

CASE STUDY

Regional Water Reclamation Improvement Project

Project Type: Municipalities / Water Reuse & Reclamation

Location: Fountain, Colorado

HIGHLIGHTS

Veyra covered civil work, building erection, and all process and utility system installations.

Linked new chemical addition and clarification equipment with the existing SCADA system.

The project ensured the facility met the deadline for Colorado Regulation 85, mitigating regulatory risk.

REGULATORY COMPLIANCE UNDER PRESSURE FOR PHOSPHORUS UPGRADE

The Harold D. Thompson Regional Water Reclamation Facility, managed by the Lower Fountain Metropolitan Sewage Disposal District (LFMSDD) in Fountain, CO, faced a critical mandate: comply with the stringent new effluent limits for phosphorus and inorganic nitrogen set by Colorado Regulation 85. To meet this deadline, the District embarked on an improvement project to construct a chemical addition and high-rate clarification system for total phosphorus control.

CHALLENGES FACED

- Operating Plant Integration:** The new treatment facilities had to connect to existing plant infrastructure without interrupting service. This required careful planning to remove buried piping and connect new lines while maintaining compliance and continuous operations.
- Site Utility Relocation:** The project required the relocation of critical existing site utilities such as natural gas and non-potable water lines, adding coordination risk to the project's critical path.
- Civil and Structural Foundation Work:** Constructing the new high-rate clarification process tankage and foundations required substantial below-grade civil work, including deep excavation, earthwork, and the drilling and installation of reinforced concrete drilled caissons.



SOLUTIONS IMPLEMENTED

- **Stakeholder Communication:** Veyra established regular contact with District Manager Jim Heckman, ensuring project alignment and rapid issue resolution.
- **Comprehensive Construction Scope:** Veyra managed the entire project scope from site preparation (utility relocation, earthwork) to final commissioning. This included erecting a metal building, installing all mechanical, HVAC, electrical, and process equipment, minimizing reliance on sub-contractors.
- **Responsive Management:** Veyra addressed unforeseen challenges and project changes, demonstrating flexibility and responsiveness that prevented schedule derailment.



OUTCOME AND IMPACT

- **Critical Regulatory Compliance:** The new treatment system was completed on time, successfully meeting the mandatory effluent limits of Colorado Regulation 85.
- **State-of-the-Art System Integration:** The complex chemical addition and high-rate clarification system was successfully integrated into the existing SCADA system, providing reliable, automated phosphorus control.
- **Secured High Client Satisfaction:** The District was "completely satisfied" with the project outcome, resulting in an unequivocal recommendation for Veyra on future work.

The HDTRWRF Phosphorus Control Facilities project stands as a testament to the successful execution of complex infrastructure upgrades under tight regulatory deadlines. By successfully navigating significant construction and integration challenges, IW delivered a critical, high-performing asset that secured the District's compliance and earned a sincere and lasting partnership endorsement.

"The District ended up completely satisfied with Veyra at project completion. Regular contact and communications with the project manager, ensured that the project approach was consistent and completed to plan. Veyra was also flexible and responsive to project change and all concerns raised by the District were dealt with promptly. I would have no hesitation in recommending Veyra on future projects with the District or any organization."



Jim Heckman, District Manager of the Lower Fountain Metropolitan Sewage Disposal District



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