



Case Study: Raccoon Creek

At the time of acquisition, three of Raccoon Creek Company's oldest treatment plants in Pettis County required significant upgrades, including two activated sludge facilities and a lagoon serving the Villages at Whiteman. Each facility faced operational challenges, and all required targeted improvements to ensure long-term reliability and compliance.

The Villages at Whiteman lagoon project was among the earliest applications of a Moving Bed Biofilm Reactor (MBBR) on a small lagoon—following the Hillcrest project—and remained a forward-looking approach for a small facility. It also introduced a novel configuration where lagoon aeration in a downstream cell was operated from the same blowers powering the MBBR system. Additionally, a recirculation line routed some of the flow from the MBBR back to the first cell, introducing more active biology throughout the treatment process. These advancements marked important progress in demonstrating how MBBR technology could be successfully applied to lagoon-based treatment.

At South Walnut Hills, unique challenges arose from the receiving stream, which often had little to no natural flow. Even compliant effluent could cause solids to accumulate in the creek, creating environmental concerns. To address this, sock filters were installed to capture remaining solids, reducing effluent to essentially 0 mg/L Total Suspended Solids and providing critical protection for local waterways.

Through these projects, the Raccoon Creek facilities benefitted from significant upgrades that not only improved treatment performance, but also introduced innovative applications of treatment technology—positioning the systems for greater reliability and long-term compliance.

Before



After

