



Proven Performance the Top Reason for Choosing Aria Filtra for Module Replacement



The challenge

Located in southern California, the Yucaipa Valley Water District (YVWD) provides drinking water, recycled water, and sewer collection and treatment to residents and businesses within the cities of Yucaipa and Calimesa. Depending on demand, the YVWD Water Filtration Facility processes 6 to 12 million gallons per day (mgd) of drinking water, and the Wochholz Regional Water Recycling Facility averages about 4 mgd a day.

To meet the needs of residents and the community—and provide quality water during even the hottest summer days in California—recycling water is a key initiative for YVWD. Not only does recycled water reduce the water district's dependence on imported water from the California State Water Project, but it also enables the community to meet their water needs. Recycled water is used throughout the district for irrigating residential yards and gardens, the golf course, and parks. Recently, newly built dual-plumbed homes, which have a meter for indoor drinking water and another for recycled irrigation water, are expected to reduce residential water usage by a third.

Between 2005 and 2007, YVWD underwent a pilot program for testing membrane filtration for pretreatment ahead of their reverse osmosis process. Aria Filtra® was ultimately chosen for both the drinking water and wastewater facilities based on performance. Feedwater to the membranes depend on upstream processes, and during periods of high rains, the quality of feedwater cannot be guaranteed. Despite irregularities in feedwater quality, YVWD has been able to maintain their flows. Throughout these periods of process upsets, the Aria Filtra membranes provided reliable performance and uptime.



"When it came time to replace the modules, we chose to remain with [Aria Filtra]. The consistency in performance, the minimum maintenance, and the durability we saw over the past 13 years won us over. Additionally, the [Aria Filtra] engineer who performed our health check has been a great resource for us. The level of detail he went into during his review, along with the recommendations he offered, really speaks volumes for the value that [Aria Filtra] delivers."

Mike Kostelecky, operations manager, Yucaipa Valley Water District

The solution

For 13 years, the original Aria Filtra modules worked flawlessly, but YVWD knew the modules were approaching end of life. In evaluating possible solutions for replacing their existing modules, YVWD considered the experience they had, and ultimately, chose to stay with Aria Filtra due to:

- Reliable performance and the lack of fiber breaks experienced over the past 13 years
- Consistent permeability
- Ease of maintenance
- The expert-level customer service and engineering support provided
- Confidence that the membranes will enable them to meet compliance on a day-to-day basis

Following installation of the new modules and membranes, Aria Filtra conducted a health check of YVWD's entire system. A member of the Aria CARE™ service team spent time on-site reviewing the racks, performance, and pressure. Along with developing a roadmap to help the water district effectively maintain their new modules, the health check identified

possible issues that might degrade the membranes. The Aria Filtra engineer provided recommendations for remedying these issues, and YVWD has already implemented some changes, including adjusting their setpoints to improve efficiency.

According to Ron McCall, integrated senior plant operator at YVWD, the health check proved to be valuable to the operators as well. "It's always good to have a professional come out and reestablish some maintenance best practices

or techniques that we may have forgotten," he said. "We always have personnel changes, and it's good to have a new operator sit with an engineer who fully understands the system and can pass on his knowledge."

The results

Since replacing the preexisting modules with new Aria Filtra microfiltration modules, YVWD has achieved the same level of quality while reducing the pumping power required to push water through the membranes. Additionally, by replacing the aged membranes that were more prone to fiber breakages, YVWD has seen greater uptime in their water production processes and less need for maintenance. "From a maintenance standpoint, it's easy for us," explained McCall. "We don't have to spend a lot of time worrying about issues that arise from day to day. [Aria Filtra's] modules are trouble free."

The benefits

By selecting Aria Filtra's microfiltration modules, this southern California water district has created a consistent, long-term treatment process for all aspects of their operation. Other benefits include:

- Easy operation with consistent, high-quality performance
- Reduced operating costs and lower energy consumption
- Long-lasting membrane reliability
- Attentive customer service and technical expertise



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