



CASE STUDY: WATER TREATMENT

Built to Endure: The Legacy of Yardney Filters
at Bagdasarian Farms in California

PROJECT DETAILS :: Bagdasarian Farms

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| Project Location | Mecca, California |
| Project Type | Water Treatment for Agricultural Irrigation |
| Project Time Frame | Installed on Nov. 28, 2023 |
| End User/Customer | Bagdasarian Farms |
| Engineering Firm/ Consultant | Hydro AG Systems |
| Product Name | Yardney Sand Media Filter with a secondary Thru Flush Screen Filter |
| Model Number | SM-350-3616-3-CS- A-CS-A-100-IE |
| Targeted Contaminants | Organic & Inorganic Suspended Solids |
| Flow Rate | 360 GPM |
| Pressure | 100 PSI |
| ASME Code or Non-Code | Non-Code |
| Quantity Of Systems | 3 |
| Vessels Per System | 3 |
| Size | 36" diameter, 16" side shell |
| Filtration Media Type | Sand |

CHALLENGES

In Mecca, California, Bagdasarian Farms is a family of agricultural companies based in the Coachella Valley in the southeastern region of the state. Established in the 1950s by Richard Bagdasarian, the farm now spans over 5,000 acres dedicated to citrus, grapes, and various vegetables. Approximately 1,800 acres are allocated for growing a variety of conventional and organic citrus. The farm operates two citrus packing houses and is a member of the Sunkist cooperative, emphasizing quality and sustainable farming practices.

Like most agricultural operations in the Coachella Valley, Bagdasarian Farms relies on Colorado River water for its irrigation needs. Water is delivered to the farms via the Coachella Canal, which is part of the Coachella Valley Water District (CVWD) system. Most pump stations receiving canal water have reservoirs for settling solids before the water is conveyed through irrigation systems.

At the farm's Bonita site and pump station, which serves a 40-acre block of organic lemons, site constraints limit the space needed for a reservoir, necessitating a filtration system to remove suspended sediments. The existing system—three Yardney Sand Media Filters with two Thru-Flush screen filters as a secondary process—had been in operation for 23 years and was approaching its end-of-life.

SOLUTIONS

Performance and Longevity

Recognizing the time had come for an upgrade, Bagdasarian Farms consulted with Coachella-based Hydro AG Systems on an updated solution. *"The canal water is very contaminated with sediments, and without effective filtration, the water tends to plug the emitters or micro fan-jet sprayers used to irrigate the trees,"* said Julio Gamez, representative with Hydro AG Systems. *"The irrigation emitters require at least 150-mesh clean water."*

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ABOUT YARDNEY WATER FILTRATION SYSTEMS

Founded in 1965, Yardney Water Filtration Systems is a recognized leader in water filtration solutions for agriculture, golf, turf, landscape, industrial, commercial, and municipal markets worldwide. Featuring built-to-last fabrication and Made in USA quality, Yardney filters deliver reliable, long-term performance and extended product lifecycles. Yardney's offerings include filtration systems in either ASME code or non-code construction utilizing technologies such as manual and automatic screen filters, centrifugal sand separators, sand media, multimedia, granular activated carbon (GAC), and specialized media to address contaminants such as iron, manganese, arsenic, and PFAS. The company supports a sales network spanning the United States, Mexico, and Europe, bolstered by strategic dealer alliances that ensure a robust global presence.

To ensure optimal performance and reliability, Hydro AG Systems specified an updated solution identical to the existing one—three Yardney Sand Media Filters with two Thru-Flush screen filters. “Yardney filters deliver proven longevity,” Gamez said. “The previous Yardney filters were installed in 2002, and before that, the site was served by two Yardney Thru-Flush screen filters since 1979 [24 years]. That’s a very strong case for the long lifecycle and high quality of Yardney filters.”

Designed for the most challenging dirty water conditions in irrigation systems, Yardney Sand Media Filters effectively remove algae and slime as well as sand, rock, grit, and other inorganic contaminants from source water—protecting drip and micro-irrigation systems from plugging. The system's inlet and two-stage deflector plate enhance filtration performance by reducing the velocity of water entering the tank and facilitating more uniform distribution across the filtration media bed. Particulates are trapped and retained in the 14-inch deep media bed, achieving fine filtration removal down to 200 mesh or 75 microns.

“The Sand Media Filter also offers the benefit of lower maintenance with the automatic backwash option, which helps prevent the filter from clogging,” Gamez said. “And the interior is lined with 3M Scotchkote 134 epoxy coating for resisting oxidation and corrosion. Yardney’s SM-350 model is the one we always recommend to customers due to its many features compared to alternative models. We think it’s the best option for handling source water in the Coachella Valley.”

Yardney Thru-Flush screen filters provide robust filtration for water sources where inorganic particulate is the major contaminant. The Thru-Flush cleaning employs turbulent water action to break trapped contaminants loose from filter screens and discharge them out of the filter housing.

With the new solution up and running, long-term performance is ensured at the Bonita Filter Station. *“The new sand media filters and secondary filters are working really well, it’s a huge upgrade for us,”* said Agustin Vargas, farm manager at Bagdasarian Farms.



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