

Esko Pump Station Reconstruction

The Esko Pump Station, located in Thomson Township, served as a critical component of the WLSSD wastewater conveyance system for over 40 years. By 2014, the Esko Pump Station reached its intended design life. WLSSD, consequently, planned to reconstruct the pump station with modern, energy-efficient equipment and size the facility to meet anticipated future flows.

WLSSD retained CDM Smith in 2014 to design the new Esko Pump Station. The project involved constructing a new, submersible pump station while maintaining service for the existing facility. Once the new pump station was active, the existing facility was demolished and the site was restored.

Key design features of the new pump station include:

- Providing firm pumping capacity of 1.75 mgd using four submersible wastewater pumps
- Addressing a wide daily diurnal flow by careful pump selection and use of variable frequency drives
- Constructing a gated, bifurcated wet well to isolate pumps for in-situ service
- Protecting adjacent properties by constructing 10,000 gallons of wastewater storage within the wet well
- Facilitating flexible operation by providing station pump-around from influent sewer to discharge header



- Preserving station reliability by constructing a new electrical building and standby generator
- Connecting the new facility to WLSSD's existing telemetry infrastructure
- Redesigning the site layout to minimize above-grade infrastructure while optimizing maintainability

The project was successful in constructing a new pump station for the WLSSD conveyance system. This project fulfilled WLSSD's strategic initiative to provide reliable wastewater service while increasing capacity in order to accommodate future growth. The construction project was completed on schedule and under budget. Successful project implementation coupled with adherence to the projects fiscal constraints fulfilled WLSSD's goals.



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