

RELATED EXPERIENCE

CHARTER TOWNSHIP OF PORT HURON SAW GRANT APPLICATION AND IMPLEMENTATION

Johnson & Anderson was contracted by the Charter Township of Port Huron to prepare a Stormwater, Asset Management, and Wastewater (SAW) Grant Application for the preparation of an

Location:	Port Huron Township St. Clair County, MI
Project Date:	2013-2017
Engineering Cost:	\$523,724
Grant Amount:	\$1,562,020
Client:	Port Huron Township
Contact:	Mr. Robert Lewandowski Township Supervisor (810) 987-6600

asset management plan for sanitary sewer and pump stations within Port Huron Township's sanitary sewage collection system. The SAW Grant application addressed the development of an analysis and planning methodology for Port Huron Township to obtain a functional work order system and sustainable approved asset management program with the Michigan Department of Environmental Quality (MDEQ).

The Grant application consisted of:

- Geographical Information System (GIS)/ Computer Maintenance Management System (CMMS)/Modeling Software and Hardware Procurement, Installation;
- Asset Management Software Training such as Pipeline Assessment & Certification Program (PACP) / Manhole Assessment & Certification Program (MACP);
- Cleaning and televising sanitary sewers older than 20 years;
- Preparation of a Sanitary Sewer Main Condition Assessment Report, Sanitary Sewer Inventory and preparation of an Asset Management Report;
- Sewer Pumping Station Inventory and preparation of an Asset Management Report;
- Cityworks CMMS/Asset Development into GIS;
- Wastewater Asset Hydraulic Modeling;
- Perform a Fats, Oil, and Grease (FOG) Inventory;
- Update Sewer Use Ordinances as necessary;
- Development of Asset Management Funding Support System;
- Development of an Asset Management Plan and Implementation Schedule.

The Michigan Department of Environmental Quality notified Port Huron Township of the Grant Application Award in November of 2014.

J&A was also contracted by Port Huron Township for engineering services related to implementing the SAW Grant. J&A is currently inventorying and inspecting all sanitary manholes in the Township system, documenting existing conditions using the National Association of Sewer Service Companies (NASSCO) guidelines. An inspection report and asset photographs are recorded for each

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manhole. J&A is also locating all existing manholes and pump stations using Global Positioning System (GPS) to establish State Plane Coordinates (northing, easting, and elevation).

J&A has inventoried and inspected over 1,000 manholes in less than a six week period of time, documenting existing conditions using the NASSCO guidelines. J&A is one of the first firms to utilize the IBAK Portable PANORAMO SI Optical Manhole Camera to record continuous footage of the entire manhole and create a dimensionally accurate 3D image. The 3D image is then coded in Pipe Logix's Manhole Assessment Module, a NASSCO Certified software package, according to NASSCO's MACP requirements. The data is then incorporated into GIS software for easy retrieval and archival purposes.

The purchase, installation, and configuration of GIS, Cityworks, Sedaru, and Microsoft SQL Server Software to meet Township specifications and requirements is ongoing.

Sewer main cleaning and televising will be completed and an investigation report will be prepared including repair strategies and prioritization of repairs with cost estimates. A manhole investigation report will also be prepared compiling the data collected during the manhole inspections and will include repair strategies, prioritization of repairs, and cost estimates.



A Sanitary Sewage Pumping Station Inventory Assessment will be completed for the 14 stations in the Township. The inventory will include the conditions of the pumping stations, pumps, electrical components, and related force mains and an investigation report will be prepared delineating the condition of each station including recommendations and proposed upgrades.

A Wastewater Model Network will be created that will include all sewer manholes, sanitary piping and sanitary leads in the GIS system using historical information as well as information gathered during this project. This will be used to create a working hydraulic model of the entire sanitary sewer system that will be used to determine collection and pumping system deficiencies for inclusion in an assessment summary report.

Compiling data collected during the project, J&A will create an Asset Management Plan (AMP), addressing deficiencies in the system and areas of concern. The Plan will recommend repair strategies and prioritization of repairs with a suggested implementation schedule. Based on the system needs, a Funding Support System will be created by reviewing the existing sewer rate structure and its ability to support the AMP. If needed, recommendations will be made for a viable rate structure in order to meet the Plan requirements. This project will continue through April 2017.