

Wastewater Pretreatment



Eureka Resources, LLC

As drilling and production have increased and the needs of oil and gas producers in the Marcellus Shale have grown, so have the services offered by Eureka Resources, LLC.

Eureka Resources is an industry leader in development and produced wastewater pre-treatment, wastewater recycling for operational reuse, and solid residuals management and disposal.

The company's permitted centralized treatment facilities have expanded quickly to meet production needs, and Eureka currently operates one shale gas well wastewater treatment facility in Williamsport that is permitted to treat up to 10,000 barrels of wastewater per day. Two additional facilities have been permitted and approved for construction. The Standing Stone plant, currently under construction near Towanda, will add an additional 10,000 gallons per day treatment capacity. It is on schedule and will be operational in October. A second facility on Reach Road in Williamsport also has been permitted to treat 10,000 barrels of wastewater per day. All of our facilities have been strategically sited for easy access by Marcellus Shale oil and gas producers and their wastewater transportation partners.

Wastewater Pretreatment Technology

Eureka Resources provides the necessary level of development and produced wastewater treatment services for cost-effective, efficient recycle and/or disposal in compliance with all Pennsylvania Department of Environmental Protection (PADEP) regulations.



Raw wastewater from the well site is delivered to the Eureka facility by development companies where it is evaluated and tested prior to processing. Plant operators provide a preliminary analysis and assessment of the water for dissolved solids, barium, settled solids, mud and oil.

The wastewater is then off-loaded by pumping it through steel clarifiers that collect and remove the settleable solids. The wastewater flows through the clarifiers into one of three large concrete receiving tanks.

For processing, plant operators pump wastewater from the outdoor receiving tanks to raw wastewater storage tanks and then into one of two process trains for pH adjustment and precipitation. During these steps, acid (hydrochloric) or alkali (sodium hydroxide sometimes referred to as caustic soda) is used to adjust pH, and a coagulant can be added to aid in the removal of suspended particles.

Process water is then moved through secondary clarifiers that settle the solid particles (residuals or sludge) and pump them into holding tanks. The clarified pretreated wastewater then flows to the final equalization tank.

Residuals Disposal

Residuals (sludge) from the holding tanks drain to a sump and are pumped into a series of sludge thickening tanks. Water from these tanks decants back to pH adjustment, while the thickened sludge is pumped to a filter press or centrifuge where a solid filter cake is generated, removed and hauled away for landfill disposal. Filtrate from the filter press or centrifuge is directed back to pH adjustment.

Wastewater Reuse

One of the most beneficial aspects of the Eureka technology and operational approach is that drilling companies have the option of reusing pretreated wastewater in their ongoing drilling operations. This beneficial reuse option involves routing the pretreated effluent back into a truck for return to a drilling site for reuse.

Wastewater Pretreatment



Meeting the Wastewater Treatment Needs in Pennsylvania, Ohio and West Virginia

The growing need for oil and gas related wastewater treatment in Pennsylvania is fueling Eureka's expansion efforts. In addition to its current expansion projects, Eureka is exploring additional opportunities for serving drilling needs in the Marcellus and Utica Shale plays in both Ohio and West Virginia. The company is also positioned to work with individual oil and gas producers using on site-dedicated and/or satellite treatment facilities.