



Enabling Preventative Maintenance and Meeting Peak Demand with Mobile Water Membrane Systems

The Challenge

In 2014, officials in Monmouth County, New Jersey were determined to implement a water filtration system as they sought to provide additional water production capacity in order to take clarifiers off-line for preventative maintenance. Additionally, the county wanted a way to supplement its water supply from the Swimming River Reservoir as this alone was unable to meet peak demand in the summer months. In order to solve these challenges, New Jersey American Water began qualifying various mobile membrane units.

The Solution

Ultimately, Pall's Aria™ FAST containerized mobile water filtration system was selected in large part due to its easy to use and streamlined product offering along with the quality of its systems. New Jersey American Water initially rented four

Aria FAST units and within three weeks of the rental units' arrival, the units were producing high quality water. Following the success of the initial deployment, New Jersey American Water decided to invest in four Aria FAST units, purchasing them to support additional water production capacity allowing the plant to meet peak demand in the summer months.

The Results

Most notably, the extra units have allowed the plant to meet demand even when one of the permanent clarifiers is brought down for maintenance. Furthermore, the Aria FAST units enabled New Jersey American Water to perform preventative maintenance on all of its units in the off months prior to the summer season, thus extending the life of its equipment and improving the quality of their water.



Following the implementation of the four Aria FAST units, Monmouth County was also able to successfully meet the increased demand for water during the summer of 2015 as the units provided an extra four million gallons of water per day (MGD). The added capacity allowed Monmouth County to produce up to 41 MGD in July, its peak period, compared to the 15 MGD that it requires in the winter months. The addition of the Aria FAST units were critical as Monmouth County no longer needs to place mandatory or voluntary

water restrictions on their residents during the summer months.

Beyond providing additional capacity to meet peak demand, the fully integrated mobile membrane system's automated process for monthly turbidity monitoring and daily membrane integrity testing have been beneficial for New Jersey American Water. Both processes, which are necessary for compliance, are completed with the touch of a button and results are automatically compiled into a data log.

“Pall’s Aria FAST mobile membrane trailers were instrumental in helping us meet Monmouth County’s peak summer demand, especially in July when capacity needs are nearly triple that of the winter months. The trailers performed flawlessly for the bulk of summer in addition to being user friendly and easy to run. Overall, it was a very good experience.”

Jordan Spitzer, Production Supervisor at New Jersey American Water

The mobile membrane units were able to provide additional capacity allowing for preventative maintenance along with meeting increased water capacity needs during the 2015 peak summer months. Overall, the benefits of the Aria FAST system to New Jersey American Water included:

- Undisrupted production during maintenance
- Meeting increased capacity needs
- Automated compliance testing
- Reliable, safe source of drinking water



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