so that the system can apply some of its excess capacity to becoming a regional water supplier for the greater Pittsburgh area. This aim is already being realized with the continuous provision of drinking water to Blawnox, Fox Chapel, Millvale, Reserve Township, portions of the Pennsylvania American Water System and intermittent provisions to a number of other neighboring communities.

PGH₂O Green Infrastructure

PWSA is committed to green infrastructure and is developing new ways to reduce stormwater runoff, improve water quality, restore habitats and stimulate economic growth.

Green Infrastructure in the Wet Weather Plan

- Pittsburgh faces the challenge of addressing the overflow of sewage into our rivers during wet weather events because stormwater can overload the system.
- In 2013, PWSA reached out to researchers, architects, engineers and environmental non-profit practitioners — both locally and beyond — to help inform the discussion of implementing green stormwater infrastructure technologies and policies.
- From February to April 2013, sessions were held to explore green infrastructure opportunities, associated benefits and concerns, and the legal, institutional and financial issues. Overall, 125 individuals donated over 1,000 hours of their time to assist PWSA in its effort to better understand the challenges and opportunities of green infrastructure.
- All of the information gathered during this process was used to develop the Green Infrastructure Section of PWSA's Wet Weather Feasibility Study.
- The PWSA Wet Weather Plan will utilize the most economical approach, including using a combination of green infrastructure and traditional infrastructure to capture stormwater before it reaches the system.
- PWSA has invested more than \$1 million in projects that have the designed capacity to potentially control 3.7 million gallons annually.

Green Infrastructure Grant Program

- The program was introduced in 2015, and its primary focus is to encourage the development of more green infrastructure in the City of Pittsburgh. PWSA seeks to inspire projects that improve water quality by managing stormwater in greener ways, and help those projects move from concepts to construction. Additional benefits include strengthening public awareness of green infrastructure, helping PWSA document its impact, generate data on green infrastructure costs, and incentivize owners of large impervious surfaces to reduce their stormwater runoff.

Grants are distributed through one of two categories:

- **PWSA's Green Infrastructure Mini-Grant Program**, which is for non-profit organizations and community groups to implement projects that improve water quality, restore habitat, stimulate economic growth and educate the community about stormwater issues. Grant amounts are between \$1,000 - \$5,000.
- **PWSA's Green Infrastructure Matching Grant Program** is for property owners and agencies to implement large-scale GI projects. PWSA will reimburse up to 50% of a project's costs (minimum reimbursement of \$5,000, maximum \$50,000).

PWSA strives to constantly improve our operations to enhance the way we do business in a safe, sustainable and customer-friendly manner.

Safety Program Initiatives

- We recently completed a comprehensive review of all of our safety procedures and developed a new safety program to improve our excavation, work zone and confined-space safety.
- We strive to ensure 100% of our employees are fully trained in safety procedures and are provided with the necessary safety equipment needed to prevent injury.
- We clearly identify all our employees and educate our customers about the danger of utility worker imposters.

Our 2015 safety initiatives include:

- Safety training for all employees
- Ongoing safety inspections
- Improved communications between safety committees and upper management
- Development of an Incident Investigation Policy
- Improved emergency procedures