

# Willingboro Municipal Utilities Authority

## ESIP Phases 1 and 2

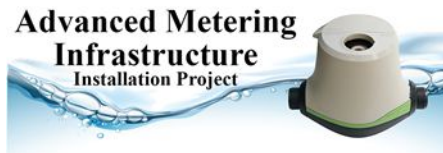


### WMUA Challenge

The Willingboro Municipal Utilities Authority's (WMUA) stated mission *is to produce and distribute the highest quality drinking water and to collect and treat the wastewater created by Willingboro's citizens and return it safely to the environment at the lowest possible cost.* The ESIP projects are designed to address utility-wide systems and equipment that need modernization and revitalization. Antiquated data systems and lack of operational controls combined with aging infrastructure, in some instances dating back to the original days of Levitt construction, and PCP plant process optimization, resiliency, and the need to achieve significant energy savings to offset the cost of upgrades has resulted in the need to move into the future. Additionally, the WMUA must bring its water meter infrastructure into the modern era by replacing mechanical residential and commercial water meters that require complete revitalization.

### WMUA Solution

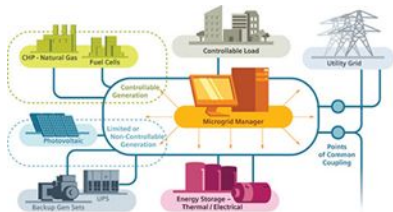
As part of its commitment to the community of Willingboro, the Authority focuses on continual quality of service improvement and fiscal responsibility. The WMUA's current ESIP initiatives includes a partnership with Schneider Electric to create energy savings, resiliency, and revenue generation with capital improvements in their Pollution Control Plant, Water Treatment Plant, wells, and pumping stations throughout the community. In collaboration with Schneider Electric over the past three years, the WMUA has developed a total infrastructure modernization and process optimization solution that includes the following:



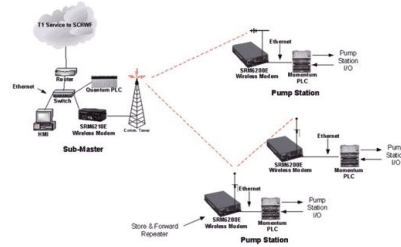
- **Advanced Metering Infrastructure**  
13,000 Smart Meters and a communications network that will provide analysis to allow WMUA and residents to earlier, saving both money and water. 2) it takes WMUA to respond to issues as the Smart meters will notify us of such issues. 3) Meter reading that will be automatic and more precise, thus leading to extremely accurate billing. 4) Accurate, real-time data that will allow for quicker resolution to billing issues and questions. 5) Older, aging meters that will be replaced with state-of-the-art new technologically advanced equipment.



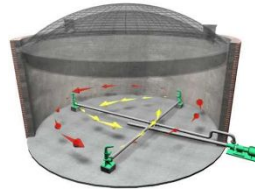
project to install community-wide  
1) Improved data detect leaks  
Reduction in time emergencies or



- **Microgrid** at the PCP plant to provide resiliency which will include battery storage, existing solar arrays and a new Combined Heat & Power Co-generation unit that operates off of the methane gas produced by the plant that is currently being flared. The microgrid will provide resiliency that will allow for complete and continued PCP plant operation in the event there is a power outage.

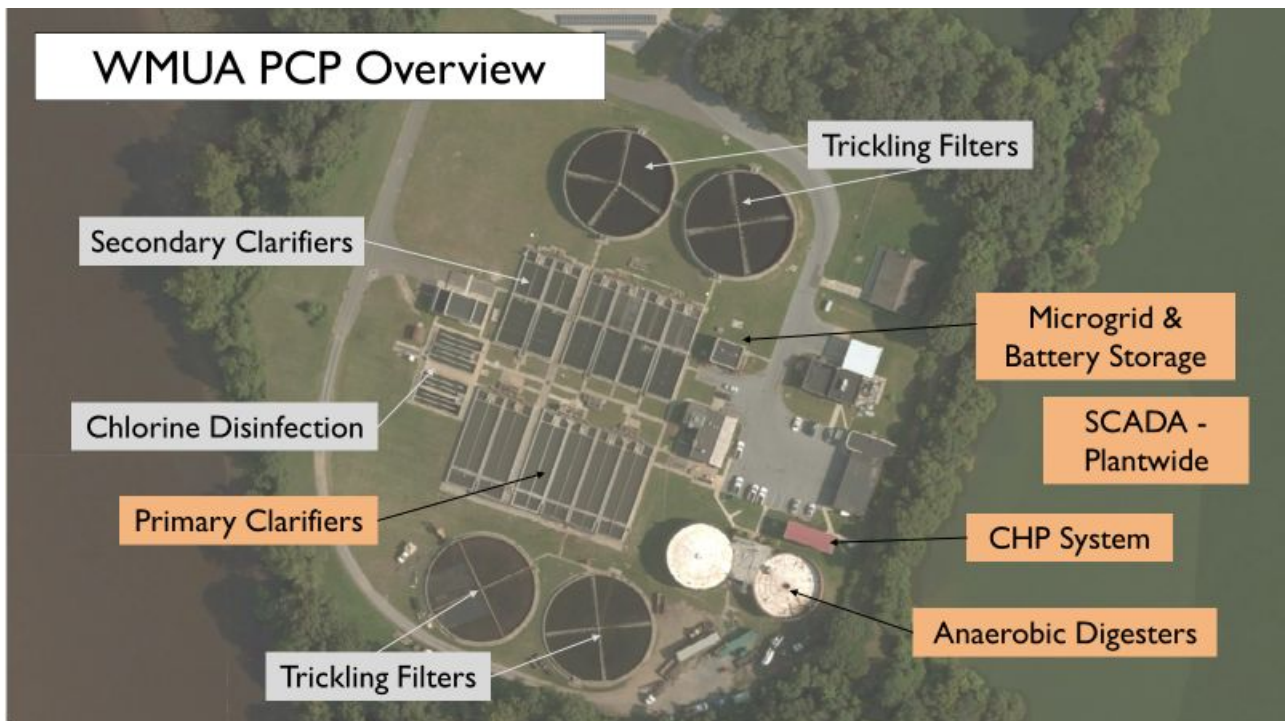


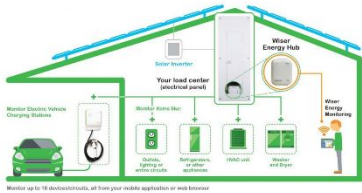
- **Supervisory Control and Data Acquisition (SCADA)** is a system of software and hardware elements that allows industrial organizations such as the WMUA to control industrial processes locally or at remote locations. The SCADA network is will be implemented throughout the entire WMUA operations across the community to ensure complete systems and process efficiency and control 24/7/365.



- **PCP Plant Process Optimization** will include a new digester mixing system, digester boiler replacement, gravity sludge thickener, Biogas piping replacement, belt press feed pump, VFD's on pumps and motors for enhanced operating and process efficiency to increase energy savings.

## WMUA PCP Plant Infrastructure





**Utility-wide Lighting retrofits and Building Envelope** enhancements for greater energy savings and efficiencies. The ESIP program will implement complete lighting upgrades and building envelope efficiencies throughout all the WMUA facilities requiring such enhancements.

The Willingboro Municipal Utilities Authority is the first MUA in the State of New Jersey to utilize an Energy Savings Improvement Program as a means to implement an energy efficiency and capital improvement program. This program will generate seven million dollars' worth of savings, rebates and incentives for the WMUA over 20 years. Additionally, the WMUA has already received awards from the Association of Environmental Authorities of New Jersey (AEANJ) and will most definitely be highlighted further as the projects are successfully implemented.