Altoona Water Authority
Infrastructure Overview
Mission Statement

As stewards of the community’s water system, our mission is to provide a clean, safe, reliable water supply and to collect and treat wastewater in a manner that protects public health and the environment.

Our commitment is to ensure a cost-efficient operation, render the highest standard of customer service, and maintain an active role within the community.
The Altoona City Authority was created by the City of Altoona in 1946 for the purpose of financing capital improvement projects.

The Authority assumed operational responsibility of the water system from the City in 1981 and of the wastewater system in 1986.

In 2009, our name was officially changed to the Altoona Water Authority.
About Us

- We are the largest dual-operating authority (water and wastewater) between Pittsburgh and Harrisburg.

- Over the last 25 years, the Altoona Water Authority has constructed 40+ major capital improvement projects to comply with government-mandated regulations, at a cost approaching $200,000,000.
Water Service Overview

• The Altoona Water Authority supplies public water to 60% of Blair County. The water system extends from Tyrone Borough in the north to Duncansville in the south.

• The water system serves a population of about 70,000 people, with approximately 23,000 customer accounts in eleven municipalities.

• In addition to domestic water service, the Authority maintains public, commercial, and industrial accounts.

• The Authority also sells water in bulk to Hollidaysburg, Bellwood, Blair Township, and Freedom Township.
The present surface water sources were once two separate systems. The Altoona City Authority acquired the Blair Gap system in 1981.

The dams and reservoirs original to the Authority are: Lake Altoona, Cochran Dam, Kittanning Point, Little Allegheny, Mill Run, and Homer’s Gap. They were constructed from the 1870s to the 1950s.

The former Blair Gap system was constructed by the Pennsylvania Railroad from 1880 to 1920. Its reservoirs were: Tipton, Bellwood, Kettle, Blair Gap, and Plane 9. It also included Muleshoe Reservoir, which is now owned by Hollidaysburg Borough.
Water Production and Treatment

- The Authority’s eleven surface water reservoirs have a combined storage volume of 2.85 billion gallons, and in total are capable of yielding up to 14.6 million gallons of water per day.

- The Authority’s seven water treatment plants have a combined treatment capacity of 28.5 million gallons daily, which is almost two times the net safe yield of the reservoir systems. In 2012, their combined production averaged 8.7 million gallons of water each day.
Mill Run Reservoir
Kettle Reservoir & Water Treatment Plant
Plane 9 Dam & Water Treatment Plant
Homer Gap Water Treatment Plant
Water Production and Treatment

- The Altoona Water Authority has one of the most technologically advanced water treatment systems in the eastern United States. Our treatment techniques include:
  - Ozonation
  - Direct filtration
  - Continuously backwashed / filter-to-waste / mixed media filters
- In 1999, the Authority received the Governor’s Award for Environmental Excellence in Technology Innovation for its water treatment facilities.
Ozone Generators

Traveling Bridge Filters

Ozone & Rapid Mix

Chemical Addition
Water Storage and Distribution

- The Authority operates sixteen finished water storage tanks, with a combined storage capacity of 28.3 million gallons.

- The water system is comprised of about 390 miles of transmission and distribution main piping, ranging in diameter from 4” to 24”.

- The water system has more than 1900 hydrants for fire protection.

- The Authority operates nine pumping stations throughout the system for various purposes, such as:
  - Filling storage tanks
  - Transferring water from one service area to another
  - Maintaining hydraulic gradient
Oakton Water Storage Tanks

Prospect Water Storage Tank
Pumping Station Interiors

Installation of a fire hydrant
Wastewater Service Overview

- The Altoona Water Authority wastewater collection system serves a population of about 50,000 people, with approximately 19,000 customer accounts in the City of Altoona and in parts of Logan and Allegheny Townships.

- The Logan Township and Allegheny Township collection systems are also connected to and treated by the Altoona Water Authority’s wastewater system.
The wastewater collection system is divided into two drainage basins: the Westerly and the Easterly. Each basin has its own treatment plant.

In a portion of central Altoona, the wastewater system is combined—it collects storm water as well as sanitary sewage.
Wastewater Collection and Treatment

- Portions of the sewer system were constructed more than 125 years ago.
- The wastewater system is comprised of over 230 miles of collection and conveyance sewers, ranging in size from 4” to 80”.
- The system is accessible via approximately 3200 manholes.
- The Authority operates 3 wastewater pumping stations (Spring Run, East Juniata, and Logan Hills).
Wastewater Collection and Treatment

- During wet weather events, the Authority utilizes two Combined Sewer Overflows (CSOs) to capture the “first flush” from the combined (storm/sanitary) portion of the system. The CSOs have a 2.9 million gallon storage and pumping system to release wastewater to our treatment plants at a controlled rate.

- The Altoona Water Authority system was one of the first in the United States to integrate the treatment of wet weather flows, combined sewer overflow discharges, and normal wastewater flows.
Wastewater Collection and Treatment

• The Easterly Wastewater Treatment Plant treats an average of 4.1 million gallons daily.

• The Westerly Wastewater Treatment Plant treats an average of 5.9 million gallons daily.

• During wet weather events, each facility is capable of treating up to 20 million gallons per day.
Both of our state-of-the-art wastewater treatment plants provide advanced secondary treatment capability, normally removing 95% of organic and suspended solids via the single state nitrification, activated sludge process.

In 2013, the American Academy of Environmental Engineers awarded its Top Environmental Project in the US for the Authority’s upgrades to its Westerly Wastewater Treatment Plant.
66” Combined Sewer Installation, Union Ave

Spring Run Wastewater Pumping Station
Storage Tank Construction, Bellwood Ave CSO

Discharge Pumps, Bellwood Ave CSO
Westerly Wastewater Treatment Facility

Just off Route 764

144 Westerly Treatment Plant Rd, Duncansville PA

Easterly Wastewater Treatment Facility

1522 Old 6\textsuperscript{th} Ave Rd, Altoona PA
Bar Screens & Grit Removal
Overflow Storage Tanks
Ultraviolet Disinfection Tanks
Biological Aeration Tanks
For More Information

Please visit our website:
http://www.altoonawater.com

Or contact Customer Service:
900 Chestnut Ave
Altoona PA 16601
(814) 949-2540