

# Plant Operations

The City of Moberly has five permitted outfalls. One is at the WWTF and is the main discharge of treated effluent from the City. The other four are for combined sewer outfalls that may discharge partially treated stormwater and sewage during heavy rain events. The four combined sewer system outfalls are located at Taylor Street near St. Mary's Cemetery, Rollins Street northeast of the Outer Road, Seven Bridges Road at the creek at the south edge of the holding basin, and Holman Road behind Moberly Area Community College Athletic Complex.

Two lagoons (Rollins Street near Highway 63 and on Seven Bridges Road) serve as storm water holding basins for peak flow storage during rain events. These basins provide storage from small rain events, and are permitted as overflows if the rain water exceeds the storage capacity. Stored water is pumped back to the WWTF for treatment after the rain event subsides. Moberly's system captures and treats approximately 86.5% of the stormwater received in the combined sewer system for full secondary treatment and disinfection prior to discharge, and more than 99% of the flow is treated to primary treatment standards before discharge during high flow wet weather events.

There is also a swirl concentrator (removes settleable solids and floatable materials, and reduces oxygen demand in the wastewater) at the Taylor Street CSO, with additional storage for small rain events. Each combined sewer overflow is monitored daily, and rain event overflows are monitored for BOD, TSS and ammonia.

Wastewater treatment is a biological process that yields biosolids as bacteria, protozoa and other organisms eat the material in the wastewater. These "bugs" settle out of the wastewater and are recycled as more wastewater enters the WWTF. The extra "bugs" are transferred to two aerobic digesters where the process continues. Once the biosolids have been processed sufficiently, the thicker material is transferred to a holding basin prior to being land applied on a City-owned 180 acre farm adjacent to the Wastewater Treatment Facility.