



WHITESTOWN WATER IMPROVEMENTS

CHALLENGE

WHEN THE FASTEST GROWING COMMUNITY IN INDIANA CONTINUED TO EXPAND, IMPROVED AND MORE RESILIENT WATER AND SEWER SYSTEMS WERE NEEDED.

SERVICES

- Hydraulic Design
- Sanitary Master Planning
- Storm Sewer Design
- Stormwater Planning
- Wastewater Collection
- Wastewater Treatment Processes
- Water Master Planning
- Water Resources

WHITESTOWN WATER IMPROVEMENTS

As the Town of Whitestown grows, so does its water needs. Whitestown saw an increase in water demands as the retail, industrial, commercial, office, warehouse, and residential industries in the area grew.

This central Indiana city wanted to develop an overall water master plan and sanitary master plan to meet the needs of its growing community. Whitestown teamed up with ms consultants to undergo these master plans and subsequent projects.

WHITESTOWN WATER MASTER PLAN

Whitestown currently purchases all of their water through two master meters and pump stations, which are supplied by the same vendor. These two pump

stations pump to the distribution system and two elevated water storage tanks.

The master plan evaluated the interior growth, as well as possible expansion to another city to provide water service. The plan reviewed demands and proposed improvements needed over a 20-year time period. Cost estimates and suggested financing options were provided as part of the master plan.

As part of the master plan, ms developed a WaterGEMS hydraulic model to evaluate the existing water distribution system. The evaluation included the development of numerous scenarios to meet projected growth demands throughout the entire town. The model reviewed existing demands as well as 5-year, 10-year and 20-year projected demands.

WHITESTOWN SANITARY MASTER PLAN

Whitestown's growing population also needs a reliable sanitary sewer system and wastewater treatment plant (WWTP). The town built a new WWTP in 2015 to handle the growth for up to 10 years. The WWTP can be expanded; however the trajectory of when those improvements need to be completed is important for planning as well as financing.

The master plan estimated milestones for the expansion of the WWTP based on population growth and the resulting increases in flow.

Additionally, the master plan included future planning of the collection system and the lift stations through the

use of computer aided hydraulic modeling. A regional lift station approach was evaluated to either combine lift stations, eliminating some long-term maintenance, or to build a new regional new lift station where growth is occurring. The collection system also included similar population and flow triggers as the WWTP for the planning of new sewer trunk lines and lift station sewersheds.

This master plan will provide a planning tool for the town for the next 10 years.

WHITESTOWN LEGACY CORE STORM SEWERS

As a result of stormwater planning performed by ms consultants, the Legacy Core or historic downtown Whitestown, had new storm sewers installed.

The project covered approximately two-thirds of the downtown area in the worst flooding areas of town. During construction, the contractor connected several old field tiles that did not have a positive outlet to the new storm sewer piping.

The team also provided underdrain piping so residents could connect their downspouts and sump pumps to the new storm sewer piping.

Services included hydraulic design including plan/profile piping design drawings of the historic downtown Whitestown.