



Returning Water to its Natural State



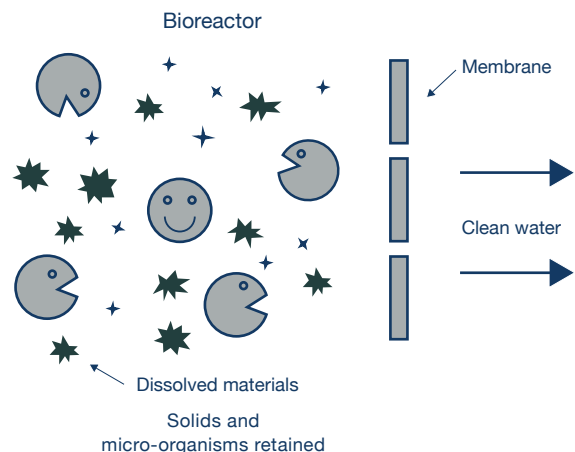
Eureka Resources has been the leading provider of wastewater treatment, recycling and reuse services for the oil and gas industry in the Marcellus Shale play since 2008.

We have been awarded a National Pollutant Discharge Elimination System (NPDES) permit from the U.S. Environmental Protection Agency (EPA) certifying that our patented process generates water so pure it can be returned to waters of the United States. The state of Pennsylvania's Department of Environmental Protection (DEP) has also certified that our ultra clean water meets their WMGR123 standards for fresh water. That means we can add our thoroughly cleansed water to the Susquehanna River.

We meet these exacting governmental standards through our innovative patented process. First, we biologically treat water using a membrane biological reactor to remove residual organics. Then we polish the resulting water with reverse osmosis to remove trace materials. (US Patent No. 9,796,612)

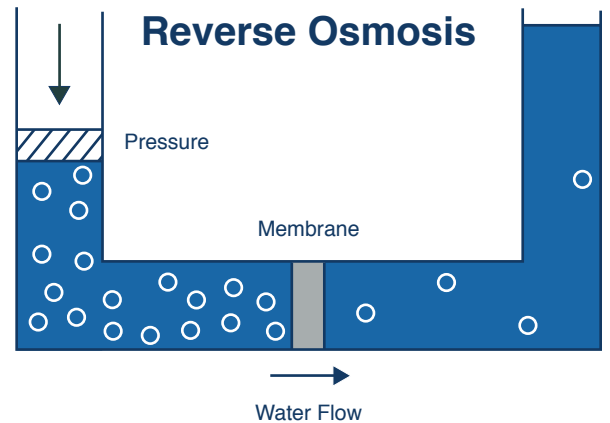
Membrane Biological Reactor (MBR)

The MBR consists of two principal components: biological reactor tanks that biologically degrade organic matter and ultrafiltration membranes (0.005 – 0.05 mm pore size) that retain biological solids. The membranes provide a barrier to keep microbial solids in the reactors and render clarified, solids-free water for reverse osmosis polishing.



Reverse Osmosis (RO)

Reverse osmosis is a membrane-technology filtration method that removes many types of large molecules and ions from water by applying pressure to the water when it is on one side of a selective membrane (0.0001 mm – 0.001 mm pore size). In Eureka's case, the result is that residual dissolved solids and organics in the MBR effluent are retained on the pressurized side of the membrane and ultra clean water passes to the other side.



FAQs

Does the water Eureka releases to the Susquehanna River impact the river's water quality?

No. We're on a mission to leave a clean, wholesome environment for future generations, and our own internal standards assure that water we release to the river is as clean as or cleaner than the river's natural water. However, you don't need to take our word for it. Both federal and state officials regularly monitor our water to assure the public that it meets all U.S. EPA and Pennsylvania DEP standards for clean, safe water.

Does the discharge have high total dissolved solids (TDS)?

No. The treated water has an average TDS of approximately 50 mg/l, which is one tenth the Pennsylvania DEP allowable TDS of 500 mg/l.

What is the distance from your discharge point to the nearest drinking water withdrawal locations?

The nearest surface drinking water withdrawal is operated by the Danville Municipal Water Authority, which is approximately 68 miles downstream on the Susquehanna River. It is important to remember that our water is as clean as or cleaner than the river's natural water. Water withdrawn from the river for municipal use is tested by the local water authority to assure its safety and all river water is thoroughly purified to create drinking water. The nearest underground water withdrawal source is approximately 10 miles upstream from our facility in Towanda. Our water does not flow toward Towanda.

Is your water discharged to King Creek or any other body of water?

No.