
Operations & Maintenance Manual

Section 3

Administration

3.1 Financial

The Old Lycoming Area Authority generates funds through charges associated with the use of its sanitary sewer system. Each user within the service area is charged a fee for usage. A flat rate fee has been established for this use. All sanitary sewer system generated funds are used for operation and maintenance and treatment of sewage from the sanitary sewer system. Funds generated by this charge are not used for other utilities owned and operated by either the Township or Authority.

3.1.1 User Rate/User Charge

The Authority's current user rate is a flat fee of \$50.00 per month (\$600.00 annually). The user rate should be reviewed on an annual basis by the Authority to evaluate the need for increases associated with the cost of Treatment, operating and maintaining the sanitary sewer system. Any future increases in user rates will be set by Resolution by the Authority.

3.1.2 Public Education/Outreach

A concerted effort should be made each year to provide the public with information regarding the status of projects and overall condition of the system. These education and outreach programs should include summaries of the overall goal to eliminate I & I; as well as, the progress which has been achieved through the yearly preventative maintenance.

These programs should also provide a means of informing the users and rate payers of how the system works and how well the system is working. Information provided to the users will help generate community awareness and community involvement with regard to achieving goals and will provide a sense of trust between the Township/Authority and the community.

3.1.3 Budgeting for Preventative Rehabilitation

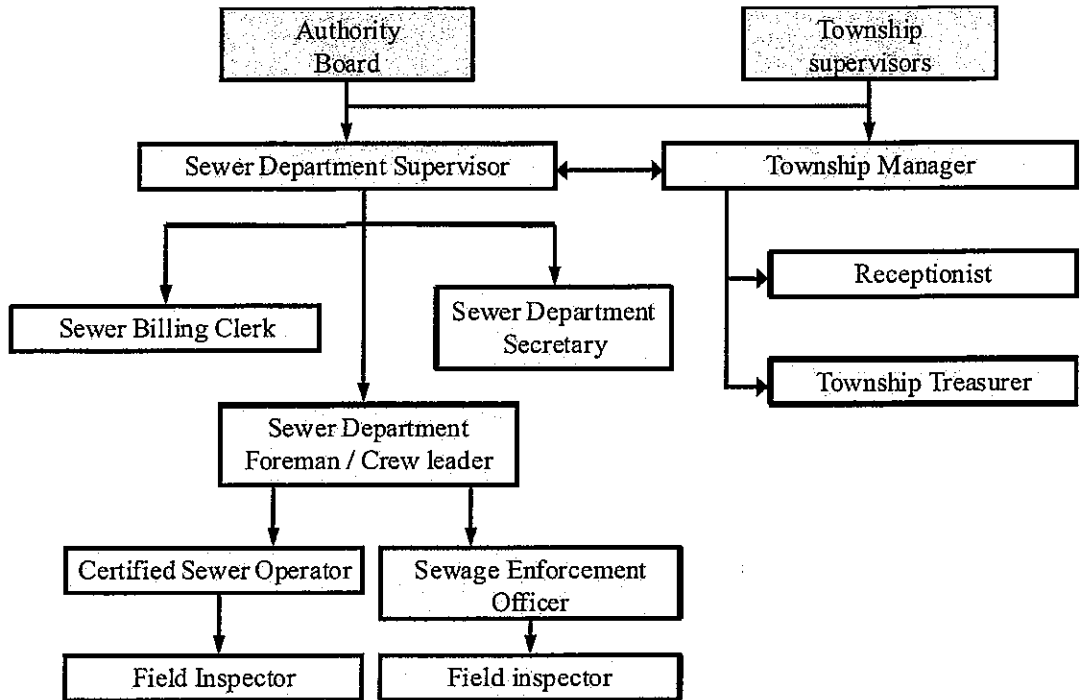
The estimated amount of repairs required each year to establish a structurally sound and efficient system will require a certain portion of the annual budget to complete necessary repairs. Approximately \$200,000 each year should be budgeted to complete the minimal repairs specified in the previous section. Each year's repairs will include approximately 1,500 linear feet of mainline repairs and approximately 8 manholes.

3.2 Personnel

3.2.1 Organizational Structure

An organizational chart has been prepared that shows the overall personnel structure for the Sewer Department. Each job position should have an up-to-date job description that delineates responsibilities and authority for each position. The following is a visual representation of the organizational structure that is needed to complete the necessary tasks associated with this manual.

Figure 3.2.1 – Organizational Structure



3.2.2 Job Responsibilities

The Township's elected officials, Sewer Department and administrative staff is responsible for the operation and management of the Sanitary Sewer System in the Township. The elected officials and administrative staff rely on the Township's Sewer Department to "carry-out" the physical tasks required for the operation of the sanitary sewer system. The specific responsibilities relating to the operation and management of the sanitary sewer system are identified in this section.

Responsibilities of the Authority

The Old Lycoming Area Authority appointed board members are responsible for the financial management of the sanitary sewer system. In addition, whenever necessary, the Authority's board members are responsible for the planning, design, and construction of new sewers, and carrying-out "major" projects for the rehabilitation and replacement of existing sewers.

Responsibilities of the Sewer Department Administrative Staff

The administrative staff is responsible for completing the administrative tasks (billing, bill collection, maintaining document files for regulatory agency compliance, etc.), which are required to support the Township's elected officials in the operation and management of the sanitary sewer system.

Responsibilities of the Sewer Department

The Township's Sewer Department is principally responsible for the operation of the sanitary sewer system. The Sewer Department inspects, cleans and maintains the Old Lycoming Area Authority's sanitary sewer system (which encompasses both Old Lycoming and Lycoming Townships), including Shirms, Fox Hollow and the English Farm lane Pump Stations.

3.2.3 Job Descriptions

Each job description should, at a minimum, include the nature of the work to be performed, examples of the types of work to be performed, minimum requirements for the positions described, list of license(s) required for the position, necessary special qualifications or certifications, performance measures or promotion potential.

3.2.4 Training

The Sewer Department should have a formal job knowledge, skills, and abilities training program, whether it is administered internally or externally. This program should address the fundamental mission, goals, and policies of the Sewer Department. The program should identify mandatory training requirements for key employees.

Each Sewer Department employee should complete a minimum of forty hours of job specific training, which relates directly to their position. Training related to the sanitary sewer system should be provided, at a minimum, regarding safety, routine line maintenance, confined space entry, traffic control, record keeping, electrical and instrumentation, pipe repair, public relations, SSO/emergency response, pump station operations and maintenance, and CCTV of lines. Operator and maintenance certification programs are currently used and required to operate and maintain the pump stations. Each employee should have First Aid (once every three years) and CPR training (once every year) in the event of a medical emergency.

3.2.5 Job Specific Reviews

A formal job specific review process should be implemented for the Sewer Department field workers and administrative staff. The role of the review process is simply to identify areas of improvement needed by the employees when compared to the job descriptions specified for each position. The descriptions for each position target key areas of responsibility for each position and allow the employee to be evaluated based upon his/her ability to complete the specific tasks. As part of the review process, the employees should complete a review of their job performance and have a review completed by their superior.

3.2.6 Staffing

A thorough review of the current staffing needs should be completed on an annual basis. The Township Manager and the Sewer Department Superintendent should identify staffing needs based upon the projection of work and other activities schedule in the following years. At a minimum, the Sewer Department should be comprised of a Sewer Department Supervisor, Department Foreman/Crew Leader, two Inspectors, a Sewer Billing Clerk and a Secretary.

In the event that the staffing is not adequate to complete the tasks that have been assigned, assistance would be provided from the Road Crew Department.

3.3 Safety

Safety of the employees is a key in the success of completing the tasks specified in this manual. A safety policy should be written by the Township. This safety policy should be reviewed on an annual basis by the safety committee which should be composed of the supervisor from each department, a member of the administrative staff, and a representative from the Board of Supervisors. The safety policy is to provide a written record of steps taken to prevent injuries and accidents. The policy should not enter the Public Works Departments into any kind of legal binding review, but rather to provide a guide to new employees regarding what the accepted safety practices are by each department.

In addition to the current safety practices that are utilized, at a minimum, the policy should include lockout/tag out procedures, material safety data sheets (MSDS) for each chemical stored, chemical handling procedures, confined spaces permit program procedures and procedures for traffic control and work site safety.

The safety equipment that is needed is immediately available for the employees and is in adequate supply. In addition to the existing equipment that is available, sewer gas monitoring devices should be purchased for the pump stations. At a minimum, gas detectors (oxygen, hydrogen sulfide and methane) and lower explosion limit (LEL) metering equipment should be purchased. Additionally, in the event of an emergency, a 5-minute escape breathing device should be readily and easily accessible at each pump station.

3.4 Major Equipment and Tools

A list of the major equipment and tools should be compiled and available to the Sewer Department. A maintenance card or record should be kept by the Sewer Department for each piece of mechanical equipment within the collection system. Maintenance records should also be kept for major equipment such as the Vactor Truck, the TV inspection vehicle, and the lateral push cameras. All vehicle maintenance and repair records should be kept by the Township's Lead Mechanic and shall be their responsibility to track them.

The mechanical equipment maintenance records should include maintenance recommendations, instructions on conducting the specific maintenance activity, maintenance schedule, a record of the maintenance on the equipment to date and any other observations on the equipment. Weekly vehicle checks shall be performed on all Sewer Department vehicles and turned into the Sewer Department supervisor for review.

The other major equipment used for the sanitary system should have records that include dates of last service, written procedures for operation of the equipment and notes on any other issues that need to be addressed. The vehicles and camera equipment records should also include the date of the last usage and the personnel who used the equipment.

Dated tags should be provided for any out-of-service equipment. A system for prioritizing system equipment needs should be established.

3.4.1 Equipment Parts Inventory

In the event that parts are needed to make repairs to the system, an inventory of parts should be kept at the Public Works Department garage. The amount of parts needed to make two spot repairs within the system should be kept in stock at all times. A list of parts in the inventory should be kept and available to the Sewer Department. A tracking system should be utilized to track the usage of the spare parts. A readily available source or supplier should be identified in the event that the parts needed are not part of the spare parts inventory

3.4.2 Major Equipment Replacement Schedule and Estimated Earmarked Reserve:

# IN SERVICE	CATEGORY	REPLACEMENT COST	LIFE CYCLE	ANNUAL EARMARK	ESTIMATED REPLACEMENT YEAR
08-429-740	VEHICLES				
1	1998 NISSIAN FRONTIER	\$30,000.00	15 YEARS	\$2,000.00	2013 to 2015
1	2003 FREIGHTLINER	\$200,000.00	15 YEARS	\$30,000.00	2015 to 2020
1	2003 STERLING/VACTOR	\$550,000.00	20 YEARS	\$17,500.00	2020 to 2023
1	2011 F-250	\$40,000.00	15 YEARS	\$2,666.00	2023 to 2026
08-429-371	SOFTWARE/OFFICE				
4	DESKTOP COMPUTERS	\$1,000.00	5 YEARS	\$800.00	2= 2012&2=2013 and every 5 yrs
4	LAPTOP COMPUTERS	\$1,200.00	5 YEARS	\$960.00	
3	LASERJET PRINTERS	\$250.00	5 YEARS	\$720.00	
1	COPIERS		10 YEARS		
6	SCADA SYSTEM		10 YEARS		
1	WINCAN	\$13,000.00	5 YEARS	\$2,600.00	
08-429-262	MAINT/ INSPECTION EQUIPT.				
1	MAINLINE CCTV SYSTEM	\$85,000.00	10 YEARS	\$8,500.00	2021
3	LATERAL CCTV SYSTEMS	\$10,000.00	5 YEARS	\$6,000.00	2013
1	SONDE LOCATOR	\$2,350.00	5 YEARS	\$500.00	2013
1	TRIMBLE GEO XT GPS	\$7,500.00	10 YEARS	\$750.00	2012
1	RAINWISE RAINGUAGE	\$400.00	10 YEARS	\$40.00	2018
5	SIGMA 910 FLOWMETERS	\$4,000.00	5 YEARS	\$4,000.00	2012
1	HURCO RIPCORDER SMOKER	\$1,100.00	15 YEARS	\$100.00	2023
2	METAL DETECTOR	\$40,000.00	15 YEARS	\$80,000.00	2015

# IN SERVICE	CATEGORY	REPLACEMENT COST	LIFE CYCLE	ANNUAL EARMARK	ESTIMATED REPLACEMENT YR
	CONVIENCE EQUIPMENT				
08-429-251	GARDENVIEW PLACE PUMPING STATION				
2	VAUGHAN PEDISTOOL CHOPPER PUMPS MODEL# VDP6URS-104 1,200GPM	\$15,000.00	20 years	\$1,500.00	2015 to 2020
2	BALDOR 15 HP, 1170 RPM C-FACE 230/460 VOLT 3PHASE 60 HZ PUMP MOTORS	\$3,800.00	20 years	\$380.00	2015 to 2020
1	GENERAC BACKUP GENERATOR MODEL 65KW/3 PHASE	\$23,000.00	25 years	\$920.00	2028
1	ENDRESS & HAUSER ECOGRAPH T DATA LOGGER	\$2,500.00	10 years	\$250.00	2018
1	EG CONTROLS VFD CONTROL PANEL	\$7,000.00	20 years	\$350.00	2013
2	AC TECH.VARIABLE FREQUENCY DRIVES MODEL# QJ2015HB	\$2,500.00	20 Years	\$250.00	2013
1	ROSEMOUNT MAGNETIC FLOW METER MODEL 8712D	\$6,700.00	15 years	\$467.00	2024
1	DWYER INSTRUMENTS SUBMERSIBLE LEVEL TRANSDUCER MODEL SBLT2-05-040	\$500.00	5 years	\$100.00	2016

# IN SERVICE	CATEGORY	REPLACEMENT COST	LIFE CYCLE	ANNUAL EARMARK	ESTIMATED REPLACEMENT YR
08-429-255	FOX HOLLOW PUMPING STATION				
2	VAUGHAN MODEL S3V-073 SUBMERSIBLE CHOPPER 35HP 3510RPM 220GPM	\$15,000.00	20 YEARS	\$1,500.00	PUMP 1=2028 PUMP 2= 2030
1	GENERAC BACKUP GENERATOR MODEL 355860100 75KW/3 PHASE	\$23,000.00	25 YEARS	\$920.00	2027
1	ENDRESS & HAUSER ECOGRAPH T DATA LOGGER	\$2,500.00	10 YEARS	\$250.00	2018
1	ENDRESS & HAUSER PROLINE PROMAG 53 ELECTROMAGNETIC FLOW METER	\$3,000.00	15 YEARS	\$200.00	2018
1	PRESSURE SYSTEMS SERIES 700 SUBMERSIBLE LEVEL TRANSDUCER	\$500.00	5 YEARS	\$100.00	2012
1	CLINTON CONTROLS CONTROL PANEL	\$7,000.00	20 YEARS	\$350.00	2023
0	SQUARE D .ALTISTART 48 SOFTSTART CONTROLLER	\$5,000.00	20 YEARS	\$500.00	2023

# IN SERVICE	CATEGORY	REPLACEMENT COST	LIFE CYCLE	ANNUAL EARMARK	ESTIMATED REPLACEMENT YR
08-429-255	ENGLISH FARM LANE PUMPING STATION				
2	KSB MODEL KRT 40-250/62X SUBMERSIBLE CHOPPER 7.5HP 3550 RPM 35 GPM	\$12,000.00	20 YEARS	\$1,200.00	PUMP 1= 2022 PUMP 2=2023
1	GENERAC BACKUP GENERATOR MODEL 3385870100 17KW/SINGLE PHASE	\$9,000.00	25 YEARS	\$360.00	2026
2	CUTLER HAMMER MODEL SVX 9000 VARIABLE FREQUENCY DRIVES	\$2,500.00	20 YEARS	\$250.00	2030
1	ENDRESS & HAUSER PROLINE PROMAG 53 ELECTROMAGNETIC FLOW METER	\$3,000.00	15 YEARS	\$200.00	2018
1	CLINTON CONTROLS CONTROL PANEL	\$7,000.00	20 YEARS	\$350.00	2023
1	PRESSURE SYSTEMS SERIES 700 SUBMERSIBLE LEVEL TRANSDUCER	\$500.00	5 YEARS	\$100.00	2013
# IN SERVICE	CATEGORY	REPLACEMENT COST	LIFE CYCLE	ANNUAL EARMARK	ESTIMATED REPLACEMENT YR
08-429-250	SAMPLING STATIONS				
4	ISCO 3710FR/3730 REFRIGERATED SAMPLER	\$5,400.00	15 YEARS	\$1,413.00	2013-2020

3.5 Legal – Sewer Ordinance

3.5.1 Sewers and Sewage Disposal Ordinance

Township Ordinance No. 238: Sewers and Sewage Disposal Ordinance sets forth uniform requirements to regulate sewer connections, industrial waste pretreatment facilities and discharges of sewage and industrial waste into the Old Lycoming Area sanitary sewer system. It enables the Township to comply with all applicable State and Federal laws, including the *Clean Water Act* (33 United States Code §1251 et seq.) and the *General Pretreatment Regulations* (40 CFR, Part 403).

The objectives of this Ordinance are:

- ❖ To comply fully with conditions established by the United States Government for clean public waters through congressional adoption of the *Federal Water Pollution Act Amendments of 1972*, and the *Clean Water Act of 1977*,
- ❖ To promote and enforce applicable standards established by the EPA and/or DEP related to sewage collection and conveyance,
- ❖ To prevent the introduction of pollutants into the Township's sanitary sewer system, which will interfere with the normal operation of the Township's sanitary sewer system or otherwise incompatible with the Township's sanitary sewer system,
- ❖ To protect from damage the Township's sanitary sewer system, to maintain the safety of the public and the safety of Township personnel assigned to operate and maintain the Township's sanitary sewer system, and
- ❖ To impose penalties and fines concerning illegal collection, conveyance, treatment and/or disposal of sewage.

3.5.2 Tributary Communities Agreement

Since the Township receives flow from a portion of Loyalsock Township, and as part of the Act 537 Plan prepared by the Tributary Communities to WSA's WWTP, agreements will be prepared between the direct flow contributors and their tributary communities. This agreement will set forth the requirements for discharge to the Township's sanitary sewer system.

This agreement will include the requirements listed in the SUO and will have a date of termination, which will allow the agreement to be renewed under different terms. The agreement will also provide the utility legal authority to control the maximum flow introduced into the sanitary sewer system. All standards and inspections will be clearly documented in the agreement and will be uniform with the SUO.

The agreement will require the tributary community to adopt the industrial and commercial regulator discharge limits and inspection and sampling schedules as required by the pretreatment ordinance.