

## **PART III – PROJECT NARRATIVE LAKE AVENUE SSES (PLANNING)**

### **Section A     Project Summary**

The City of Worcester has been periodically experiencing surcharging and sanitary sewer overflows (SSOs) into Lake Quinsigamond, near Lake Avenue. When surcharging occurs at this location, sewage will overflow into the storm drain system, which is tributary to a drainage outfall discharging to Lake Quinsigamond in the Blackstone Basin (see Figure 2 in Appendix A).

Lake Quinsigamond and Flint Pond are listed as Category 4a waters on the 303(d) list of impaired waters as the TMDL has been completed. The Blackstone River is listed as a Category 5 water requiring a TMDL on the 303(d) list of impaired waters. An EOEa watershed management plan entitled, 2004 Blackstone River Watershed Five-Year Action Plan, September 2004, was developed for the Blackstone River Watershed. A TMDL entitled, Draft Pathogen TMDL for the Blackstone River Watershed, was developed for MADEP and USEPA (New England Region 1).

The Lake Avenue Area Sewer System Evaluation Survey (SSES) is planned for spring and summer of 2013 to identify I/I sources. The project area consists of 146,000 linear feet (l.f.) of sanitary sewer ranging from 8-inches to 42-inches in diameter. Of the approximately 900 manholes in the project area, an estimated thirty percent (30%) are twin manholes, in which both sanitary and drain lines enter at different elevations. The Lake Ave SSES will include flow isolation of 146,000 l.f. of sewer, topside manhole inspection of 600 manholes, internal manhole inspection of 300 manholes, cleaning and television inspection of 73,000 l.f. of sewer, smoke testing of 146,000 l.f. of sewer, dyed water testing of approximately two hundred and ten (210) suspected inflow sources, dyed water flooding at approximately fifty (50) locations, dyed water flooding at approximately twenty five locations in conjunction with 8,000 l.f. of sewer television inspection and groundwater monitoring in six locations. Flow isolation, manhole inspections and cleaning and television inspections are scheduled to begin in January of 2013. Smoke testing and dye testing/flooding will be completed in March of 2013.

Following the Lake Avenue SSES, a design will be completed and the objective of the Lake Avenue Area Sewer System I/I Rehabilitation Project will be to remove cost-effective removable peak Inflow/Infiltration (I/I) from the Lake Avenue Area that contributes to the overflows in Lake Quinsigamond and surcharging and overflows in the Lake Avenue area. The amount of removable I/I will be determined at the end of the SSES study, we estimate 347,000 gpd of removable infiltration and inflow will be found based on past projects. The construction costs will be determined from the results of the study, the construction cost provided in this application is based on the results of past SSES projects completed in other parts of the city. (See Appendix B for Engineer's Estimate.) The implementation of I/I rehabilitation projects will improve the water quality during wet-weather to Lake Quinsigamond, Flint Pond and the Blackstone River Basin.