

Westside Wastewater Treatment Plant

project description | wastewater treatment

location

Madisonville, Kentucky

client

City of Madisonville

completion date

1996

project budget

\$13,000,000



This project involved the construction of a new 6.0 MGD West Side WWTP, gravity interceptor sewers, pumping stations and force mains. The WWTP project included a new influent pump station, two mechanical rotary screens; two oxidation ditches, two circular final clarifiers, hydraulic splitter boxes, post aeration, ultraviolet disinfection, and a return/waste activated pumping station. Major process units were designed for a peak hourly flow of 15.0 MGD. Sludge processing facilities included two circular gravity thickeners, sludge stabilization with lime, and dewatering with two new belt filter presses.

The influent pump station had a capacity of 15 MGD. Wastewater was transported to the wastewater treatment plant through two parallel 24-inch diameter ductile iron force mains. The pumping system was designed to accommodate a wide range of flow rates using a total of six submersible pumps and variable frequency drives. Carbon absorption odor control facilities were installed at the influent pump station.

Because the new WWTP was located on a new site, the Kentucky Division of Water required a new KPDES discharge permit. Discharge from the facility was to Greasy Creek located immediately upstream of an extensive wetland system. Consequently, the project included environmental studies documenting that the wetlands would not be negatively impacted by the new facility. The environmental study included an investigation of indigenous animal species; long-term water quality monitoring; and a flora/fauna survey.



project components

- Construction of a new 6.0 MGD WWTP
- New influent pump station
- Carbon absorption odor control
- New belt filter press

Note: A member of CDP staff managed this project while with another firm.