

2019

TOWN OF VERONA CAPACITY, MANAGEMENT, OPERATIONS, AND MAINTENANCE(CMOM) PLAN



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INTRODUCTION

In preparation of the impending Sanitary Sewer Overflow (SSO) rule and the Capacity, Management, Operations and Maintenance (CMOM) component of the proposed rule by the United States Environmental Protection Agency (USEPA) and the State of Wisconsin Department of Natural Resources (WDNR), the Madison Metropolitan Sewerage District (MMSD) developed a CMOM Program for its wastewater collection system. The USEPA's proposed SSO regulation goal is to reduce health and environmental risks by reducing SSO occurrences. MMSD, recognizing the interdependency between its system and the satellite municipality systems for successfully meeting the USEPA SSO regulation goal, developed a regional CMOM approach and is cooperatively working with the satellite municipalities to develop their CMOM Programs.

The Management Plan describes the means and methods the Town of Verona has in place to ensure complete execution of a CMOM Program. This is the general format of the Management Plan and is derived from the proposed USEPA SSO regulations. The municipal systems served by MMSD developed a Management Plan that will support CMOM Program development and implementation.

A Management Plan describes the approach that the Town is undertaking to implement their CMOM Plan. The Management Plan consists of the following components:

1. Mission Statement
2. Goals
3. Organization
4. Management of Assets
5. Customer Service
6. Legal Authority
7. Fiscal
8. Data Management
9. Standard Design, Construction and Inspection
10. Training
11. Performance Measurements

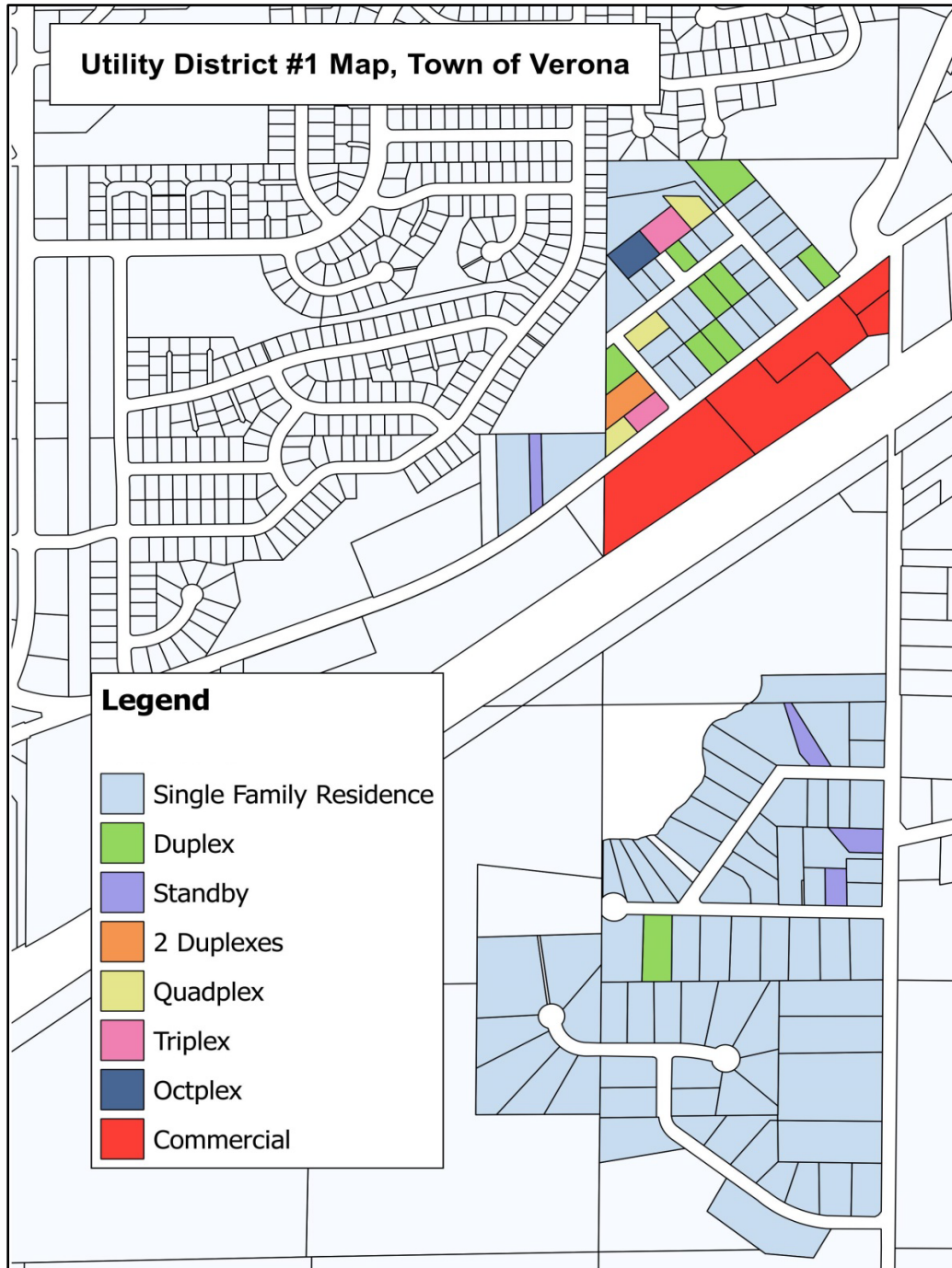
Mission Statement

The Town of Verona Utility District's mission is to protect the health, safety and environment of Town of Verona through the cost-effective and efficient collection and conveyance of wastewater in accordance with applicable law.

SECTION 1 – OVERVIEW

1.1 Background and Information

Located in the southwestern portion of Dane County, the Township of Verona was established in 1847. Today, Verona is a community of approximately 1,963 people served in part by a public sewerage infrastructure which dates to the late 1960's that is maintained on an ongoing basis. The Town of Verona Utility Commission currently operates and maintains a sewer collection system. The sanitary system, generally located in Sections 12 and 13 of the Township of Verona is comprised of approximately 3 miles (15,313 linear feet) of sanitary sewer ranging in size from 8 inches to 10 inches in diameter. Pipe materials include vitrified clay, Polyvinyl chloride (PVC), and Acrylonitrile Butadiene Styrene (ABS) Truss. The Utility is a satellite of the Madison Metropolitan Sewerage District.



The wastewater from the Town collection system discharges to the Madison Metropolitan Sewer District (District) via two Metropolitan Interceptor Sewer (MIS) connections. The District is responsible for treating the wastewater and maintaining the one lift station. A Capacity, Management, Operations and Management (CMOM) Plan is required to comply with Wisconsin Administrative Code NR 210.23 which requires all owners of collection systems, including satellite sewage systems, to develop and implement a Capacity, Management, Operation and Maintenance Program by **August 1, 2016**. A CMOM Program is to assure that a sewage system is properly managed, operated and maintained at all times; has adequate capacity to convey peak flows; and all feasible steps are taken to eliminate excessive infiltration and inflow from the system. A CMOM Program must mitigate the impact of overflows on waters of the State, the environment and public health. Public notification is required of each SSO.

1.2 Definitions

For the purpose of this document the following definitions pertain:

1. **CMOM** Capacity, Management, Operations and Maintenance, a program to efficiently operate and maintain collection system assets to minimize performance failures and overflows.
2. **Collection System** is defined as the Village sanitary sewer system including sanitary sewers, combined sewers, manholes and associated equipment.
3. **Combined Sewers** is defined as sewers located in the combined sewer area. These sewers include flow from the sanitary sources as well as storm water. For purposes of this document, combined sewers may be referred to as sewers.
4. **DNR** – Wisconsin Department of Natural Resources
5. **DNR Chapter NR 110** – Register May 2001, No. 545 – Sewerage Systems “NR 110” State of Wisconsin rules for sewerage systems.
6. **District** is the Madison Metropolitan Sewerage District
7. **Infiltration** definition Wisconsin DNR Chapter NR 110 (see below for NR 110) – means water other than wastewater that enters a sewerage system (including sewer service connections) from the ground through such sources as defective pipes, pipe joints, connections, or manholes. Infiltration does not include, and is distinguished from, inflow.
8. **Inflow** definition from Wisconsin DNR Chapter NR 110 means water other than wastewater that enters a sewerage system (including sewer service connections) from sources such as roof leaders, cellar drains, yard drains, area drains, foundation drains, drains from springs and swampy areas, manhole covers, cross connections between storm sewers and sanitary sewers, catch basins, cooling towers, storm waters, surface runoff, street wash waters, or drainage. Inflow does not include, and is distinguished from, infiltration.
9. **I/I** Infiltration/Inflow abbreviation.
10. **MMSD** is the Madison Metropolitan Sewerage District
11. **Sanitary sewer overflow (SSO)** is a condition whereby untreated sewage from the Village sanitary sewerage collection system is discharged into the environment prior to reaching treatment facilities thereby escaping wastewater treatment. It is also considered a discharge of sewerage to waters of State. When caused by rainfall it is also known as **wet weather overflow**. **SSO** is also referred to as “confirmed sewage spill”, “sewer overflow,” or “overflow”.
12. **Town** – Town of Verona

SECTION 2 – GOALS

2.1 Goals

The Wisconsin Department of Natural Resources (DNR) defines a CMOM program as one that achieves these primary objectives:

1. Ensures that communities have adequate wastewater collection capacity.
2. Improves the operation and performance of the municipal sanitary sewer collection system.
3. Evaluates areas of excessive inflow of precipitation or groundwater into the system.
4. Conducts maintenance and repairs needed to prevent problems.
5. Reduces the frequency and occurrence of sewer overflows and basement backups.
6. Provides more effective public notification when overflows do occur.

The goals outlined below contribute to the overall mission and address issues of health and safety, cost efficient operation and compliance with applicable law.

1. Minimize the occurrence of problematic overflows
2. Improve or maintain system reliability
3. Maintain assets cost-effectively through a rehabilitation and replacement program based on condition assessment
5. Reduce the potential threat to human health from sewer overflows
6. Provide adequate capacity to convey peak flows
7. Manage I/I
8. Protect collection system worker health and safety
9. Operate a continuous CMOM Program
10. Maintain annual cleaning and inspection programs
11. Continue cost-efficient operation of the sewer utility

Program Goals	Objectives	Regulatory Expectations	Performance Measures
1. Review and update Town of Verona Ordinance 91-1	Review at least annually.		The Ordinance will reflect the current structures and policies
2. Review/Establish safety procedures for Town employees.	Update procedures as needed and conduct regular training in advance of possible events.		Determine the effectiveness of training through written and/or practical testing.
3. Regularly update informational materials for users.	Produce/Update mailings and postings on a regular basis.		Public compliance and awareness improves.
4. Implement a fats, oil, and grease control program	Reduce/Eliminate blockages in mains and lift station problems.	Eliminate FOG that will cause of contribute to obstruction to the flow.	Review future televising to measure effectiveness.
5. Clean and televise 17% of the system annually.	Repeat the cycle every six years.	Prevent SSOs through regular cleaning.	Meet cleaning PMs.
6. Identify illegal sump pump hookups.	Educate the public to eliminate any illegal hookups.	Inflow from sources on private property is subject to oversight and control.	No increases to flow when ground is saturated with water.

5. Locate specific areas of blockages and identify/control the source.	Confirm the existence of any system components that do not function according to established reliability standards.	In addition to eliminating FOG, routinely perform root cutting and remove mineral deposits.	Inspect and rehabilitate sewers and manholes. Perform maintenance activities.
6. Maintain annual televising program.	Provide a continuous program to maintain the assets.	Routine preventive operation and maintenance activities.	Meet inspection PMs.
7. Review budget for repair and rehabilitation projects.	Review annually and present to users at the annual budget hearing.		Adequate funding is available to support routines and initiatives without borrowing.
8. Comply with the WPDES permit concerning sanitary sewer overflows	Ensure procedures are in place to identify SSOs, report SSOs to the WDNR, and mitigate impacts from the SSOs per the WPDES permit.	Untreated wastewater discharges from the system are a violation of the WPDES permit.	Number of Sanitary Sewer Overflows
9. Minimize the occurrence of problematic overflows.	Ensure procedures are in place including operations and maintenance practices to minimize overflows.	The WDNR General Permit for SSOs provides specific circumstances under which the WDNR may not take enforcement action against the discharger. These circumstances include situations where the SSO occurred to prevent loss of life, personal injury, or severe property damage.	Inspect sewers, and manholes (MMSD inspects lift station) Rehabilitate or replace sewers and manholes Perform maintenance activities
10. Maintain assets in a cost-effective manner.	Ensure preventive maintenance is performed (manholes, and sewer pipes). Continue to conduct condition assessments on sewer assets.	State statutes require wastewater rates to include a component for equipment replacement.	Inspect sewers and manholes. Rehabilitate sewers and manholes.
11. Continue cost-efficient operation of the sewer utility.	Provide adequate funding to support the initiatives.		Inspection, cleaning and rehabilitation of sewers and manholes.
12. Operate a continuous CMOM Program.	Establish procedures for monitoring CMOM Program implementation and initiating program modifications.		Update CMOM Plan annually. Report per Table 8-1.

<p>13. Reduce the potential threat to human health from sewer overflows.</p>	<p>Identify potential overflows <input type="checkbox"/> Confirm the existence of locations where system overflows could pose a threat to human health. <input type="checkbox"/> If such locations exist, develop response measures and investigate alternatives for eliminating the potential threat</p>	<p>Overflows from the system are a violation of the WPDES permit, Clean Water Act, and Wisconsin State law.</p>	<p>Reporting Performance Measures. Inspect, replace and rehabilitate sewers and manholes.</p>
<p>14. Provide adequate capacity to convey peak flow</p>	<p>Gain an understanding of the current system's ability to convey peak flows and what steps are necessary to address system inadequacies.</p>	<p>The State would require a System Evaluation/Capacity Assurance Plan for the Town if the evidence shows that the system does not possess the capacity to convey peak flows.</p>	<p>Perform flow monitoring as necessary. Rehabilitate and replace sewers and manholes, as needed.</p>
<p>15. Manage infiltration and inflow (I/I).</p>	<p>Reduce I/I <input type="checkbox"/> Understand the level of I/I in the system, the extent to which it poses a threat to the regional or municipal system operation, sources of I/I, and potential remedial measures. <input type="checkbox"/> Establish a program to reduce I/I in situations where I/I results in service problems, overflows and building sewer backups. Such Performance standards may include those that would prevent I/I from increasing in the future.</p>	<p>If the State or MMSD determines that a SECAP is required of the Town, a component of this plan will include I/I evaluation and reduction.</p>	<p>Inspect sewers and manholes. Rehabilitate sewers and manholes. Perform maintenance activities.</p>

SECTION 3 – ORGANIZATION

3.1 Organization Structure

The Town owns and operates the wastewater collection system. The Town of Verona Utility Staff is comprised of one full-time employee to oversee the operation and maintenance of the sewer collection system. On a regular and ongoing basis, the Town Utility Commission Board reviews the staffing and service out-sourcing. This evaluation will continue throughout the administration of the CMOM Program. This Board is also responsible for reviewing and updating the Utility District Ordinance 91-1. See Table 3-1 for Town staff responsibilities and Figure 3-1 for the Town organization chart as it relates to the collection system.

Table 3-1 Town of Verona Staff Responsibilities	
Town of Verona Utility Commission	Elected officials who serve a policy-making role for the Town including amendments to Ordinance 91-1
Town of Verona Planner/Administrator	Manages the Public Works Project Manager and Town Patrolman
Town Clerk/Treasurer	Reports to the Town Utility Commission and manages all procurement, budget and overall operation of Town activities including the collection system
Town Patrolman	Responsible for inspecting manhole covers and scheduling road sweeping to keep stormwater out of the sewer system
Madison Metropolitan Sewerage District	Determines the base rates for service based upon metering and types and amounts of effluents

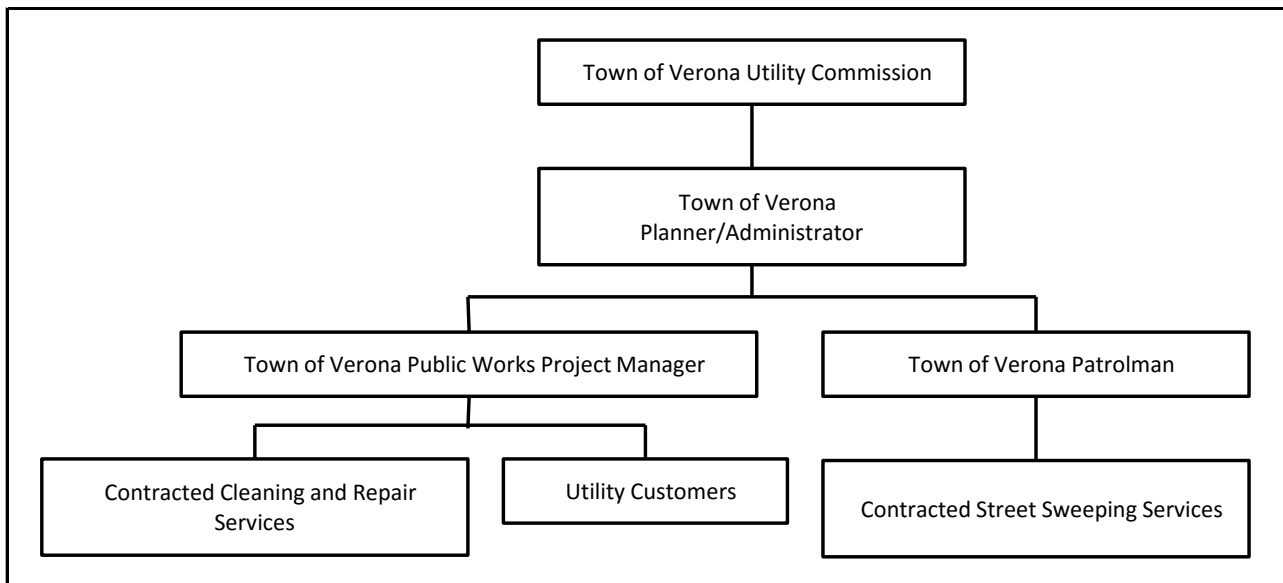
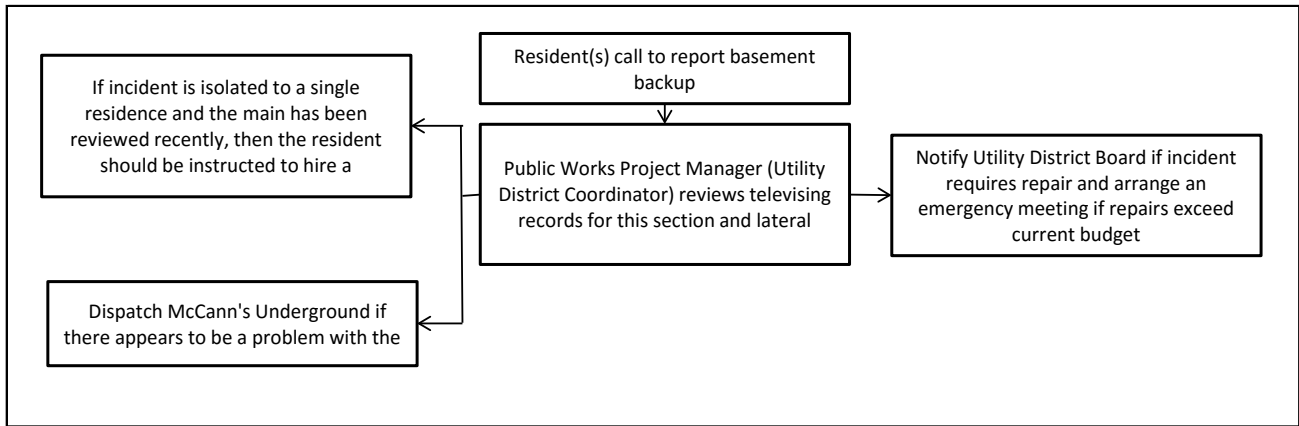


Figure 3-1

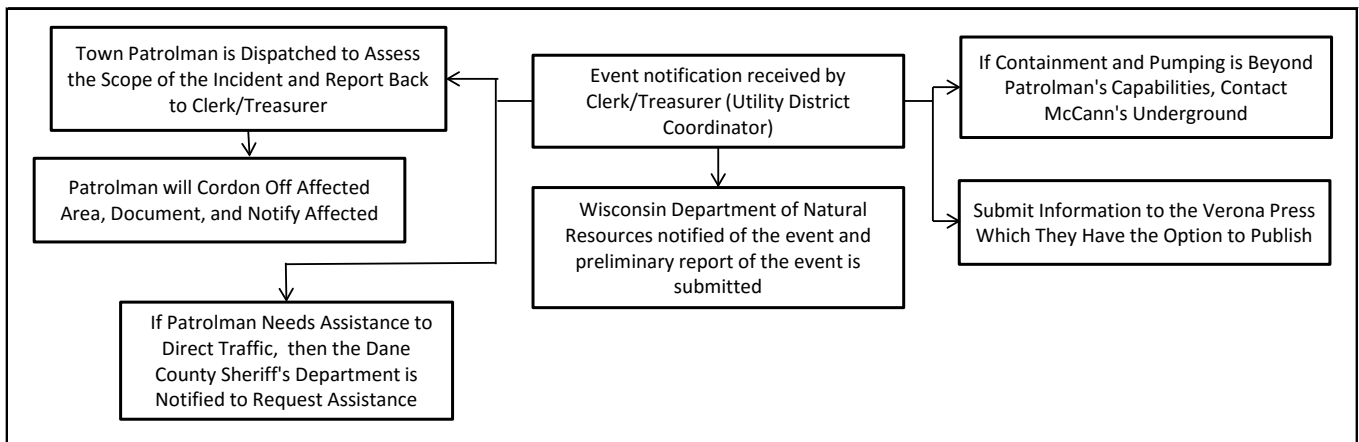
Town of Verona Organization Chart for Sewer Services

3.2 Internal Communication Procedures

The Town of Verona contracts for inspection and repair services, so does not have a Chain of Command in the event of worker injury or everyday operations. A phone tree for the following Chain of Command flowcharts will be distributed to those involved, but will not be published in this document.



**Figure 3-2
Chain of Command
Basement Backup**



**Figure 3-3
Chain of Command
Sanitary Sewer Overflow**

3.3 Notification

In the event of an overflow, the Town needs to submit notification to various stakeholders:

1. Notify the Town Patrolman.
2. Verbal or email notification to the DNR within 24 hours notification that an overflow occurred.
3. Written overflow report to the DNR within five (5) days. The form can be found on the DNR website and is included in the Appendix E.
4. Notify the Verona Press.

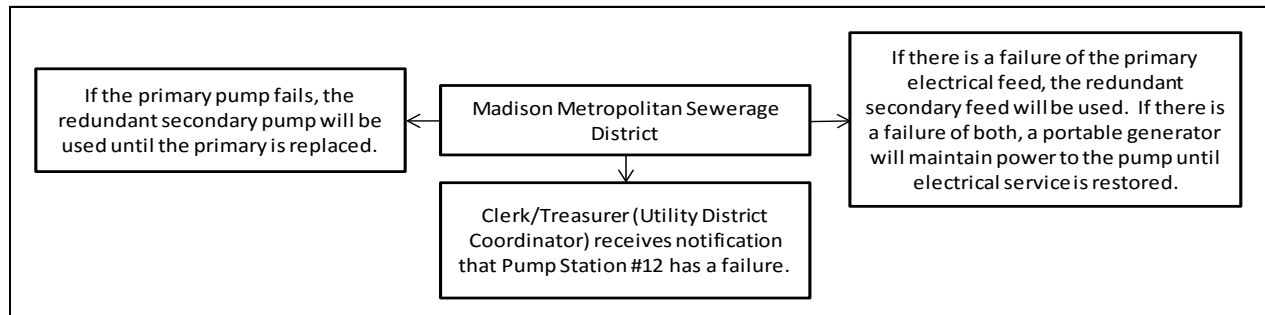


Figure 3-4
Chain of Command
Electrical or Pump Failure at Lift Station #12

3.4 Training and Education

- 3.3.1. Safety. The Town Patrolman attends professional safety training on a regular basis.
- 3.3.2. Equipment and Tools. The Town uses vendors and equipment manufactures for training specific to the equipment utilized.

3.5 Public Information and Education Program

- 3.5.1 The Town of Verona communicates with the DNR, District, the Town of Verona Utility Commission, the Town Board, and the customers on a regular basis. The Utility Commission is governed by a board comprised of the Town Chair and four (4) Town Supervisors as outlined in the Town Organization Chart in Figure 3-1.
- 3.5.2 The Town of Verona Utility Commission meets once annually to determine policy issues related to finance, personnel, operations, SSO reduction and elimination, sanitary sewer system improvements. Any SSO events or other capacity issues are presented and discussed at the Commission meetings. Currently, the Town utilizes direct mailings, emails, and its website <http://www.town.verona.wi.us/> to update residents on matters related to the sewer collection system.
- 3.5.3 CMOM-related topics identified for future and/or continued discussion include:
 1. Financial Impact to the Town (i.e. adequate budget to support initiatives including, but not limited to: capital improvements, operation and maintenance activities, personnel and equipment)
 2. Problem areas in the system
 3. Sanitary Sewer Overflows
 4. Communication to stakeholders including actions that residents and businesses can take to extend the life of the collection system and their private laterals
 5. Meeting the CMOM goals
 6. Cost effective reduction of I/I

SECTION 4 – LEGAL AUTHORITY

4.1 Sewer Use Ordinance

The Town Sewer Use Ordinance 1991-01 was last revised on November 21, 2017. This document is reviewed at a minimum on an annual basis. Madison Metropolitan Sewerage District Use Ordinance that governs the portion of their infrastructure within the Town of Verona was last revised on July 30, 2015.

4.2 Pretreatment or Industrial Control Programs

There are currently no manufacturing facilities within the Town. The highest flow in the system is along Nesbitt Road; this section was relined in April of 2015.

4.3 Fat, Oil and Grease (FOG) Control Program

The greatest concentration of residential users is in the Hillside Heights neighborhood. This neighborhood was cleaned and televised between 2013 and 2016; no significant FOG problems were noted. Grease problems have been identified in the 10" diameter main in the Fitchrona Road right-of-way that will be handled by the City of Fitchburg; this main is shared by the Town and the City of Fitchburg. A sausage manufacturer in the City of Fitchburg is upstream of the grease accumulation noted in 2015 City of Fitchburg televising.

4.4 Illicit Discharges by Commercial or Industrial Users

One illegal tap and one incidence of illicit discharges to the system not authorized by the Town were discovered in 2006; the illegal connection has been removed and the discharges have ceased. No new incidents have been observed previously or since.

4.5 Private Property Clear Water

The only significant inflow that has been observed in the many years of televising is from a residence in the City of Fitchburg that has a tap on the shared 10" main within the Fitchrona right-of-way. The City of Fitchburg has actively been working with the property owner to mitigate the problem that is due in part to a high water table and possible I/I to the private lateral.

4.6 Private Lateral Inspections/Repairs

Currently the Town televises connections between the public main and private laterals, but does not currently intend to televise private laterals. Maintenance and repair to these connections within the Town right-of-way is currently performed by the Town with no special assessment levied against the property other than a blanket charge system-wide for treatment, televising, and repair. The Town may consider amending its Sewer Use Ordinance at a future date to authorize the Town to televise private laterals.

4.7 Service and Management Agreements

The Town stays in regular communication with representatives at the Madison Metropolitan Sewerage District (MMSD) about their upgrades to their Pump Station #12 and their televising and cleaning schedule for their 48" main in the 18/151 right-of-way. In turn, MMSD stays in regular communication with the Town if they observe any possible I/I issues that must be addressed. The Town and the City of Fitchburg are in the process of exchanging televising and repair histories of the shared 10" main within the right-of-way of Fitchrona Road including GIS data. The Town is hoping to establish a mutual aid agreement with the City of Fitchburg in the event of a significant Sanitary Sewer Outflow (SSO) in either municipality. The Town currently works with McCann Underground and with Capitol Underground to clean, televise, and repair the Town's infrastructure.

4.8 Enforcement Actions

Enforcement shall be carried out per the specifications Article XIII of the Town of Verona Sewer Use Ordinance 1991-01 as follows:

(1) Notice of Violation and Special Order of Remedy. Any person found in violation of the Ordinance of the Utility District or of any prohibition, limitation, or requirement contained therein, will be served with written notice stating the nature of the violation and issuing a special order for the appropriate remedy thereof.

(2) Penalties. A violation of any written rule or order of the Verona Town Board shall be a public nuisance pursuant to Section 66.24 (1) (d) of the Wisconsin Statutes, and shall be abated and damages and costs recovered therefore in accordance with Section 823.02 of the Wisconsin Statutes. Any person who fails to comply with a special order within the time specified shall be declared to be a person creating a public nuisance enjoinable under Section 823.02 of the Wisconsin Statutes and shall forfeit to the Town of Verona \$25.00 for each day such failure continues.

(3) Falsifying of Information. No person shall knowingly make any false statement, representation, record, report, plan or other document filed with the Utility District or the District, or falsify, tamper with, or knowingly render inaccurate any monitoring device or method required under this Ordinance or the District Sewer Use Ordinance. Any person who violates this provision shall be subject to the penalties imposed under Article XVI (3) of this ordinance.

SECTION 5 – OPERATION AND MAINTENANCE ACTIVITIES

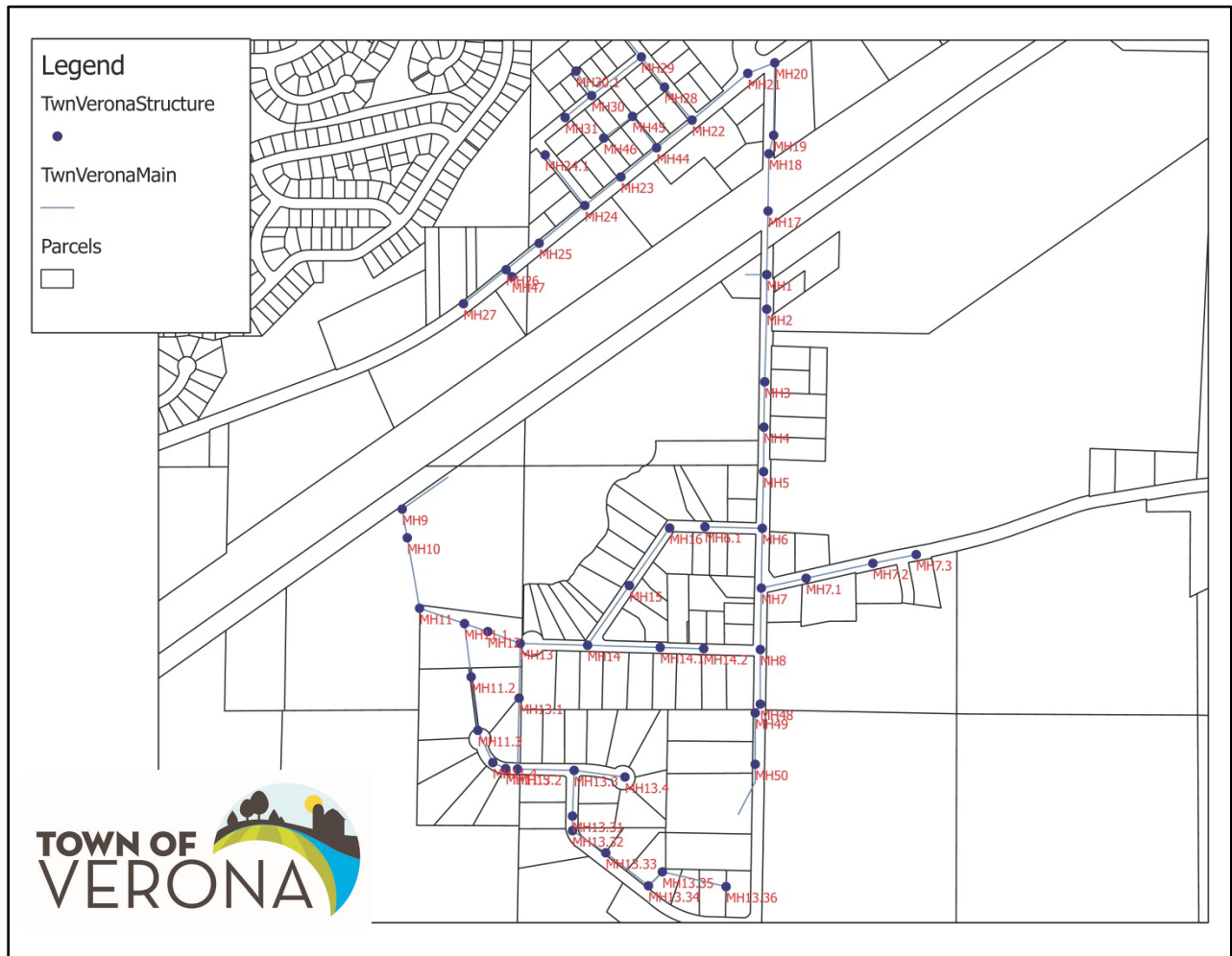
5.1 Management of Assets

- 5.1.1 Sewer Maps. The Town has updated their sanitary sewer map showing key assets including sewers and manholes. In addition, the Town maintains a sewer rehabilitation map identifying assets that were inspected and rehabilitated. The Town has a GIS system in place. This system is utilized and updated on a continual basis. A current map of manhole covers and mains is below.
- 5.1.2 Condition Assessment Program. The Town currently has a program to evaluate on a routine basis the condition of the collection system assets; this assessment is used to budget and plan for upcoming rehabilitation and replacement programs.
- 5.1.3 Equipment. To perform routine operations and maintenance, respond to emergencies and prevent sanitary sewer overflows, it is critical to have adequate equipment. A list of equipment and spare parts that the Town owns and maintains can be found in Table 5-2.
- 5.1.4 Critical structures in the collection system have been identified; these are outlined in Table 5-3.

Description	Goals
Sewers	
Total Sewer Length in Feet 14,923 feet	
Sewers televised and cleaned (%/feet/year)	17% 2,487'
Manholes	
Number of Manholes in the system 59 manholes	
Manholes inspected (%/feet/year)	10% 6 manholes
Mainline and Manhole Rehabilitation	
Relining/Grouting/Repair Displaced Taps and Manholes	As needed As needed
Maintenance	
Root cutting	As needed As needed
Reporting	
Backups	0% 0
Infiltration	0% 0
Overflow	0% 0

Description	Model	Quantity	Capacity	Year Purchased
Portable Pump	Wacker Neuson PT3A	1	3" discharge, 400 gpm	2007
Barrel barricades		12		2007
Barricades	24" with flashers	6		2008
Portable Generator	Wacker Neuson GP3800A	1	3800 Watt	2007

Description	Location	Manhole(s)
Hillside Heights Sewer	Nesbitt Rd, Everest Drive, Allegheny Drive, Andes Drive, and Cortina Drive	21-47
Goose Lake Sewer	Goose Lake Drive, Pheasant Ln, DeMarco Trail, and Tonto Trail	5-13.36
Fitchrona Sewer	Fitchrona Rd	4-20
MMSD Lift Station #12 rehabilitation	2739 Fitchrona Rd	1
Marty Farms	Marty Rd (maintained by Madison Metropolitan Sewerage District)	



5.2 Background and Information

Operation and Maintenance (O&M) Programs for the collection system are critical to properly operate and maintain the 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. In addition, several other programs are used on an as-needed basis to maintain the system. The Town has the following O&M Programs:

1. Inspection of Sewers
2. Inspection of Manholes
3. Inspection of Easements
5. Inspection of Critical Structures
6. Code Compliance
7. Sewer Cleaning
9. Root Control

5.3 Inspection - Sewers

5.3.1 The sewer inspection cycle is performed on a ten-year cycle. The Town currently contracts out the inspection services to qualified sewer contractors.

- 5.3.2 Annually, sewer sections are identified to be inspected the following year. Based on the results of these inspections, the inspection cycle may be revised so that some areas would be inspected more frequently or less frequently than other areas.
- 5.3.3 Sewer inspections are done by using a closed circuit television camera (CCTV) and the results are recorded digitally.
- 5.3.4 All sewer inspections are documented; a copy of the form used can be found in Appendix E.
- 5.3.5 The Town uses an internal evaluation document (Sanitary Sewer Report) for assessments.
- 5.3.6 Sewer inspections will be used for condition assessment of the sewer. See Section 6 for details. Based on the condition assessment, recommendations are made for future inspections, repairs, rehabilitation or replacement for the collection system. Where possible, these improvements are scheduled in conjunction with planned roadway or other utility improvements or upgrades.
- 5.3.7 The Town does not currently have a defined program for sewer lateral inspections. Staff will continue evaluation of the development of a program to address private property lateral maintenance.

5.4 Inspection - Manholes

- 5.4.1 The Town inspects manholes on a regular basis.
- 5.4.2 Manhole inspections shall be documented.
- 5.4.3 Manhole inspections will be used for condition assessment of the manhole. All defective items shall be repaired or replaced.
- 5.4.4 Based on the condition assessment, a recommendation shall be made for future inspections, rehabilitation or replacement.

5.5 Inspection of Easements

- 5.5.1 The Town currently has 2,672 feet of 8-inch sewer located on easements or private property. It is important to keep these areas clear to ensure that access to all manholes is available for maintenance activities and emergencies.
- 5.5.2 There is an on-going inspection program to ensure sewers and manholes are accessible.

5.6 Inspection of Critical Structures

- 5.6.1 The Town also performs other inspections for critical points in the system as necessary. These can and will vary upon the situation. Critical points are identified in Table 5-3.

5.7 Code Compliance

- 5.7.1 Properties are inspected for compliance with the ordinances and codes. The Town is committed to enforcing codes.

5.8 Sewer Cleaning Program

- 5.8.1 The Town currently employs a sewer cleaning program to remove debris from the sewers and to prevent blockages and potential sewer backups or SSOs.
- 5.8.2 The sewer cleaning is performed on a six-year cycle. Sewers are identified to be cleaned on an annual basis. Based on the results of these inspections, the inspection cycle may be revised and future inspections could result in some areas inspected more frequently or less frequently than other areas.
- 5.8.3 Other areas that may require more frequent cleaning are included in the cleaning schedule.

5.9 Root Control

- 5.9.1 Root intrusion in collection systems is another source of blockages and overflows. Control of roots will be done in combination with routine cleaning to reduce blockages and overflow.
- 5.9.2 Root control will be done on an as-needed basis.

5.10 Maintenance Tracking

The Town currently receives condition reports and estimates from vendors in printed and digital video formats. The Town uses spreadsheets and GIS-based maps to track all maintenance activities including inspection, cleaning, rehabilitation and replacement projects. An example of the forms used can be found in Appendix E. The Town reviews and updates these forms on a regular basis. Currently, the Town does not contract for flow monitoring, private sewer inspections, or private sewer I/I removal. MMSD maintains Pump Station #12; the most current rehabilitation began in 2014 with designing and bidding followed with construction and upgrades spanning from 2015-2016.

SECTION 6 – DESIGN AND PERFORMANCE STANDARDS

6.1 State Plumbing Code

Department of Safety and Professional Services SPS 382 published under §35.93, Wisconsin Statutes--**Design, Construction, Installation, Supervision, Maintenance and Inspection of Plumbing** must be followed when designing and constructing residential and commercial plumbing and pipes. An important installation is the connection of the private laterals to the sewer main. Often these connections, if not installed properly, can be significant sources of infiltration, so a municipal program that ensures proper construction and connection of private lateral pipes will significantly control infiltration.

6.2. State Sewerage System Code(s)

Department of Natural Resources Chapter NR 110 published under §35.93, Wisconsin Statutes--**Sewerage Systems** must be followed when designing and constructing sewage conveyance systems.

6.2. Local Municipal Code Requirement

There is no local Municipal Plumbing or Sewerage Code in effect at this time.

6.3 Standard Design, Construction, and Inspection

The Town utilizes the services of an engineering consultant for the development and design of sewer system improvements. The most current version of standard specifications for sewer and water construction in Wisconsin is employed. The Town uses various performance measures that are monitored on a regular basis. The performance measures are based on the following:

- Madison Metropolitan Sewerage District Use Ordinance
- Town of Verona Sewer Use Ordinance 91-1
- DNR Requirements

The Town contracts for services for sewer inspection and repairs.

SECTION 7 – OVERFLOW EMERGENCY RESPONSE PLAN

7.1 Background and Information

An Overflow Response Plan (ORP) is necessary to protect public health and the environment. It provides procedures to respond to overflows as well as documents work and reports notification to the appropriate parties.

7.2 Alarm System and Routine Testing

MMSD utilizes a radio-telemetry system to monitor its pump station and other remote facilities it operates. Data such as pump run-time and wet well level depth are recorded on a continuous basis and stored in controllers at the station. This information is then sent back to the treatment plant via radio waves where it is integrated with the plant's process control system. This system is also used for specific alarms such as building intrusion, loss of station power, smoke detection and high wet well level. This information is also sent over the radio-telemetry system as soon as a set point is triggered so that operators at the treatment plant can be notified immediately.

7.3 Emergency Equipment

Description	Model	Quantity	Capacity	Year Purchased
Portable Pump	Wacker Neuson PT3A	1	3" discharge, 400 gpm	2007
Barrel barricades		12		2007
Barricades	24" with flashers	6		2008
Portable Generator	Wacker Neuson GP3800A	1	3800 Watt	2007
Portable Radios	Kenwood TK-2160K	2	5 Watts	2008 and 2010
Mobile Radios	Kenwood TK-762G	2	25 Watts	2008
Mobile Radio	Kenwood TK 790H	1	110 Watts	2012
Base Radio	Kenwood TK 790H	1	110 Watts	2012
Dump Body Truck	Ford F550 DRW 4WD XL	1	300 HP	2014
Tractor	Case IH L755	1	145 HP	2018
Tandem Axle Truck	Peterbilt 348	1	350 HP	2013
Single Axle Truck	Peterbilt 335	1	330 HP	2006
Front End Loader	John Deere 544E	1	120 HP	1991

Other emergency equipment and services beyond the capabilities of Town staff would be contracted with external vendors who routinely conduct our televising, cleaning, repairs, and excavation.

7.4 Emergency Procedures

The Town has procedures that are updated on a regular basis; these procedures include:

- Secure the area surrounding the overflow to protect the public until normal flow has been established and the area cleaned
- Identify the destination of the overflow and take steps to either contain or mitigate the impact
- Mobilize Town Patrolman and contractual services to pump effluent from one manhole to another if a blockage has been discovered; remove the blockage to re-establish normal flow
- Mobilize mutual aid when needed
- Document the entire process by completing forms and photographing the overflow and efforts to mitigate and efforts to return the site to pre-event condition
- Notification of stake-holders of an overflow

7.5 Mutual Aid Agreements

The Town of Verona does not currently have a mutual aid agreement with the City of Fitchburg with which the Town has shared infrastructure. However, stormwater management is currently being handled cooperatively between the two municipalities. Once key components of stormwater management are in agreed upon, the same group can then focus upon a mutual aid agreement as part of an emergency response plan.

7.6 Communications/Notifications

7.6.1 If an overflow is verified, then the Town of Verona shall notify the DNR within 24 hours of an SSO occurrence by telephoning the wastewater staff in the regional office as soon as possible. If staff is unavailable, then the use of fax, e-mail, or voicemail is acceptable. It is recommended that if possible, an email is sent for documentation. The Town will use WDNR Form 3400-184 "Sanitary Sewer Overflow or Bypass Notification Summary Form" for written notification. This form is available in Appendix A and is available for download on the DNR website: <https://dnr.wi.gov/topic/wastewater/documents/3400-184.pdf>.

Within 5 days of conclusion of the bypass or overflow occurrence, the following information will be reported to the DNR in writing:

- Reason the overflow occurred or explanation of other contributing circumstances that resulted in the overflow event; If the overflow is associated with wet weather, then the data on the amount and duration of the rainfall or snow melt for each separate event will be provided
- Date and location where the overflow occurred
- Duration of the overflow and estimated wastewater volume discharged
- Steps taken, or a proposed plan to remedy, to prevent similar future occurrences
- Any other information the permittee believes is relevant
- Forward a copy of the written report to the Madison Metropolitan Sewerage District

7.6.2 The Town is required to notify the water utilities in surrounding cities that might be impacted by the SSO to protect their drinking water sources. The Town is required to notify the Madison Metropolitan Sewerage District of all SSOs and will provide them a copy of WDNR Form 3400-184. All overflows shall be reported immediately to the Town Chair and the Town Patrolman. As appropriate, the public will be notified. This may include a posting on the Town website identifying all pertinent information. The Public Health Department should be notified if an overflow occurs.

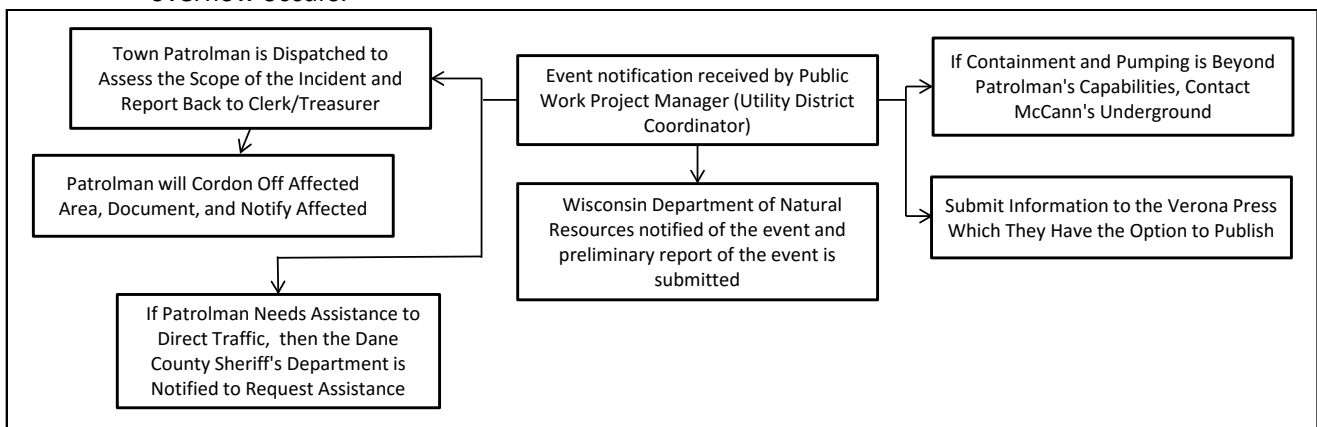


Figure 7-1
Chain of Command for SSO

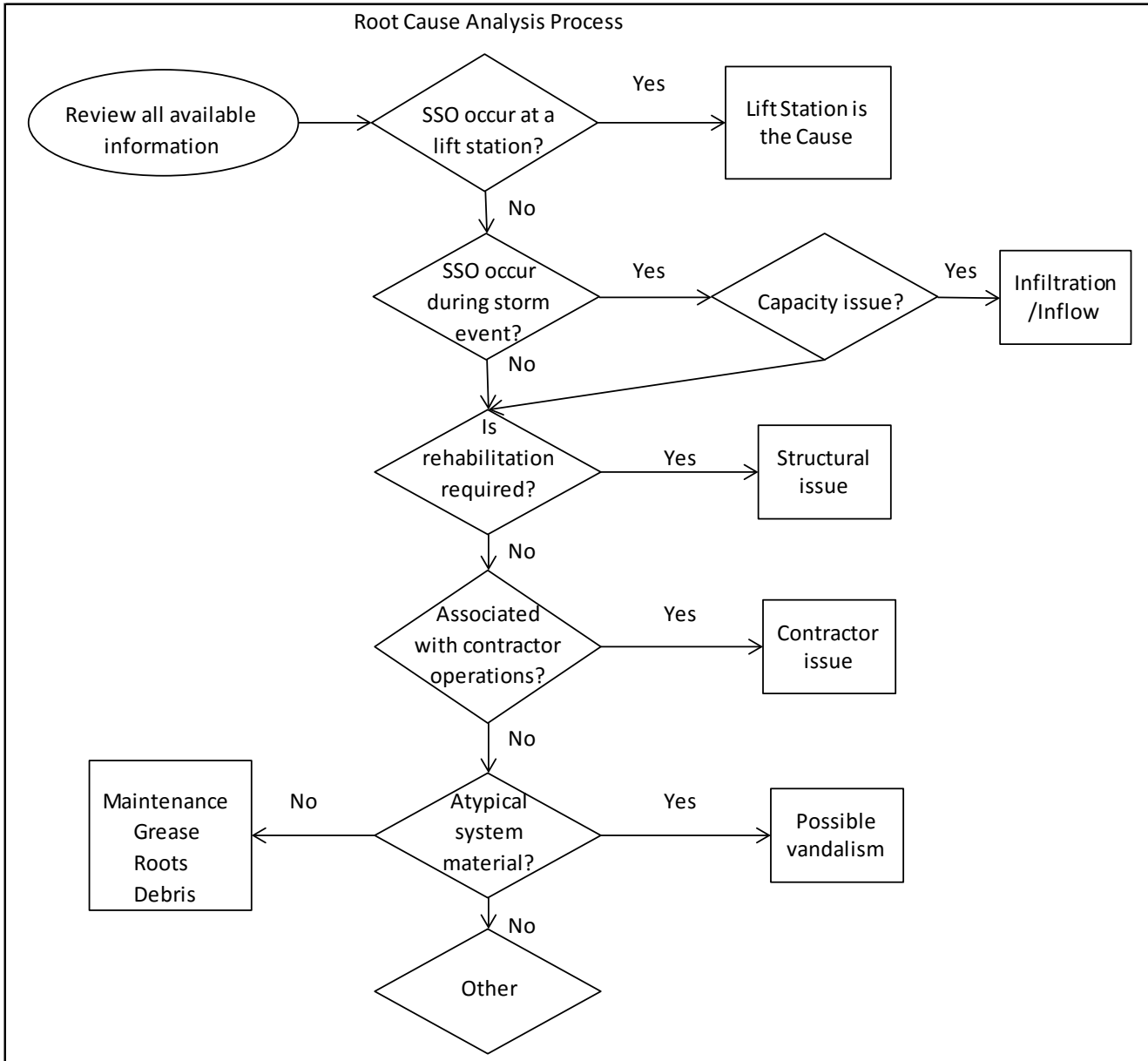
7.7 Weather Forecast

The Town also uses weather forecasting of wet weather and melting snow events to assist in predicting high flows and potential problems in the collection system.

☐ Channel 3000: <https://www.channel3000.com/weather/forecast>

☐ Weather Underground Madison web site: <http://www.wunderground.com/us/wi/madison>

7.8 Lessons Learned: Root Cause Failure Analysis



SECTION 8 – CAPACITY ASSURANCE

8.1 Background and Information

The Town is required to have sufficient capacity during dry weather events and to manage peak wet weather flows. This includes identifying areas during wet weather events where excess flow from I/I occurs. The Town regularly updates its GIS-based maps of the infrastructure including the location and numbering of manholes. The Town archives all video footage, televising reports, and post-repair televising reports. All televising and repairs are tracked by date and location; observations and the vendor are also included in this master spreadsheet. The location of flat sewers, root growth, cracks, offsets, and other defects that could affect flow capacity are also located relative to manholes. Madison Metropolitan Sewerage District operates and maintains the single lift station in our service area. The construction standards and plans for the original installation, additions, and repairs are also archived in the Town Office.

8.2 Capacity

- 8.2.1 Dry Weather Conditions. The Town has no dry weather capacity restrictions.
- 8.2.2 Wet Weather Conditions. The Town will continue to reviews flows during wet weather events to reduce I/I. Problems during wet weather events and SSOs are analyzed to determine the root cause of these problems. A root cause failure analysis form is included in Appendix E.
- 8.2.3 The Town has an on-going inspection program to identify I/I.
- 8.2.4 The Town is enforcing their Ordinance on a continuous basis to ensure that I/I is reduced.
- 8.2.5 Madison Metropolitan Sewerage District determines with each new connection that adequate capacity is assured.

8.3 Field Investigation

- 8.3.1 The Town performs field investigations on a regular basis to identify I/I, defects and other potential problems. All problems are based upon the following: customer service requests, staff recommendations, or as needed.
- 8.3.2 Problem areas and overflows are investigated. Overflows are reported – See Section 5 Overflow Response Plan for details.
- 8.3.3 Observations and recommendations from these field investigations are used to enhance the O&M programs and to provide repair, rehabilitation and replacement recommendations.

8.4 Flow Modeling

- 8.4.1 The Town currently does not use flow modeling to evaluate the collection system.
- 8.4.2 Flow modeling may be considered if the Town determines that it is necessary to manage peak wet weather flows.

8.5 Flow Monitoring

- 8.5.1 The Town will use the District flow monitors to evaluate flows in the system and to evaluate capacity constraints.
- 8.5.2 Additional flow monitoring may be done on a case-by-case basis to identify high I/I areas and to confirm flows in the system.

8.6 I/I Reduction

- 8.6.1 The Town has an ordinance for property owners to maintain their service connection or lateral. The Town will continue to enforce this ordinance.
- 8.6.2 The Town will continue to review alternative programs to eliminate clear water in the sanitary sewer and combined sewer systems.

- 8.6.3 Rehabilitation and replacement programs are based on reducing I/I in addition to ensuring that the structural integrity of the assets is maintained.
- 8.6.4 Projects are included in the Town of Verona Utility District Capital Improvement Program for planning and financing purposes.

SECTION 9 -ANNUAL SELF-AUDIT

9.1 Background and Information

A CMOM audit is necessary to ensure that the Plan is properly implemented, goals and objectives are met, and performances measures are reviewed, evaluated, an updated on a regular basis. The Annual Compliance Maintenance Annual Record (CMAR) fulfills part of the ongoing audit process that includes an ongoing review of the collection system performance indicators. The CMOM Plan provides the framework and documentation to implement the programs that the Town is currently doing. This Plan is meant to be a working document and will be updated as needed. As part of the Audit, the following tasks will be performed:

1. Audit and review the CMOM Plan
2. Monitor the Plan
3. Provide recommendations
4. Update the CMOM Plan

9.2 Audit and Review the Plan

8.2.1 Audits of the Plan shall be done every five years

8.2.2 Review the Plan for the following:

8.2.2.1 Goals are applicable to the Town

8.2.2.2 Goals and strategies are applicable and meet the DNR and District requirements

8.2.2.3 Program elements are applicable and relevant

8.2.2.4 Budget is adequate to meet the recommendations from the various CMOM components

9.3 Monitor the Plan

8.3.1 Monitor the implementation and measure the effectiveness of the program through performance indicators

8.3.2 Annually, review goals and performance indicators to measure the program effectiveness

8.3.3 Submit reports as required by DNR and the District

9.4 Provide Recommendations

8.4.1 Provide recommendations to revise the remedy negative performance indicators

8.4.2 Provide recommendation to update the Plan

9.5 Update the CMOM Plan

8.5.1 Update the CMOM Plan based on the audit, feedback from employees, and other recommendations

8.5.2 The audit and the CMOM Plan update will be documented as shown in Table 9-1

Audit Completed By:	Audit Date	CMOM Plan Updated By	Plan Updated Date	Approved By:	Date Approved	Update Number
		John Wright	7/26/2017	John Wright	7/26/2017	1
		John Wright	2/4/2019	John Wright	2/4/2019	2

APPENDIX A



State of Wisconsin
 Department of Natural Resources
 dnr.wi.gov

**Sanitary Sewage Overflow
 Notification Summary Report**

Form 3400-184 (R 7/17)

- Sanitary Sewer Overflow (SSO)
 Treatment Facility Overflow (TFO)

Notice: An overflow is defined as a release of wastewater from a sewage collection system (SSO) or from a location within a sewage treatment facility (TFO) other than a permitted outfall structure, directly to a water of the state or land surface. Pursuant to s. 283.55(1)(dm), Wis. Stats., s. NR 210.21(4)(5)(6) Wis. Adm. Code and in accordance with reporting requirements in your WPDES permit, permittees shall submit a written report form for each overflow. This record is used to administer the water quality program, and any personally identifiable information may be provided to requesters as required under the Wisconsin Open Records law (ss. 19.31-19.39, Wis. Stats.).

Use one form per SSO location. Submit within five calendar days to your Department wastewater representative. Attach additional information as necessary to explain or document each overflow occurrence. A single SSO may be more than one day if the circumstance causing the overflow results in discharge duration more than 24 hours. If there is a stop and restart of the overflow within 24 hours, but it's caused by the same circumstances, report it as one SSO. If the discharges are separated by more than 24 hours, they should be reported as separate SSOs.

Notifications

Department Notification

Permittee (Municipality or Facility Name)	Permit No.
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Person Who Contacted the DNR

DNR Person Contacted	Date (mm/dd/yyyy)	Time of Day <input type="radio"/> am <input type="radio"/> pm	Within 24 hours? <input type="radio"/> Yes <input type="radio"/> No
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Public Notification

Date (mm/dd/yyyy)	How the Public was Notified
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Describe the actual or potential for human exposure or contact with overflowing wastewater

Other Notifications (if applicable)	Drinking Water Intake Owner	Date (mm/dd/yyyy)
	Regional Wastewater Treatment Facility	Date (mm/dd/yyyy)

(Satellite collection permittees are required to submit a copy of this report to the regional plant to which they discharge.)

Wet Weather Information (if applicable)

Was this overflow wet weather related? Yes No (skip this section)

Rainfall Start: _____ am pm _____ inches
 Date (mm/dd/yyyy) Start Time Rainfall Amount

Rainfall End: _____ am pm
 Date (mm/dd/yyyy) End Time

Contributing Soil or Other Conditions (saturated, frozen, soil type, snowmelt, etc.): _____

Overflow Details

Location (Street Address)

Location (GPS coordinates, WGS84 standard coordinate system)	Latitude: _____ (e.g. 43.075350)	Longitude: _____ (e.g. -89.379770)
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Overflow Start: _____ am pm _____ hours _____ gallons
 Date (mm/dd/yyyy) Start Time Duration Volume

Overflow End: _____ am pm _____
 Date (mm/dd/yyyy) End Time

Cause: (select all that apply)

- Rain Plugged Pipe
 Snow Melt Broken Pipe
 Flooding Equipment Failure
 Power Outage Contractor Related
 Other—Explain: _____

Overflow Occurred From: (select only one)

- Lift Station – Name: _____
 Manhole – MH#: _____
 Gravity Sewer Pipe
 Pressure Sewer Pipe (Forcemain)
 River or Stream Crossing – Select one: Forcemain Siphon
 Permanent Overflow Structure
 Treatment Plant Unit or Pipe: _____
 Other: _____