

# Campbellsport CMOM Plan



July 11, 2016



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## Executive Summary

A sanitary sewer collection system is a vital element of any community's infrastructure and a critical component of the wastewater treatment process. The nation's sanitary sewer infrastructure has been built over the last 100 years or more using a variety of materials, design standards, installation techniques, and maintenance practices. As this valuable infrastructure ages, the importance of preventive and predictive maintenance increases.

CMOM stands for "capacity, management, operations, and maintenance." It is a flexible, dynamic framework for municipalities to identify and incorporate widely-accepted wastewater industry practices to:

- Better manage, operate, and maintain collection systems
- Investigate capacity constrained areas of the collection system
- Respond to sanitary sewer overflow (SSO) events

The CMOM approach helps municipal wastewater utility operators provide a high level of service to customers and reduce regulatory noncompliance. CMOM can help utilities optimize use of human and material resources by shifting maintenance activities from "reactive" to "predictive"—often leading to cost savings through avoided overtime, emergency construction costs, increased insurance premiums, and the possibility of lawsuits. CMOM information and documentation can also help improve communications with the public, other municipal works and regional planning organizations, and regulators.

The Village of Campbellsport has established this CMOM document to fulfill requirements in NR210 and provide the Village with a framework for collection system operation and management. The CMOM program will lead to a system that is properly managed, operated and maintained. Proactive and predictive management, operation and maintenance will over time ensure that adequate capacity is maintained to convey peak design flows, feasible steps are taken to eliminate excessive inflow and infiltration, and sanitary sewer overflows are mitigated or eliminated. The Village has included a goal matrix as part of the CMOM program that prioritizes goals based on a number of factors including:

- Cost
- Benefits
- Barriers to Implementation
- Level of Impact

Goals found in the next section of the CMOM program focus on all areas including:

- Investigative
- Operational
- Construction Related
- Rehabilitative
- Budgetary
- Legal



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## Chapter 1 - Goals

The Village of Campbellsport has developed this CMOM program to comply with the sanitary sewer overflow rules and requirements of NR210, as well as to promote a systematic and proactive program to address capacity, management, operations and maintenance of its collection system. The Village has developed goals that are: investigative, rehabilitative, operational, construction-related, budgetary, and legal in nature. CMOM goal setting was developed with an understanding that goals should be specific, realistic, and achievable given the Village's current situation, and as goals are achieved, new goals will be developed to further develop the CMOM program as warranted.

The Village of Campbellsport has developed a priority matrix with respect to CMOM goals that ranks goals using a cost-benefit approach and allows the Village to add or modify goals based on progress each year. Table 1 below presents the goal matrix established. Goals were selected in each of the following areas:

- **Investigative**
- **Rehabilitative**
- **Operational**
- **Construction-Related**
- **Budgetary**
- **Legal**

**Table 1. Campbellsport CMOM Goal Summary**

Category	Goal	Description	Cost	Benefit	Implementation Timeframe:
Legal	Sewer Use Ordinance	Regular update the sewer use ordinance as needed to reflect goals identified.	Minimal	Provides legal authority for all users.	As needed, 1st update Summer 2016
Investigative	Sewer Televising	Televise 5% of sewer system annually. Progress towards achieving this goal will be tracked via the CMAR and associated trending charts, and adjusted accordingly.	\$3,118.50	Identify collection system deficiencies and I&I. Aid in establishing 5-Year CIP.	Ongoing, Fall 2016
Operational	Sewer Jetting	Annually jet problem areas within the sewer system, and additional jet the 5% of the entire system.	\$3,118.50	Regular jetting reduces deposits of FOG, sediment and other obstructions including root intrusion in problem areas.	Ongoing, beginning late Summer/Fall 2016
Investigative	Purchase Push Camera	Purchase a push camera to conduct internal inspections of MH's, sewer laterals, and other small inspections.	\$6,000 to \$9,000	Identify I&I, structural deficiencies, and potential illegal connections.	Fall 2016 to Spring 2017
Investigative	Manhole Inspections	Annually Inspect 5% of system manholes.	Minimal, PW Employee Time Investment	Routine MH inspection helps prioritize MH rehabilitation activities.	Ongoing, beginning Fall 2016

Category	Goal	Description	Cost	Benefit	Implementation Timeframe:
Budgetary	Collection System Budget Line Item	Create a collection system budget line item to help identify and trend actual collection system operational costs.	No Cost	Provides a means to track collection system spending and determine if money is being spent efficiently by reducing I&I.	Begin with 2017 Budgeting Sessions
Construction-Related	State Sewerage Code	Incorporate reference to NR code for wastewater treatment and collection system requirements into the sewer use ordinance.	No Cost	Provides consistency between sewer projects completed in Village.	2017
Construction-Related	Standard Specifications for Sewer & Water Construction	Incorporate standard specifications into the sewer use ordinance.	No Cost	Provides consistency between sewer projects completed in Village.	2017
Budgetary	Capital Improvement Planning	Develop a 5-Year Capital Improvement Plan for collection system assets. Coordinate this plan with street and other infrastructure improvement planning.	No Cost	Provides Village with a means to prioritize projects based on multiple parameters (i.e. road condition, water, sewer, planned development/expansion)	Implement following ID and prioritization of deficiencies
Investigative	Annual Self-Audit	Update performance indicator charts in CMOM report.	No Cost	Identify whether \$ spent on collection system is achieving goal of reduced I&I, and failures.	Annually by June 30

Category	Goal	Description	Cost	Benefit	Implementation Timeframe:
Investigative	Collection System Deficiency ID & Tracking	Track results of annual investigative activities on hard copy of sewer system map, or in GIS (once developed) to identify critical areas.	Varies depending on method.	Tracking will aid with development of Capital Improvement Planning.	Ongoing, beginning Fall 2016
Rehabilitative	Manhole Rehabilitation	Annually rehabilitate MH's identified as deficient during MH inspections, and push camera televising. Prioritize based on severity and criticality of MH.	\$250 to \$300/Vertical Lineal Foot, \$8,000/yr currently budgeted	Preventative MH rehabilitation will reduce I&I and MH failure occurrences.	Ongoing, prioritize based on condition and how critical MH is.
Operational	Update Master Sewer Map	Update 2001 Master Sewer Map to reflect current system.	\$5,000.00	Provides a single reference for all collection system O&M activities.	2017
Operational	GIS Mapping	Develop a Village GIS system with collection system informational layers including manholes (with numbering), interceptors, force mains, and lift stations.	Initial - \$10,000, Annual Recurring - \$0 to \$5,000	Provides centralized, real-time data village-wide. Allows for integration of collection system investigative, rehabilitative, and operational activities.	2017 to 2018

Category	Goal	Description	Cost	Benefit	Implementation Timeframe:
Operational	Emergency Response Plan	Develop a formal written emergency response plan that identifies procedures to respond to basement backups, SSOs, lift station failures, and structural failures and incorporate into CMOM program.	\$5,000.00	Ensures all public works staff knows the appropriate response to various collection system emergencies.	Lower Priority, implement if SSO frequency increases
Operational	Update Employee Handbook	Update the employee handbook for DPW employees to reflect the new collection system certification subclass required by changes to NR114.	No Cost to update handbook. Potential continuing education cost for certified operator.	All permit holders will be required to have an operator certified in collection system subclass in the future. This Certification helps ensure staff is receiving continuing education.	July 2018

## Chapter 2 - Organization

The successful implementation of a CMOM Program is directly related to the organization's structure and communications.

### Ownership and Governing Body Description

Campbellsport is a Village located in southeastern Fond du Lac County, Wisconsin. The population as of the 2010 census was 2,016. A 2015 population estimate and population projections for the Village are shown in Table 1 below.

**Table 2. Village of Campbellsport Population Trends & Projections**

Place	US Census Population			Population Projections <sup>1</sup>					
	1990	2000	2010	2015 (WI DOA est.)	2020 Projection	2025 Projection	2030 Projection	2035 Projection	2040 Projection
Village of Campbellsport	1,732	1,913	2,016	2,010	2,080	2,130	2,170	2,180	2,160

**Notes:**  
1) Wisconsin Department of Administration 2015 estimate and 2020 to 2040 projections.

The village is run by a Board of Trustees comprised of six trustees and a Village President. Three Village Trustees are elected each year to a two year term of office. The Village President is also elected for a two year term. Six committees direct Village operations. Village committees are composed of three trustees. The village president serves, ex officio, on all committees. The following committees currently exist:

- BUDGET
- BUILDINGS
- PERSONNEL
- PUBLIC WORKS
- SAFETY AND PROTECTION (\* will form if needed)

The public works committee is established provide oversight, authorize budgets and expenditures, report to the Village Board on compliance, and guide the direction of the water and sewer utilities. The director of public works and wastewater superintendent report to the public works committee at monthly meetings.

The Village Offices are located at:

177 E Main Street  
Campbellsport, WI 53001

OFFICE HOURS: 7:30 AM - 4:00 PM – MONDAY – FRIDAY, Closed Holidays

Village Office Phone: (920) 533-8321  
FAX: (920) 533-5298  
WWTF Phone: (920) 533-4614  
WWTF E-Mail: [cportwwtf@kmoraine.com](mailto:cportwwtf@kmoraine.com)  
SEWER OR WATER EMERGENCY – (920) 960-3060

Collection system ownership boundaries are described in “Chapter 29 – Utilities” of the Village ordinances. Chapter 29 is included as Appendix A (current as of the last date of revision of the CMOM Program). Access to the up to date ordinance can be found with the following Municode link:

[Village of Campbellsport - Code of Ordinances](#)

Policies regarding private laterals, easements and right-of-ways are each described in within the ordinance.

### **Personnel and Position Descriptions**

The Village developed an employee handbook complete with job descriptions for each department in April 2016. Formal job descriptions of each worker and manager that clearly define collection system work duties and tasks as well as communication responsibilities are included in the new employee handbook. This handbook will be periodically updated as warranted by future regulatory requirements, staffing changes and responsibilities. Appendix B presents copies of the department of public works (DPW) staff job descriptions excerpted from the new employee handbook.

Revisions to NR114 regarding operator certification took effect in 2014. These revisions created a new subclass “SS” for collection systems. Each facility must now have a designated operator-in-charge for sanitary sewer collection systems as described in the excerpt below from NR114.

”NR 114.53 General requirements. (1) Every WPDES permitted treatment plant shall have a designated operator-in-charge holding a current and valid certificate pursuant to this subchapter. The designated operator-in-charge shall be certified at the level and in all subclasses of the treatment plant, except laboratory. Treatment plant owners shall notify the department of any changes in the operator-in-charge within 30 days. (2) Owners of treatment plants, which includes both the treatment plant and sanitary sewage collection system to it, shall have a designated collection system operator-in-charge for sanitary sewage collection systems. The designated operator-in-charge shall have passed and be certified in the sanitary sewage collection system subclass. For owners of satellite sanitary sewage collections systems, collection system operator certification is voluntary.”<sup>1</sup>

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<sup>1</sup> Wisconsin Administrative Code NR114. Register June 2015 No. 714

Village staff will be working to identify a public works job description to incorporate the new “SS” subclass and comply with the certification and continuing education requirements.

**Organizational Chart**



**Internal Communication Procedures**

DPW employees utilize daily morning meetings to plan work for each day. In addition, the alarm auto-dialer is programmed with a phone tree of all DPW staff beginning with the on-call emergency cell phone number which rotates with DPW staff currently on-call. Current practice requires the staff member on-call to determine the level of response necessary and make subsequent internal or external contact.

Formal written internal communication procedures are not currently documented. Given how spread out a collection system is and the numerous tasks involved, written internal communication procedures should be known to all employees. Best communication practices suggest that all employees and supervisors should know who is doing what, where and when. When a basement back-up or sewage overflow occurs, it is critical good internal communications occur as well as providing information and answering questions from the media. These internal communication procedures can be written into a formal emergency response plan.

### **Public Information and Education Program**

The key to any program, such as a CMOM Program, is public information and education (I&E). The Village of Campbellsport utilizes several different methods to inform and educate sewer system users. The following Public I&E methods are currently utilized:

**Website:** The village website includes several links pertaining to the sewer system, including:

#### **Sewer Use Ordinance:**

[Village of Campbellsport Code of Ordinances Chapter 29 - Utilities](#)

#### **Inflow and Infiltration Abatement Program:**

[Village of Campbellsport - Inflow & Infiltration Abatement Program](#)

#### **Frequently Asked Questions (FAQ) for Sewer Lateral Problems:**

[Village of Campbellsport - FAQ for Sewer Laterals](#)

#### **Current Utility Rates:**

[Village of Campbellsport Utility Rates](#)

**Mailings:** Mailings have not historically been included with quarterly bills. The Village is investigating other ways to make public education more visible to the customer base.

**Person-to-Person Contact:** Public perception of an organization is often viewed on the proactive work that gets done and goes largely unnoticed. DPW staff routinely handles calls in response to basement backups, or makes person-to-person contact regarding O&M activities occurring in portions of the Village.

## Chapter 3 - Legal Authority

Adequate legal authority is the foundation of a successful CMOM Program. In order to operate and maintain your sewer system, you must have certain legal mechanisms 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 rehabilitation; and to enforce actions for noncompliance, permits, fees, and fines.

The Village of Campbellsport has taken steps in order to enforce the legal authority necessary to regulate the flow entering the collection system from residential, commercial and industrial customers by passing Ordinance Section 29 - Utilities. A summary of those elements included are as follows:

### Sewer Use Ordinance

The sewer use ordinance was last revised on 03/07/2003. Current versions of the sewer use ordinance can be accessed via the village website. A copy of the ordinance is included in Appendix A.

### Fat, Oil and Grease Control

The current ordinance requires fat, oil and grease containing substances, materials, waters, or waste to be limited in discharges to sanitary sewer systems to concentrations or quantities which will not harm either the sanitary sewers, wastewater treatment process, or equipment; will not have an adverse effect on the receiving stream; or will not otherwise endanger lives, limbs, public property, or constitute a nuisance. The approving authority may set limitations more stringent than those established below if such more stringent limitations are necessary to meet the above objectives. The approving authority will give consideration to the quantity of subject waste in relation to flows and velocities in the sewers, materials of construction of the sanitary sewers, the wastewater treatment facility and other pertinent factors.

### Illicit Discharges by Commercial or Industrial Users

Commercial and industrial discharge control is addressed in the sewer use ordinance under Division 4, and includes the following:

"Sec. 29-148. - Industrial discharges.

If any waters or wastes are discharged or are proposed to be discharged to the public sewers, which waters or wastes contain substances or possess the characteristics enumerated in division 3 of this article and which in the judgment of the approving authority have a deleterious effect upon the wastewater collection and treatment facilities, processes, equipment, or receiving waters, or which otherwise create a hazard to life, health, or constitute a public nuisance, the approving authority may:

- (1) Reject the wastes;
- (2) Require pretreatment to an acceptable condition for discharge to the public sewers;
- (3) Require control over the quantities and rates of discharge; and/or
- (4) Require payment to cover the added cost of handling and treating the wastes not covered by existing taxes or sewer charges under the provisions of this article."

### Private Property Clear Water, Inspections & Repairs

Private property lateral repair responsibilities are identified in Section 29-60 of the ordinance. Excerpts are as follows:

”Sec. 29-60. - Sanitary sewer lateral repair responsibilities.

The owner on any property receiving sewer service through any lateral connections shall be responsible for all costs associated with the cleaning and maintaining the sewer lateral within the public right-of-way and throughout the premises served. The property owner shall also be responsible for all costs associated with repair or replacement of the sewer lateral outside of the main sewer. The property owner may apply to the village for reimbursement for the costs associated with the repair or replacement of the sanitary sewer lateral for those portions of the lateral that lie within the public right-of-way. All applications must be approved by the village board and the amount of reimbursement shall be limited by sewer lateral replacement fund policies as adopted by the village board.”

In response to a 2004 WPDES permit violation, the village implemented an Infiltration and Inflow (I/I) Abatement program.

The I/I Abatement program is found on the Village website:

[I/I Abatement Program](#)

For any property where a potential violation is observed by a Village employee:

1. The Village will notify the property owner, that a possible violation exists.
2. It will be the responsibility of the property owner to bring that property into compliance or show to the Village that no violation actually exists.
3. The property owner will be given approximately 30 days to respond to this letter and then a follow-up check will be made on the suspect property.
4. If a violation still exists on the property, a fine will be levied against the property owner and the fine will be increased monthly until the problem is corrected.
5. Failure to pay the fine or correct the problem will ultimately result in the disconnection of service by the Village.

Appendix C provides a letter sent to all sewer users regarding the abatement program.

### Service and Management Agreements

The village does not currently have any written service and management agreements on file. The village utilizes a list of private contractors, and other municipalities to call upon for O&M and emergency response assistance. Contact information is found in the Mutual Aid Agreement section of this report.

### Enforcement Actions

Divisions 7 and 8 of the Village’s sewer use ordinance identify enforcement and penalties with respect to the requirements described above.

## Chapter 4 – Operation & Maintenance (O&M)

A comprehensive Collection System Operation and Maintenance (O&M) Program includes:

- 1) Mainline
- 2) Manholes
- 3) Lift stations
- 4) Private laterals

Collection system O&M is the essential element of a CMOM Program. Just like your car, it will eventually fail to perform without regular maintenance and repairs.

What O&M tasks should you be doing? Studies have shown that optimizing collection system performance depends on specific maintenance tasks and frequencies. Maintenance activities should be summarized and reviewed annually.

### Cleaning

The village contracts with several outside entities to perform collection system cleaning activities on an annual basis. Contact information for each entity is found in the Mutual Aid section of this report. The Village has a practice of cleaning in which picked up where they were last left off.

### Root Removal

Root removal activities are currently contracted to outside entities, and are conducted on an “as needed” basis resulting from CCTV inspections or in known root problem areas.

### Flow Monitoring

Flow monitoring activities within the village are not currently conducted. Budget constraints diverted funding from flow monitoring to rehabilitation activities, as a more cost effective use of available collection system maintenance funds.

### Sewer Line Televising

The village also contracts with several outside entities to perform collection system televising. Contact information for contracted entities is also found in the Mutual Aid section of this report.

### Manhole Inspections

Manhole inspections are conducted intermittently within the collection system. DPW staff utilizes the Village generated manhole inspection form found in Appendix D. Completed manhole inspection forms are currently stored as hard copies only and can be found on file at the WWTF.

### Manhole Rehabilitation

Current practice within the village is to rehabilitate or replace manholes only upon failure or manhole collapse.



**Mainline Rehabilitation**

Current mainline rehabilitation practice includes televising prior to planned street reconstruction projects and coordination of rehabilitation efforts with street projects.

**Private Sewer Inspections**

The current sewer use ordinance provides legal authority for private sewer inspections. Formal private sewer inspections are not routinely conducted by DPW staff given current staffing, budgeting, and equipment. The Village is investigating purchasing a push camera for public works staff to conduct private lateral inspections.

**Private Sewer I/I Removal**

The Village has implemented an I/I abatement program as described in the Legal Authority Section of the CMOM plan.

**Lift Station O&M**

Each lift station within the Village receives regular O&M. O&M checklists are housed at each lift station and indicate the date of the last inspection, as well as what was inspected.

## Chapter 5 - Design & Performance Standards

Design and performance standards are often contained in state or municipal codes. These standards establish requirements for collection system design, construction, inspection and final approval. Some municipalities have employees that review, approve, and/or inspect collection system design and construction. Other municipalities or utilities contract with a registered professional engineer to perform these services or require the company constructing sewers to hire a qualified professional to provide these services. The CMOM Program summary should include the procedures followed to maintain control over the design, construction and inspection of the collection system.



### State Plumbing Code

The Village of Campbellsport adopts the state plumbing code in Chapter 29-299.

“Sec. 29-299. - State plumbing code adopted.

The village adopts by reference the state plumbing code being Wis. Admin. Code chs. SPS 381 through 387.”

### State Sewerage System Code(s)

The Village of Campbellsport Code of Ordinances does not directly adopt pertinent sections of state sewerage system code as of the original date of publication of the CMOM program. The following sections of NR Code are included in Appendix E for reference:

- **NR108** - REQUIREMENTS FOR PLANS AND SPECIFICATIONS SUBMITTAL FOR REVIEWABLE PROJECTS AND OPERATIONS OF COMMUNITY WATER SYSTEMS, SEWERAGE SYSTEMS AND INDUSTRIAL WASTEWATER FACILITIES
- **NR110** - SEWERAGE SYSTEMS
- **NR114** - CERTIFICATION REQUIREMENTS FOR WATERWORKS, WASTEWATER TREATMENT PLANT, SEPTAGE SERVICING AND WATER SYSTEM OPERATORS
- **NR208** – COMPLIANCE MAINTENANCE
- **NR210** – SEWAGE TREATMENT WORKS

### Local Municipal Code Requirement

The Village does not currently use a local municipal code to supplement State plumbing or sewerage system codes. In the absence of a local municipal code to supplement State plumbing or sewerage systems codes, many municipalities will reference the Standard Specification for Sewer & Water Construction in Wisconsin (6<sup>th</sup> Ed.) The Village will investigate adding these standards by reference to the current ordinance.

## Chapter 6 - Overflow Emergency Response Plan

Unanticipated collection system events are going to happen, and the better prepared you are, the more efficient, effective and less stressed your response will be. A CMOM Program should have an Overflow Emergency Response Plan with written procedures for responding to various collection system emergencies. Detailed records of emergencies and responses should be documented. The plan should be regularly reviewed and revised in response to the adequacy of past emergency actions.

### Alarm System & Routine Testing

Radio telemetry is provided from the Main Lift Station to the WWTF, and from the Hwy V Lift Station to the WWTF. Appendix F provides the P&ID from the Main Lift Station Upgrade project indicating current alarms and interface with the WWTF SCADA system.

### Emergency Equipment

The Main Lift Station and CTH V Lift Station are equipped with standby diesel generators to operate each station in the event of a power failure. Table 2 presents a summary of the emergency generator equipment.

**Table 3. Emergency Power Equipment**

Emergency Generator Equipment	Installation Type	Fuel Type	Capacity, kW	Notes
WWTF Generator	Permanent	Diesel	40	
Main Lift Station/Fire Station	Permanent	Diesel	250	200A/3P Automatic Transfer Switch
CTH V Lift Station Generator	None	N/A	N/A	

The Village of Campbellsport also has emergency pumping equipment at its disposal in the event of an emergency overflow, blockage, or similar situation. Table 3 presents a summary of Village owned emergency pumping equipment.

**Table 4. Emergency Pumping Equipment**

Emergency Pumping Equipment	Location	Year in Service	Type	Capacity (gpm, TDH)	Notes
Mid-Whirl Clogless 3" pump	DPW Garage	1982	Trailer Mounted	400gpm/10 ft TDH	
Multi-Quip 3x3 Trash Pump	DPW Garage	1998	Cage Type		

### Emergency Procedures

The Village of Campbellsport does not currently maintain a formal written overflow emergency response plan that details procedures to be followed in the event of the following occurrences:

1. Basement Backup
2. Sanitary Sewer Overflow (SSO)
3. Pump Station Failure
4. Power Outage

Current practice involves alarms or emergency calls to be directed to the on-call cell phone number first. The on-call worker makes an initial response to the alarm or call, and determines how critical the emergency is, any additional resources necessary, and the course of action to address the emergency.

### **Mutual Aid Agreements**

Campbellsport currently has verbal mutual aid agreements with multiple neighboring communities and private contractors. Past mutual aid practices have had good success in the Village, and written agreements have not been justified.

Campbellsport currently utilizes the following mutual aid priority list for televising and sewer jetting:

#### **1) Village of Kewaskum**

- a. Point-of-Contact: Ben Propson – Wastewater Superintendent
- b. Phone:
  - i. Non-Emergency: (262) 626-2313
  - ii. Emergency: (262) 689-9857
- c. E-mail: [bpropson@village.kewaskum.wi.us](mailto:bpropson@village.kewaskum.wi.us)

#### **2) City of West Bend**

- a. Point-of-Contact: Steve Randall – Wastewater Utility Manager
- b. Phone: (262) 334-1235
- c. E-Mail: [randalls@ci.west-bend.wi.us](mailto:randalls@ci.west-bend.wi.us)

Each contact above has established time and materials (T&M) billing rates for services offered to the Village. In addition, the village has verbal “on-call” agreements with two septage haulers for emergency response assistance. Septage hauler contact information:

#### **1) Veolia Environmental Services**

- a. Point-of-Contact 1: Glen Marquardt
  - i. Phone:
    1. Non-Emergency: (920) 550-2626
    2. Emergency: (920) 605-0357
- b. Point-of-Contact 2: Mike Dietz
  - i. Phone: (920)334-0834

#### **2) Dean’s Septic**

- a. Point-of-Contact: Rick Dean
- b. Phone:
  - i. Non-Emergency: (920) 979-8862
  - ii. Emergency: (920) 979-7785

**Communications/Notifications (DNR, Internal, Public, Media)**

A formal communication plan is not currently in place. This plan would be developed as part of a formal written emergency response plan. Currently, the wastewater superintendent is responsible for notifying DNR of any SSO events that occur within the system, and following proper documentation requirements. The SSO reporting form is included in Appendix G.

**Lessons Learned**

Appendix G documents historical basement backups, SSO's, critical lift station alarms and failures, as well as the response actions and comments regarding lessons learned from the event. Completed SSO forms are also included in this appendix. This table will be updated following each emergency response event.

## Chapter 7 - Capacity Assurance

A CMOM Program includes an assessment of the adequacy of the collection system to convey wastewater for new connections. It also reviews the system's current flow to determine where trouble spots are located. Identifying problem areas allows a municipality to make the necessary repairs and improvements, or, at the very least, identify areas to be cleaned and maintained on a specific schedule so that flow capacity is maximized.

### Sewer System Map Status

The most recent sanitary sewer system map was last updated in 2001 by Excel Engineering. The 2001 sewer system map is included in Appendix H. Several projects have been completed since the last update which are not reflected. Tables 4 and 5 present a summary of the Campbellsport sewer service area and an inventory of current collection system.

**Table 5. Service Area Characteristics**

Characteristic	Value	Units
Service Area	851.2	acres
Service Population	2,010	people
Annual Precipitation	32	inches
Service Connections		
Residential	697	number
Commercial	67	number
Industrial	4	number
Public Authority	27	number
Total Connections	795	number

**Table 6. System Inventory Table**

System Inventory	Characteristic			Units
<b>Treatment Facilities</b>				
WWTP Design Capacity	0.95			MGD
Current Average Daily Flow	0.26			MGD
Average Dry Weather Flow	0.17			MGD
<b>Access &amp; Maintenance</b>				
Manholes	Approximately 200			Number
Number of air/vacuum relief valves	None			Number
<b>Conveyance and Pumping</b>				
	<b>Gravity Sewer</b>	<b>Force Mains</b>	<b>Pump Stations</b>	
Pipes and Pumps (Length/Quantity)	12.7	0.34	3	Miles/Number
<b>System Age</b>				
0-25 years old	N/A	12%	1	%/Number
26-50 years old	N/A	68%	1	%/Number
51-75 years old	N/A	20%	1	%/Number
>76 years old	N/A	0%	0	%/Number
Number of inverted siphons	0			Number

### **Sewer System Plans and Specifications**

Project drawings and specifications are stored at the WWTF via hard copy. Files are located in the office area, and are accessible for viewing. Sewer system project plans and specifications are currently available with some housed at Village Hall and others housed at the WWTF office area. Some project drawing sets were provided with electronic files saved on a CD at project completion, however, no attempt has been made to date to provide a central location (server, WWTF computer) to store electronic project files. The Village is currently considering options for a centralized electronic storage location following completion of the new Village Hall.

### **Manhole location maps with numbered manholes and GPS coordinates**

The current version of the sanitary sewer system map does not incorporate manhole numbers or GPS coordinates. A separate collection system map is available with manhole numbers and is presented in Appendix H.

### **Lift station pump and wet well capacity information**

Three lift stations convey wastewater through the collection system and to the WWTF. Table 6 (on the next page) presents a summary of the lift station and wet well capacity information.

**Table 7. Lift Station Summary Table**

Lift Station	Location	Year Constructed	Type	Drive	Wet Well Dimensions (ft)	Wet Well Depth (ft)	No. of Pumps	Pump HP	Pump Year	Capacity (gpm, TDH)	Backup Power	Alarm System	Force Main Material
#1 Main Lift Station	550 E. Main	1980	Submersible	VFD	#1 = 5'8"x11'0"	7.8'	2	25	2012	600 gpm, 81 ft TDH	yes	yes	Ductile Iron
#1 Main Lift Station	550 E. Main	1980	Submersible	VFD	#2 = 5'8"x15'8"	7.8'	2	25	2012	600 gpm, 81 ft TDH	yes	yes	Ductile Iron
#2 Barton Road	Barton Rd.	1963	Pnumatic Ejector	CS	2'6.5" dia.	na	1	3	1984	N/A	no	no	Sand Cast Iron
#3 Hwy V	697 Fdl Ave	2006	Submersible	VFD	7'6" dia	7.3'	2	N/A	2006	475 gpm, 19 ft TDH	yes	yes	Ductile Iron

**Lift station O&M manuals**

The main lift station was refurbished with new pumps and interior piping in 2011. A three ring bound hard copy of the O&M manual, as well as a CD with electronic copies of the record drawings and O&M manual were provided. These files are housed in the office area at the WWTF.

The Hwy V lift station was constructed under the direction of a private developer. Hard copy record drawings are available at the WWTF, however O&M manuals were not provided.

**Known Problem Areas**

Table 8 presents a summary of the identified problem areas within the collection system that require additional periodic inspection and maintenance. The areas are identified with one or more of the following deficiencies:

- Areas with flat sewers
- Areas with surcharging
- Areas with bottlenecks or constrictions
- Areas with chronic basement backups or sanitary sewer overflows (SSOs)
- Areas with excess debris, solids or grease accumulation
- Areas with heavy root growth
- Areas with excessive infiltration/inflow (I/I)
- Sewers and manholes with severe corrosion
- Sewers with severe defects that affect flow capacity
- Adequacy of capacity for new connections
- Lift station capacity and/or pumping problems
- Wet weather relief points or overflow structures (if any)

Table 8 is updated as new problem areas are identified, or deficiencies are addressed.

**Table 8. Known Collection System Issues Table**

Issue No.	Location (Address, MH Number, etc)	Known Issues	Routine Maintenance Schedule					Maintenance Notes
			Daily	Weekly	Monthly	Semi-Annually	Annually	
1	Main Street (from M.Hole 11 east to Pork Chop Alley)	12" to 10"/Constriction					x	Monthly Visual MH Inspection, Annual Jetting
2	Sewer Line 192 Under River / M. Hole 24 to 191	Flat area/Debris buildup					x	Annual Jetting
3	Auburn Meadows Condos Manhole Between 360 370	Flat area/Debris buildup					x	Flush
4	Forest Str. From M.Hole 121 to M.Hole 122, San. Pipe 121	Roots					x	Televis / Root removal; Last completed 2014
5								
6								
7								
8								
9								
10								

## Chapter 8 - Annual Self-Audit

The Compliance Maintenance Annual Report (CMAR) Collection System section is, in part, an annual self-evaluation or audit of the collection system CMOM Program. Once the Village's facility data is entered into the CMAR, it will create trend graphs. Trend graphs for various collection system performance indicators described below can help determine if the village's CMOM Program is effective. In theory, an effective O&M Program over time should result in a reduction in I/I (peaking factors), SSOs, basement backups, complaints, and equipment and pipe failures.



Trend graphs for the performance indicators below are provided in Appendix I, and are updated annually to reflect CMOM program effectiveness.

- **Lift Station Failures (failures/lift station/year)**
- **Sewer Pipe Failures (pipe failures/sewer mile/yr)**
- **Sanitary Sewer Overflows (number/sewer mile/yr)**
- **Basement Backups (number/sewer mile)**
- **Complaints (number/sewer mile)**
- **Peaking Factor Ratio (Peak Monthly: Annual Daily Average)**

## Chapter 9 - Special Studies

From time to time a utility or municipality may conduct special studies on its wastewater collection system.

**Infiltration/Inflow (I/I) Analysis** — An I/I Analysis evaluates wastewater flow occurring throughout the collection system to identify specific infiltration and inflow components and whether these flow components are excessive. An I/I analysis can be triggered by the following:

**No records indicate the village has completed an I/I analysis.**

**Sewer System Evaluation Survey (SSES)** — 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.

**The village last completed an SSES in 1999. A hard copy of the SSES is on file at the WWTF.**

**System Evaluation and Capacity Assurance Plan (SECAP)** — 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 SSOs, as it relates to capacity issues.

**No records exist indicating the village has completed a SECAP report.**

**Lift Station Evaluation Report** — an assessment of lift station conditions, capacity limitations, and recommendations for improvement.

The village upgraded the Main Lift Station in 2011. Hard copies of the design report assessing the need for lift station improvements is on file at the WWTF.

## Chapter 10 - CMAR

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 violations 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 about wastewater capital and management needs. Most importantly, it fosters communication among 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. The Sanitary Sewer Collection System section can be found on the next four pages. Performance indicators and trend graphs are automatically generated as part of this section of the CMAR to help operators evaluate the success of their CMOM or O&M program. The questions in the CMAR are to guide operators in developing a CMOM Program, and in the operation & maintenance and financial management of their collection system.

The three most recent CMAR's are included for reference at the end of this Chapter.

### CMOM Program Revisions

Revision Date	Comments
7/11/2016	Initial Program Approved by Village Board

## **Appendix A – Campbellsport Sewer Ordinance**

## **Appendix B – Department of Public Works Job Descriptions**

## Appendix C – I&I Abatement Letter

# Appendix D – Campbellsport Manhole Inspection Form

## Appendix E – WDNR Code References

## **Appendix F – SCADA Interface and Main Lift Station P&ID**

## Appendix G – SSO Reporting Forms & Lessons Learned

# Appendix H - Current Sanitary Sewer Maps

## Appendix I – Annual Self-Audit Performance Indicator Charts