

Wastewater

Fact Sheet



When the Atlantic County Utilities Authority (ACUA) was formed in the late 1960s by the Atlantic County Board of Freeholders and charged with developing a comprehensive approach to wastewater management, Atlantic County had 14 small, outdated sewage treatment plants. Many of these discharged effluent into streams, tidal waters and other surface waters. Over the years, the situation resulted in the degradation of the county's fresh water resources, estuaries and marine environments.



The ACUA Wastewater Treatment Facility is permitted to treat up to 40 million gallons of wastewater per day.

With the construction of the Coastal Region Wastewater Treatment Plant in 1978, conditions began to improve. Since that time, the system has been expanded to serve the needs of residential and commercial development throughout the county as well as demands placed by increased tourism. As a result, our back bays, rivers and streams are now fit for recreational activities such as swimming and fishing.

Wastewater Treatment Service Area

There are currently 14 participating communities serviced by the ACUA's 40 million-gallon-per-day Regional Wastewater Treatment Facility. These include: Absecon, Atlantic City, Brigantine, Egg Harbor City, Egg Harbor Township, Galloway Township, Hamilton Township, Linwood, Longport, Margate, Northfield, Pleasantville, Somers Point and Ventnor.

ACUA Wastewater Collection System

The ACUA utilizes a system of gravity interceptors and force mains to transport raw wastewater collected in local sewage systems to the Regional Plant for treatment. This collection system utilizes approximately 60 miles of pipe and more than 20 pumping stations to convey the raw wastewater to the Regional Wastewater Treatment Plant.



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ACUA Laboratory Services

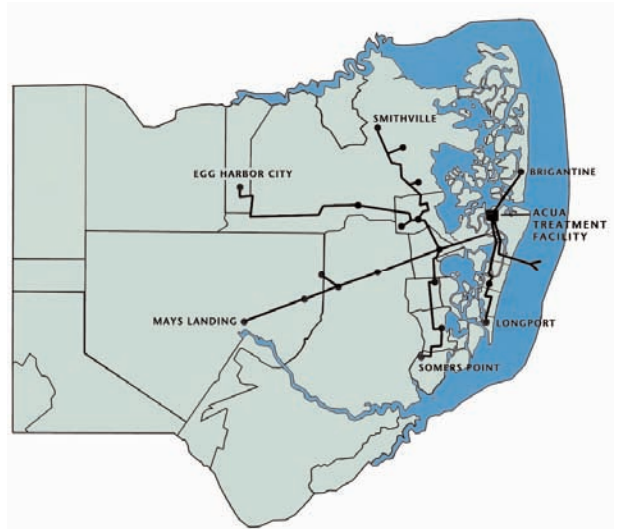
The ACUA maintains a New Jersey State certified water and wastewater environmental testing laboratory. The highly trained laboratory staff provides analyses which are used in establishing operational and process control. These analyses ensure that the plant is meeting all environmental quality standards set by the NJ Department of Environmental Protection. Laboratory services are also offered to public entities such as public health departments, water utilities, wastewater utilities, school districts and others.



Disposal Services

The ACUA Regional Wastewater Treatment Plant is the designated disposal location for septage generated in Atlantic County. Along with septage, the facility also accepts liquid and dewatered sludge and biosolids from customers outside of Atlantic County.

The ACUA's multi-hearth incinerator is a major regional sludge/biosolids disposal site and is an integral part of the NJ Statewide Sludge Management Plan. The sludge/biosolids which are thermally treated in the multi-hearth incinerator are reduced in volume by approximately 90 percent. The resulting ash, which is non-hazardous uniform material, is disposed of at the ACUA's solid waste landfill located at the Haneman Environmental Park in Egg Harbor Township. This incineration process, heavily regulated by state and federal guidelines, operates within compliance on a consistent basis.



Wastewater from 14 Atlantic County municipalities is pumped to the ACUA's facility for treatment.

Renewable energy

Along with its partner, Community Energy, Inc., the ACUA has successfully built the first commercial wind project in New Jersey, and the nation's first coastal and urban wind farm. The 7.5-megawatt wind farm consists of five 1.5 megawatt turbines manufactured by General Electric. The tower hubs are approximately 262 feet high, each with three rotors of 118 feet for a total height of 380 feet (as high as a 32 story building). The rotors are 231 feet across (longer than the wing span of a commercial airplane). Each turbine is capable of producing 1.5 megawatts of energy, and when operating at design wind speeds, the wind farm can produce up to 7.5 MW of electric power, which is enough energy to power 2,500 homes. The ACUA uses approximately 35 to 60 percent of the electricity generated for the wastewater facility with the remaining energy provided to the main power grid. This provides an estimated 70 percent of the wastewater facility's needs.

Working with World Water & Power and Conti, the ACUA completed a 500-kilowatt photovoltaic solar project, also at its wastewater treatment facility in Atlantic City. The project consists of five arrays, two are ground mounted, two placed on the roof and the last array serves as a canopy over an employee parking area. The total of 2,700 photovoltaic panels produces more than 600,000 kilowatt-hours of energy per year and is used to power the wastewater treatment facility.



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The two projects together have earned the ACUA the title of being the nation's largest hybrid wastewater treatment facility. This distinction has many positive attributes, most importantly reducing the use of fossil fuels. Both wind and solar energy are renewable sources of energy that do not pollute our environment. An estimated 24,000 barrels of crude oil is saved each year, with the implementation of these two projects. Reducing the use of fossil fuels also helps reduce dependence on foreign fuel suppliers. It helps stabilize the ACUA's electricity rate. It also provides security should the main power grid fail for whatever reason.



The Wastewater Treatment Process

