SANITARY SEWER EVALUATION STUDY

BOWLING GREEN, MISSOURI

PROJECT DESCRIPTION

McClure engaged in a project with the City to develop a holistic approach to solving the excess extraneous water entering the sanitary collection system. Alongside the City Staff, McClure developed a phased approach to field investigations to identify the worst areas of extraneous water entering the system. The first step was to place seven strategic flow monitors throughout the City to monitor flow from the sanitary drainage basins for 13 weeks during spring and summer of 2019. In conjunction with this data, lift station data from the eight lift stations was compared to the observed flow monitoring data to develop hydrographs for each sanitary basin. The data collected was converted to a one-hour rain event for comparison across the board and then compared to rainfall data for the given flow rate observed in the sanitary collection system.

McClure created design year, or 10-year storm events, as the target to be able to handle in the sanitary collection system. Topside manhole inspections were performed as the second step in the first phase of field investigations for the City of Bowling Green. Defects in the manholes were recorded and categorized per drainage basin. Defects were correlated to gallons per minute entering the manhole. Lastly in the first phase, lift station evaluations were also performed as part of the overall sanitary sewer evaluation study. Undersized lift stations were noted along with aging infrastructure defects that resulted in identified rehabilitation projects for select lift stations in Bowling Green.

PROJECT HIGHLIGHTS:

- McClure's investigations have identified the second phase of field work - smoke testing in the parts of Bowling Green experiencing the most I/I.
- While focusing on the worst basins first, the City was able to rehabilitate the collection system as their budget allows.
- All cost estimates were presented on a cost-per-gallon of extraneous water removed.
- City was able to compare rehabilitation for different defects on an even scale.

COMPLETION DATE

2019

COST OF SERVICES

$62,500

REFERENCE

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