



**WIGHTMAN & ASSOCIATES, INC.**  
ENGINEERING ♦ SURVEYING ♦ ARCHITECTURE

**Gull Lake Sewer + Water Authority**  
**Sanitary Sewer Collection System**  
**Asset Management Plan**

MDEQ Grant Funded  
2014-2017

**Report Update**

May 2017



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## Gull Lake Sewer + Water Authority

### ASSET MANAGEMENT PROGRAM

### SANITARY SEWER COLLECTION SYSTEM & APPURTENANCES

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## APPENDIX

- A. GAP Analysis Letter from DEQ
- B. PICA Report
- C. 2017 Initial District Flow Study
- D. Replacement Values
- E. System Capacity Analysis Data
- F. Wastewater System CIP Project Description, Costs, and Pump Information
- G. Detailed Rate Analysis
- H. Industrial Pre-Treatment Survey

## **Executive Summary**

This Asset Management Plan or Program (AMP) is a tool for the Gull Lake Sewer + Water Authority Board of Directors, Staff, and Customer community to collectively and proactively decide the importance / criticality of each functionally and financially significant (FFSA) asset, determine when to repair, replace or rehabilitate these FFSA assets and ultimately, evolve these improvements into a continuous Capital Improvement Plan (CIP) – a CIP that is adequately funded through rates set by the Board --allowing the Authority to achieve sustainability and to maintain a continual Level of Service (LOS) that protects the groundwater, public and adjacent communities from potential negative impacts of the wastewater collection system..

Two important aspects to review:

(i) Level of Service – when to rehab or replace each FFSA asset. The AMP is to be used to create a Capital Improvement Plan (CIP) and have the Board of Directors involved annually in the Plan, determining, with guidance from the Director, staff and engineer, the degree of proactivity and intensity. The term Level of Service is the decision by the Board of Directors as to how much “risk” should be taken in keeping and maintaining an asset that will eventually need replacing. The proactivity and intensity of the CIP, established by the Board, is not intended to be static, that is, it is to be determined over time and from time-to-time by the Board of Directors of the Authority.

(ii) The Asset Management Plan itself is not static and is to be updated at least annually -- merging each year into an evolving 10-year Capital Improvement Plan.

The AMP is organized into three components that answer the following questions:

Geographic Information System (GIS) -- relative to FFSA (significant assets):

- What do we own, operate and maintain?
- Where is it spatially (within the map)?

Asset Management Program (Functionally and Financially Significant Assets):

- What is each asset's condition and remaining life?
- What is its risk of failure? Is it likely to fail?
- What is the criticality of each asset?
- What will we do about its criticality?
  
- Where has maintenance been performed?
- Is that maintenance cost effective, does it prolong the life of the asset?
- Do we have sufficient redundancy?
- Do we have sufficient redundancy to allow it to Run to Failure (RtF)?
  
- What level of service will be provided? Risk mitigated by Capital Expenditure.
- What improvements need to be made and when?
- What changes to operations need to be made?
  
- How will these improvements and changes be funded?

## System User Guidelines

- How will the asset management program tools be used?
- How will the asset management program be maintained and updated?
- How will the asset management program provide a guide for planning decisions?

### System Condition Report / Level of Service:

From a system wide basis, in 2017, 100% of the Gull Lake Sewer + Water Authority's wastewater assets are less than 36 years old and in good condition – having been operated and maintained with a level of service, that, based on a number of measures (overflows, backups, customer service) heretofore undefined, is deemed to be well above average. The Authority's current staffing, operation, maintenance and replacement levels / procedures have been well accepted and acknowledged by the Board and the Community as more than adequate.

### Financial Report / Outlook:

As part of the Asset Management Program, during the grant period of 2014-2017, the Authority's financial position has been evaluated by Umbaugh & Associates and deemed to be in above average condition, with a cash reserve of 4 times its working capital reserve, and no "gap" or "funding gap" has been reported to the Michigan Department of Environmental Quality (MDEQ), said gap identification being a requirement of the MDEQ grant. The letter of compliance, indicating no gap existing, is attached as **Appendix A. Rich to provide.**

The Authority's current 2017 user rate of \$26 per month per single-family home is deemed by the rate consultant to be relatively modest as compared to other small-to-medium size Michigan sewer/water utilities. However, how the Authority "compares" is truthfully not relevant, as the purpose of the Asset Management Plan is to ensure the Authority's system is fully functional and sustainable for the long-term benefit of the customer, and that the customer is paying what it actually costs to keep the system from degrading, with the Board setting the Level of Service for the rehabilitation and replacement Capital Improvement Program.

The Authority now, with this report, has an indentified both ten-and-twenty-year Capital Improvement Program that will require funding, to both protect the environment and create the sustainability that the Board has deemed to be necessary, and, to this effect, it is anticipated the rate increases necessary to fund the next 10 years and to keep pace with inflation will be **approximately 3.5%** annual increase, which will result in a doubling of the current rate over the next 20 years. The 3.5% annual increase made-up of inflationary increases at **2.25%** plus long-term CIP of **1.25%**.

### On Going Assessments:

It is important to note that the Asset Management Plan is not a destination, it is a journey, a journey that the Authority has undertaken to become a Utility of the future, one that envisions the future and ensures sustainability for one-hundred years.

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## **Introduction, Team, and Mission Statement**

**Introduction:** An asset management program identifies the desired level of service at the lowest life cycle cost for rehabilitating, repairing, or replacing the assets associated with a municipality's wastewater system. In 2012, the State of Michigan enacted Legislation through Public Acts 511, 560, 561, and 562 establishing a grant program to assist communities in developing asset management programs, entitled the Stormwater, Asset Management and Wastewater (SAW) grant program. The Gull Lake Sewer + Water Authority ("GLSWA" or "AUTHORITY") received a 3-year grant in May of 2014 to develop an Asset Management program for their wastewater collection system. The report within these pages outlines the various components of the GLSWA wastewater system asset management program, including implementation recommendations.

The purpose of this report is as follows:

- List and determine the Condition and remaining life of all wastewater assets.
- Determine which assets are Functionally and Financially Significant (FAFS).
- Determine the desired Level of Service (LOS).
- Determine the Criticality of all assets as they relate to the desired Level of Service.
- Develop a Capital Improvements Program (CIP) necessary to maintain the desired LOS.
- Develop a Rates / Revenue system that will maintain the desired LOS.
- Summarize methods to implement the Asset Management Program (AMP)..

An effective and viable Asset Management Program is a continuously changing process.

**Team:** The asset management program was initially developed by the following team of officials, staff, and consultants.

Gull Lake Sewer + Water Authority Staff:

- Rich Pierson, Executive Director
- Anne Richmond, Executive Assistant
- Barry Bowman, Technical Services Director
- Aaron Grogg, Field Superintendent
- Dave Quick, Field Services / Inspections
- Andrew Hartwick, GIS Specialist (Contract GIS service provider)

Prien & Newhof Engineering, Inc

- Tom Wheat, PE
- Brian Vilmont, PC
- Dan Frizzo, GIS Specialist
- Nate VerHeul, PE

Wightman Associates Engineering, Inc.

- Alan Smaka, PE
- Frank LaPierre: Grant Program Manager
- Brian Hight, P.E.: Project Engineer

- Ryan Miller: GIS Manager

Asset Management authorization and implementation credit is given to the Authority Board of Directors:

Gull Lake Sewer + Water Authority Board of Commissioners (Directors)

- Jimmy Stoneburner, Prairieville Township Supervisor, GLSWA Chairman
- Wes Kahler, Barry Township Supervisor, GLSWA Vice-Chair
- Paul Dykstra, Ross Township Supervisor, GLSWA Secretary-Treasurer
- Lysanne Harma, Richland Township Supervisor, GLSWA Trustee

The financial analysis was provided by:

Umbaugh Associates (Financial Consultants)

- Tom Traciak, Principal
- Andrew Campbell, CPA, Senior Consultants

The GLSWA has, as its Mission Statement - 2017:

***It is the mission of the Authority to surpass the expectations of all customers -- to effectively, efficiently and in observance of all safety and sanitary practices, collect and transport wastewater from our customers to the City of Kalamazoo for treatment and disposal.***

The GLSWA also has, as part of its Staffing protocol, a “Commitment to Excellence” as follows:

### **Gull Lake Sewer and Water Authority Commitment to Excellence**

We are in business for our customers’ convenience and security, not our own.

We strive to tailor our services to our customers’ needs and continuously improve what we do.

We follow the golden rule and treat our customers as we would like to be treated.

We aim for 100% satisfaction. If there is anything you’re not satisfied with, we will do everything in our power to make it right.

However, for the Asset Management work, the Mission Statement evolved into three sentences:

***GLSWA is committed to preserving the environment, protecting the public health and safety while sustaining our wastewater utility system and its assets through the process of Asset Management and Community minded Level of Service goals.***

***We will collectively and proactively determine the importance / criticality of each functionally and financially significant (FFSA) asset, decide when to repair, replace or rehabilitate these FFSA assets and ultimately, evolve these improvements into a continuous Capital Improvement Plan (CIP) – a CIP that is adequately funded through rates set by the Municipalities and Authority Board --allowing the Authority to achieve sustainability and to maintain a continual Level of Service (LOS) that protects the groundwater, public and adjacent communities from potential negative impacts of the wastewater collection system, while effectively managing the long-term cost of operating those assets.***

***We will strive to maintain the highest-quality customer service at agreed to levels of service at the lowest life cycle cost possible.***

What this means, in the long-term, is that we won't be the cheapest utility, but we will strive to be the best.