



WASTEWATER TREATMENT PLANT EXPANSION

Cumberland, Indiana

GREENING THE ENVIRONMENT THROUGH ELIMINATION OF SEWER OVERFLOWS!

The Town of Cumberland was experiencing excessive sewer overflows due to high infiltration and limited treatment capacity, resulting in over 100 overflows at the WWTP in 2001. The situation limited growth and development in the Town and resulted in regulatory action and an Agreed Order from IDEM.

Wessler Engineering prepared a Sanitary Sewer & Wastewater Treatment Plant Preliminary Engineering Report to evaluate the present and future conditions of the Cumberland Water Pollution Control Facility (WPCF), recommend improvements to relieve hydraulic overloading and resulting sewer overflows, and for expansion of the WPCF. A flow monitoring study of the sewer system was also performed and information analyzed to determine sewer capacities and quantity of wet weather flow (inflow/infiltration) in the system. In addition, an evaluation of the 0.940 MGD extended aeration wastewater treatment plant was performed. The study recommended expansion of the treatment plant to a design average daily flow of 1.5 MGD with a design peak flow of 4.5 MGD to handle wet-weather flows.



Upon completion of the preliminary study, Wessler provided final design, bidding, construction administration, and resident project representative services for the WPCF Improvements, which included:

- New 4-pump raw sewage pump station (New concrete wet well with two 700 gpm and two 1,750 gpm submersible non-clog pumps)
- New headworks structure with aerated grit removal, fine screening and influent flow metering
- Two new SBR tanks capable of future expansion to 2 MGD
- Post-equalization/aeration structure
- UV disinfection and effluent flow metering
- Conversion of an existing package plant to an aerobic digester
- New sludge dewatering system with sludge feed pump, grinder, polymer system and 75-gpm centrifuge
- New emergency generator
- New control building with office, laboratory and electrical facilities
- Plant-wide SCADA system to monitor and control processes and equipment

The project was designed for future expansion to 3 MGD with the addition of a third SBR tank. Construction Cost: \$5,481,000.



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