

Town of Sheboygan  
Sanitary District No. 2 Sewer

**Capacity, Management, Operations & Maintenance Plan  
(CMOM)**

Prepared:  
March 2012

Revised September 2018

**Town of Sheboygan Sanitary District No. 2 Sewer  
Capacity, Management, Operations & Maintenance (CMOM) Plan**

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**Attachments**

Attachment A	Town of Sheboygan Sanitary District No. 2 Job Descriptions
Attachment B	Town and Contractor Contact Information
Attachment C	Pump and Lift Station Information
Attachment D	Industrial User List
Attachment E	Emergency Response Plan
Attachment F	Mutual Aid Agreement - Town of Sheboygan

## Town of Sheboygan Sanitary District No. 2 Sewer Capacity, Management, Operations & Maintenance (CMOM) Plan

### Section 1    Town of Sheboygan Sanitary District No. 2 Goals

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The Town of Sheboygan Preventive Maintenance Plan (PMP) covers the assets managed in the Town's wastewater collection system and is one component of the overall Capacity, Management, Operations and Maintenance (CMOM) Plan. The PMP combines preventive, predictive and corrective maintenance strategies with best management practices.

The CMOM Plan and PMP have been prepared to help the Town of Sheboygan Sanitary District No. 2 effectively manage the wastewater collection system and achieve the following goals:

- **Review and Update the Sewer Use Ordinance**  
Town Personnel have reviewed and updated the current sewer use ordinance, last updated in 2017. This will be a yearly review with changes as required.
- **Review and Establish Safety Procedures for Employees**  
The Town of Sheboygan has developed safety programs/policies and conducts training according to regulatory requirements administered through the Wisconsin Department of Safety & Professional Services (DSPS). The Town works with a third party consultant to assist with safety program development, initial training, and addressing of annual programmatic and training requirements. At the time of hire, each employee is provided initial training covering components of the Town's safety programs. Upon completion of initial training, and as required, employees are trained on an annual basis. Safety programs are reviewed and updated annually.
- **Educational Information for Users**  
The Town of Sheboygan has a Newsletter, which is available on the website and at the Town Hall. Currently the Sanitary District adds information in the letter outlining a number of different issues going on in the system. They vary from flushing wipes to current charges for the service. Monthly meetings are posted and open to the Public. Reports and literature are available at the Town's Annual Meeting. These are also available at voting polls and the Town Hall.  
The Town of Sheboygan maintains a website that as new items come up, the general public is able to view information on changes.
- **Grease Control Inspection Program**  
A grease ordinance is in effect for the Town of Sheboygan Section 4.21. However, a formalized grease control inspection program is not currently in place. Town personnel are in the process of accumulating program samples from other communities, reviewing SPS 382 standards, and conferring with the Town Plumbing Inspector as to various needs for creation and implementation of such a program.
- **Collection System Cleaning and Televising**  
The Town of Sheboygan Sanitary District No. 2 has set in place a continuing process of cleaning and televising of the sewer system. Through this process approximately 17% of the collection system is cleaned and televised annually. Problems which are identified

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during sewer televising and cleaning operations are resolved by arranging for necessary repairs to the system, including sanitary manhole repairs.

- **Identify Illegal Sump Pump Hookups**

The Town of Sheboygan is committed to preventing and enforcing illegal discharges into the collection system. Historically, the Clean Water Act outlined necessary guidelines for illegal sump pump hookups that were incorporated into the municipal ordinance. However, due to changes that have occurred in the State Administration code, these are no longer valid. A review and update of the illegal discharge ordinance will be part of the planned Town ordinance review.

- **Locate Specific Areas of Blockages, Identify/Control Source**

Specific areas of blockage are identified through regularly scheduled televising operations and those reported by users. Upon identification of blockages the Town orchestrates immediate necessary control measures and any long-term repair/replacement that is needed.

- **Design and Implement a Sewer Televising Schedule**

Town of Sheboygan Sanitary District No. 2 maintains a sewer televising map to identify areas within the Town in which televising has been completed and areas in need of scheduling. The map is updated and reviewed by the Town's Director of Public Works on an annual basis as repair and/or maintenance projects are identified.

- **Review Budget for Repair and Rehabilitation Projects**

Annual Repair and Rehabilitation budgets are based on needs identified through daily operations and the inspection process. Projects identified are prioritized and added to the maintenance list. The Town of Sheboygan Sanitary District No. 2 is committed to being proactive and preventative with maintenance needs in order to minimize repairs needed.

2017 Town of Sheboygan Sanitary District No. 2 Goals	
Task	Status / Completion Date
Review and Update Sewer Use Ordinance	yearly
Clean 17% of Collection System per year	Completed every 6 yrs
Implement System Repairs and Improvements	As needed

Observations/Comments:

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**Section 2    Town of Sheboygan Sanitary District No. 2 Organization**

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Organization is important as to how the collection system is managed, operated, and maintained. Decisions about capital projects and budgets come from the governing body of appointed officials of the collection system. Successful implementation of the CMOM Program is directly related to an organizations structure and communications vital to productivity and success of the CMOM.

- **Description of Ownership and Governing Body**

The Town of Sheboygan Sanitary District No. 2 owns and operates the wastewater collection system. The Town's Public Works staff divides their time between operation and maintenance of the sewer collection system. The Governing Body and Authority maintain, implement, and enforce these ordinances according to those outlined in the Town of Sheboygan Sanitary District No. 2 Ordinances and those defined and administered by the State of Wisconsin Safety and Professional Services (SPS) 382.

- **Organizational Chart**

An organizational chart showing the Town of Sheboygan internal team structure can be found in Attachment A on page 6.

- **Personnel and Position Descriptions**

The Town of Sheboygan administrative staff maintains and makes available all personnel and position descriptions for the Town of Sheboygan Public Works personnel (Attachment A).

- **Internal Communication Procedures**

Internal communication procedures covering emergencies such as basement backups, sewage overflows, pump failures, electrical outages, worker accidents, as well as every day operations and maintenance activities are clearly documented and provided to Town personnel. A handheld radio and/or cell phone are used for such communications. The Town of Sheboygan Sanitary District No. 2 personnel contact list, emergency contacts, and service providers can be found in Attachment B.

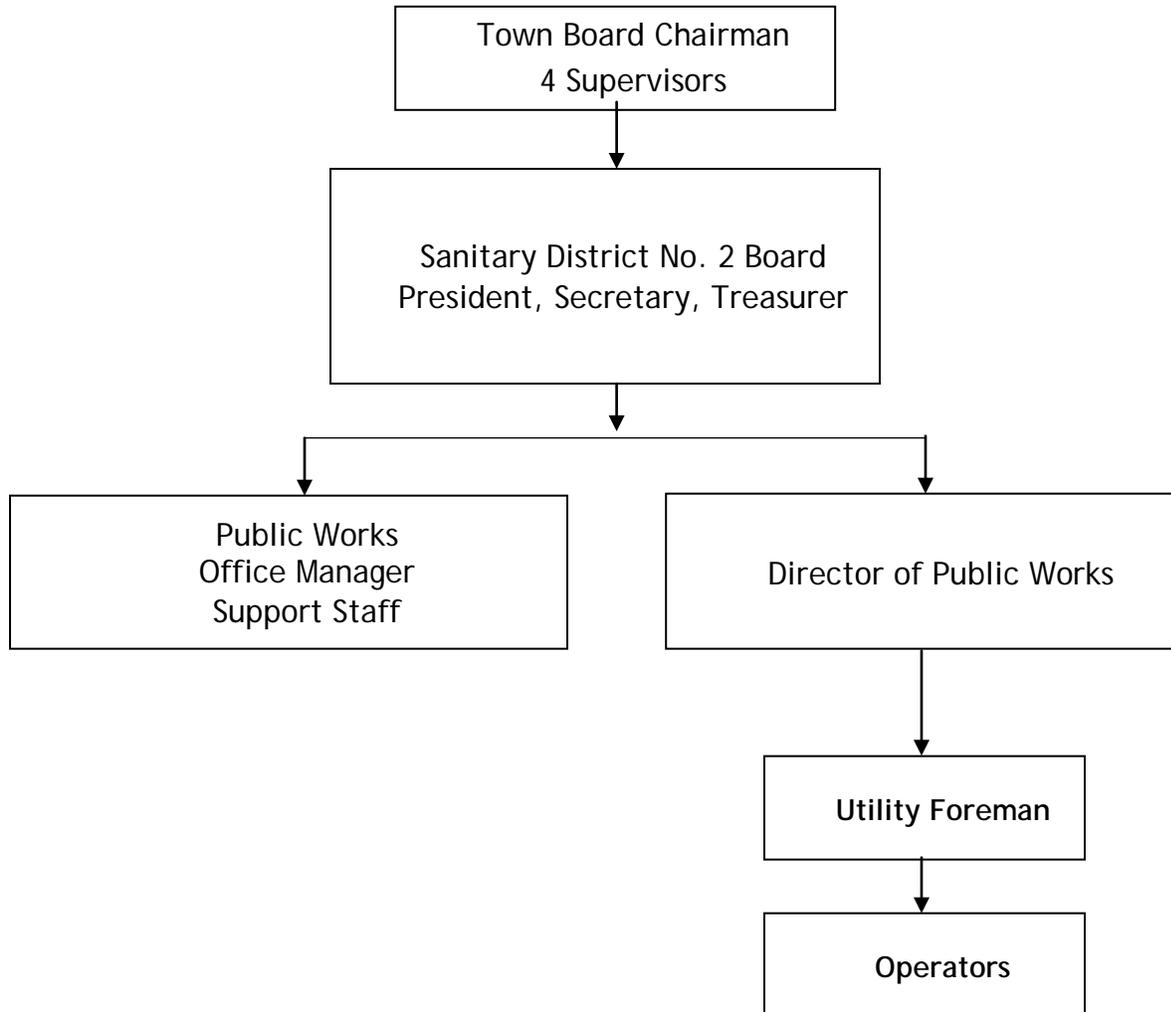
- **Public Information and Educational Programs**

The Town of Sheboygan Sanitary District No. 2 currently does not have a formal public information and education program in place. However, they are looking to implement a plan in the near future. With this said, the Town does have the capability to place notations and/or announcements on user Utility Bills and have used this to reach out and communicate various notifications to their users. Communications may include: Town Newsletter, notations on quarterly utility bills, flyers placed at Town Hall and at the voting polls; special mailings; posting on the Town website.

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Section 2 Town of Sheboygan Sanitary District No. 2 Organizational Chart

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**Section 3    Legal Authority**

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Adequate legal authority is the foundation of a successful CMOM Program. In order to operate and maintain the sewer system, certain legal mechanisms must be in place. Legal Authority provides the utility with the ability to establish sewer service charges; to regulate and control the type, volume and strength of wastewater being discharged into the sewer system; to regulate grease from restaurants and institutions; to connect new developments; to plan and specify sewer design, installation and maintenance; to require private sewer inspections and rehabilitations; and to enforce actions for noncompliance, permits, fees, and fines.

- **Legal Authority Sewer use ordinance**

Town of Sheboygan DPW staff along with leadership personnel have reviewed and updated the current sewer use ordinance, and revised as needed. Items addressed through this ordinance include:

- Sewer Service Agreement w/City of Sheboygan
- Town of Sheboygan Sanitary District 2 Ordinances
  - (1) Sewer Use and Service Charge Ordinance
  - (2) Definitions
  - (3) Public Sewers Required

- **Pretreatment or Industrial Control Programs**

High flow and/or high strength wastes can impact the wastewater collection system and treatment plant. The Town of Sheboygan Sanitary District No. 2 has legal controls in place, either through user fees/surcharges, permits or a pretreatment program that regulate discharge of high flow/high strength wastewater users. Following are the sections outlined in the Town of Sheboygan Sanitary District No. 2 Ordinances to address such users:

Section 4 Prohibitions and Limitations  
Section 5 Industrial Pretreatment Program

- **Fat, Oil and Grease (FOG) Control**

A grease control and inspection program protecting sewer pipes and lift stations from grease buildup and plugging of sewer pipes and equipment is very important. The Town of Sheboygan Sanitary District No. 2 addresses a few FOG control components under Section 4.14 B, and 4.21 of the Town of Sheboygan Sanitary District No. 2 Ordinance requiring the use grease traps. However, Town personnel understand a more comprehensive program is needed and are currently in the process of establishing a grease trap inspection program. A listing of users requiring grease traps is presented in Attachment D.

- **Illicit Discharges by Commercial or Industrial Users**

Connections and discharges by commercial and industrial users are approved and regulated through the Sewer Use Ordinance. A current listing of Town of Sheboygan Industrial Users can be found under Attachment D.

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**Section 3    Legal Authority**

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- **Private Property Clear Water**  
Legal authority to inspect private residences and to prohibit sump pumps or drains that contribute to excess clear water to the sewer system is important in reducing inflow. Historically, the Town of Sheboygan followed guidelines outlined in the Clean Water Act to inspect sump pumps. However, due to changes that have occurred in the State Administration code, these are no longer valid. A review and update as to inspecting private sump pumps will be incorporated as part of the planned Town ordinance review.
  
- **Private Lateral Inspections/Repairs**  
The Town of Sheboygan does not inspect or repair private laterals. However, due to projects that may occur adjacent to a private lateral, there may be times when an inspection is done. Upon review of the inspection should an issue arise, the Town will alert the homeowner that repairs are required.
  
- **Service and Management Agreements**  
The Town of Sheboygan Sanitary District No. 2 negotiates all service contract agreements for operating and managing the collection system. A current listing of such providers can be found under Attachment B.
  
- **Enforcement Actions** - will be done as follows by Town Personnel:
  - Contact will be made to appropriate individual(s) via written or verbal communication.
  - If no response or the issue is not resolved within the stated timeframe, the Town will reach out a second time via verbal or written communication to the appropriate individual(s).
  - Should a third communication be needed, Town of Sheboygan personnel will contact the Town Attorney for any further action.

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**Section 4    Operation and Maintenance Activities**

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Operation and Maintenance (O&M) Programs are critical in order to properly operate and maintain the Town of Sheboygan Sanitary District No. 2 collection system and to provide recommendations for future rehabilitation and replacement projects. The Town has historically inspected and cleaned sewers and manholes on a routine basis. These inspection programs are necessary to determine structural integrity, root problems, illegal connections and I/I problems.

(✓) Tasks Completed	Task	Year Completed	Percent Completed
✓	Cleaning	2017	17%
	Root removal	n/a	n/a
✓	Flow monitoring on a daily basis	2017	100%
	Flow monitoring outside of traditional monitoring	2017	0%
	Smoke testing (as needed due to problems)	n/a	n/a
✓	Sewer line televising	2017	17%
✓	Manhole inspections - done at time of cleaning	2017	17%
	Manhole rehabilitation	2017	As needed
	Mainline rehabilitation - based on inspections	2017	As needed
	Private sewer inspections	n/a	n/a
	Private sewer I/I removal	n/a	n/a
✓	Lift station O & M - O&M is ongoing based on regular inspections and, if applicable, emergency alarms	2017	100%

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## Section 5 Design and Performance Standards

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The Town of Sheboygan Sanitary District No. 2 follows the Safety and Professional Services (SPS 382) Wisconsin Administrative Code - Design, Construction, Installation, Supervision, Maintenance and Inspection of Plumbing. These rules along with the Department of Natural Resources Chapter NR 110, Wisconsin Administrative Code - Sewerage Systems must be followed. We currently have a plumbing inspector that reviews and inspects all sewers and plumbing installations. Construction of sewer mains, laterals and pump stations are reviewed and inspected by AECOM, and the Town DPW reviews all construction plans prior to work commencing. On occasion, our internal staff has completed some outside inspections, in which photographs are used to measure all installations. All new sewer mains, laterals are inspected with documentation written on the construction plan sets. These are then marked, signed as "as-built" drawings, and filed with the Town of Sheboygan Sanitary District No. 2. They are then uploaded into the GIS mapping program.

### Design and Performance Standards Procedures

- **State Plumbing Code**  
The Town of Sheboygan follows the Safety and Professional Services (SPS 382) Wisconsin Administrative Code - Design, Construction, Installation, Supervision, Maintenance and Inspection of Plumbing. The Town contracts with a plumbing inspector who reviews and inspects all plumbing and sewer installations.
  
- **State Sewerage System Code - DNR NR 110 Standards**  
All systems are required to meet the Department of Natural Resources Chapter NR 110, Wisconsin Administrative Code - Sewerage Systems standards. Plans are reviewed by the Town Engineer (AECOM) and DPW Director to assure compliance. All installations are inspected and "as-built" filed at the Town of Sheboygan Sanitary District No. 2. All proposed extensions are reviewed by the Town Engineer (AECOM) to assure that sewer capacity is not exceeded.
  
- **Local Municipal Code Requirements**  
Plans are reviewed by the Town Engineer (AECOM) and DPW Director to assure compliance with ordinances. All installations are inspected and "as-built" and/or any documentation filed at the Town of Sheboygan Sanitary District No. 2. All proposed extensions are reviewed by the Town Engineer (AECOM) to assure that sewer capacity is not exceeded.
  
- **Construction, Inspection, and Testing**  
All systems are required to meet State Code and standards. Plans are reviewed by the Town Engineer (AECOM) and DPW Director to assure compliance. All installations are inspected by the DPW and Town Engineer (AECOM) and "as-built" filed at the Town of Sheboygan Sanitary District No. 2. Sewer system extensions are reviewed for compliance with the Town of Sheboygan's Engineer (AECOM) according to the Municipal Code and Master Plan prepared by AECOM.

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- **Municipal Employees for Sewer Design Work**  
The Town of Sheboygan Sanitary District No. 2 uses a contracted engineer for all sewer design work. Design plans are then reviewed by the Town's Department of Public Works Director.
  
- **Municipal Employees for Sewer Construction Inspection Work**  
Municipal employees are involved with inspections of some smaller contracted work projects. When inspecting, employees ensure compliance with regulations outlined in the Wisconsin DSPS 332 standards and those outlined in the Wisconsin Administrative Code.
  
- **Contracted Services for Sewer Design Work**  
Various contracted services are used for the Town of Sheboygan Sanitary District No. 2 sewer design work.
  
- **Contracted Services for Sewer Construction Inspection Work**  
Various contracted services are used for sewer construction inspection work, and in some cases DPW internal staff is used for the inspection of smaller contracted work projects. All inspections are conducted according to guidelines outlined by DPCS 332 standards.

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**Section 6 Overflow Emergency Response Plan**

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The Town of Sheboygan Sanitary District No. 2 Emergency Response Plan can be found under Attachment E. Listed below are items applicable to the plan:

- **Alarm System and Routine Testing**  
Town of Sheboygan Sanitary District No. 2 Lift Stations currently runs off of a SCADA system. Should a problem occur, the SCADA system will page through a dialer system, using the emergency contact hierarchy listed below. This consists of a call out to a pager that is answered 24/7 for any emergency within the Town of Sheboygan. Warnings consist of high and low level effluent warnings, power failure, etc. A rotating employee monthly on-call list is used to identify the DPW emergency contact. Emergency hierarchy is as follows:
  1. DPW personnel - using rotating monthly on-call list
  2. Town Hall
  
- **Emergency Equipment and Capacity**  
A listing of the Town of Sheboygan Emergency Equipment and Capacity can be found in the Emergency Response Plan (Attachment E). Assurance is presented in Section 7.
  
- **Emergency Procedures**  
Emergency Procedures are outlined in the Town of Sheboygan Emergency Response Plan.
  
- **Mutual Aid Agreements**  
The Town of Sheboygan Sanitary District No. 2 has a signed Mutual Aid Agreement with the surrounding communities. A copy of this agreement can be found at the Town of Sheboygan Sanitary District No. 2 Director of Public Works Office and in Attachment F.
  
- **Communications/Notifications (WDNR, Internal, Public, Media)**  
The Town Administrator/Utility Manager will handle all Community Outreach communications and notifications. Please refer to the Town of Sheboygan Emergency Response Plan for outreach steps and methods used by the Town of Sheboygan.
  
- **Lessons Learned**  
After an emergency situation the Town of Sheboygan, DPW Director along with all responding personnel will re-evaluate the emergency steps used throughout the response process.

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**Section 7 Capacity Assurance**

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The following Capacity Assurance items are applicable to the Town of Sheboygan Sanitary District No. 2:

- Current and up-to-date sewer maps
- Sewer system plans and specifications
- Manhole location maps with numbered manholes and GPS coordinates
- Lift station pump and wet well capacity information
- Lift station O & M manuals

Items identified within the Town of Sheboygan Sanitary District No. 2 are:

Areas with:

- Flat sewers
- Surcharging
- Bottlenecks or constrictions
- Chronic basement backups or sanitary sewer overflows (SSO's)
- Excessive debris, solids, or grease accumulation
- Heavy root growth
- Excess debris, solids, or grease accumulation
- Excessive infiltration/inflow (I/I)

Sewers and Manholes with:

- Severe corrosion/deterioration
- Severe defects that affect flow capacity

Other:

- Adequacy of capacity for new connections
- Lift station capacity or pumping problems
- Wet weather relief points or overflow structures

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**Section 8 and 9 Performance Indicators / Special Studies**

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**Section 8 Collection System Performance Indicators.** Check those that apply

✓	Lift Station Failures (failures/lift station/year)
✓	Sewer Pipe Failures (pipe failures/sewer mile/year)
✓	Sanitary Sewer Overflows (number/sewer mile/year)
✓	Basement Backups (number/sewer mile/year)
✓	Complaints (number/sewer mile/year)
✓	Peaking Factor Ratio ( <b>Peak Monthly</b> : annual daily average)
✓	Peaking Factor Ratio ( <b>Peak Hourly</b> : annual daily average)

**Section 9 Special Studies.** Check those that apply

	<b>Infiltration/Inflow (I/I) Analysis</b> Evaluates wastewater flow occurring throughout the collection system to identify specific infiltration and inflow components and whether these flow components are excessive.
✓	<b>Sewer System Evaluation Survey (SSES)</b> When I/I is excessive an SSES study will assess costs for removing I/I versus conveying and treating it, and identifies a cost-effective collection system rehabilitation program to remove excessive I/I.
✓	<b>System Evaluation and Capacity Assurance Plan (SECAP)</b> Contains elements of both the I/I and SSES analyses, but is typically more focused on SSO occurrences and developing recommendations to abate or eliminate SSO's as it relates to capacity issues.
✓	<b>Lift Station Evaluation Report</b> An assessment of lift station conditions, capacity limitations, and recommendations for improvements.
	<b>Others:</b>

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**Step 10 Compliance Maintenance Plan Annual Report**

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The Compliance Maintenance Program is one of the successful cornerstones of the Wisconsin Department of Natural Resources regulatory Wisconsin Pollutant Discharge Elimination System (WPDES Program). The web-based Compliance Maintenance Annual Report (CMAR) is a self-evaluation report and grading system for Wisconsin's domestic wastewater treatment plants and sanitary sewer systems. Since its beginning in 1987, the Compliance Maintenance Program has been extremely successful in achieving its purpose of encouraging and, where necessary, requiring owners of publicly and privately owned domestic wastewater treatment works to take necessary actions to avoid water quality degradation and prevent violation of WPDES permit effluent limits and conditions.

Compliance maintenance promotes an owner's awareness and responsibility for wastewater conveyance and treatment needs; maximizes the useful life and performance of treatment works through improved operation and maintenance; and initiates formal planning, design and construction to prevent WPDES permit violations. Through a conventional and readily understandable grading system, the CMAR brings awareness and understanding to governing officials, operators and the Department about the wastewater treatment plant and collection system. Governing bodies must review each year's CMAR and pass a resolution regarding it. Low grades require recommendations or action plans by the community to address the cause of any problems or deficiencies and improve the system.

Owners of wastewater treatment facilities, as well as collection systems, including satellite systems, are required by Wisconsin Administrative Code Chapter NR 208-Compliance Maintenance to electronically submit an annual report. Electronic reporting began in 2005. Collection systems complete two sections of the CMAR, Sanitary Sewer Collection Systems and Financial Management.