Wisconsin CMOM

Capacity, Management, Operation & Maintenance

In Sight, In Mind

Do You Want To:

- Protect public health in your community?
- Maintain a clean environment?
- Further community growth opportunities through sewer extensions?
- Avoid basement backups in your community?
- Prevent sanitary sewer overflows?
- Protect your investment in the infrastructure of pipes and pumps?

If you answered YES to any of these questions, then the CMOM Program can help you reach those goals. This booklet can be used to develop a CMOM program for your community. It will also aid Wisconsin operators in completing the Compliance Maintenance Annual Report (CMAR) collection system section on pages 20–23 of this booklet.

CMOM
Capacity, Management, Operation & Maintenance

We thank USEPA for the grant (EA-00E54301-0) that made this booklet possible.

Written by Jack Saltes, Julia Riley, Fran Keally and Hannah Fass,
with photo contributions from Wisconsin communities and businesses.

This publication is also available on the web at:
http://dnr.wi.gov/org/water/wm/ww/cmar/cmom.htm

Designed by Union Street Design, LLC • www.unionstreetdesign.com

Table of Contents

STEP 1

Goals

FEMA News Photo

Royal Flush Sanitation

Stevens Point, WI

Set Your Goals

The goals of the utility provide direction for collection system operation and maintenance. Setting and achieving goals will move your utility towards an efficient and highly functioning system your community will appreciate.

Collection system goals can be: investigative, rehabilitative, operational, construction-related, budgetary or legal. Goals should be specific, realistic, and achievable. Try to set goals that are measurable quantitatively, such as the task of cleaning a certain percentage of your collection system each year, or reducing the number of basement back-ups or sanitary sewer overflows from the previous year. At the end of each year, evaluate your progress at meeting your goals. Based on your outcomes, set new goals for the next year.

Goals

Describe the specific goals you have for your collection system.

Below are some examples of goals you may want to work on in the upcoming year. Remember to set implementation dates. Every community will have different goals based on their sewer system and budget.

- Review and update your sewer use ordinance
- Review and establish safety procedures for your employees
- Create informational materials to educate your users
- Implement a Grease Control Inspection Program
- Clean___% of your sewer system
- Identify illegal sump pump hookups
- Locate specific areas of blockages, identify/control source
- Design and implement a sewer televising schedule
- Review budget for repair and rehabilitation projects

Goals can also be qualitative, such as developing a fact sheet to be sent out with the sewer bill with information on illegal sump pump hookups or promotion of low flow shower heads or low flow toilets. Educating your users is an important goal.

STEP 2

Organization

Delafield-Hartland, WI

Stoughton, WI

Know Your Organization

Your organization is very important to how your collection system is managed, operated and maintained. Decisions about capital projects and budget decisions usually come from the governing body of elected officials or owners of the collection system. Committees that serve the governing body are often formed to address and deal with specific issues, such as water and sewage matters. The decisions are usually implemented by those employed by the municipality.

The successful implementation of a CMOM Program is directly related to the organization's structure and communications. In some communities the collection system is part of the wastewater utility, while in others it is part of the streets department. For larger communities, it may be a separate entity. Communications by your organization, both internal and external, are vital to productivity and success of a CMOM Program.

Organization

Do you have the following written organizational elements? Check those that you have.

☐ **Ownership and Governing Body Description**

An ownership and governing body description should be presented in a narrative format that describes the community, its governing body and committees that serve it. Discuss the governing body decision-making process, especially as it pertains to the collection system and wastewater treatment plant. Discuss policies for laterals, easements and right-of-ways.

☐ **Organizational Chart**

An organizational chart shows the teams and work interrelationships in the organization, especially the collection system workforce, managers, supervisors and committee chairs.

☐ **Personnel and Position Descriptions**

Position descriptions for each worker and manager should clearly define collection system work duties and tasks as well as communication responsibilities. Check that all work needs are covered and assigned appropriately.

☐ **Internal Communication Procedures**

Written internal communication procedures should be known to all employees. Procedures should cover emergencies such as basement back-ups, sewage overflows, pump failures, electrical outages, worker accidents, as well as everyday operations and maintenance activities. A phone tree with both home and cell phone numbers should be in place to improve communications.

☐ **Public Information and Education Program**

Because a collection system is a large community asset that is out-of-sight, out-of-mind, it is important to communicate the benefits of a CMOM Program to the public. This can be done through mailings, informational meetings and the community website as well as person-to-person contacts.

Identify actions homeowners and businesses can take to extend the life of a collection system and their private laterals. Explain how your community communicates these ideas to the public.

STEP 3

Legal Authority

TOWN OF XXXXX SANITARY DISTRICT NO. 1
SEWER USER ORDINANCE

SECTION I - GENERAL

Sanitary District No. 1 was created pursuant to
hereinafter referred to as the District. The
ains and the discharge

Summary of Sewer User Service Charges

User Class	Fixed Quarterly Charge per Customer	By
Residential (5/8" Meter)	$82.50	
Commercial, Industrial, Public Authority		
(5/8" Meter)	$82.50	
(1" Meter)	$107.25	
(1.5" Meter)	$206.25	
(2" Meter)	$330.00	

*Surcharge will be applied to a
200 mg/L for BOD

Town of XXXX Sanitary District No. 1
2003 Calculation of Sewer User Rates and Revenue Check

$30,500
486
$62.76
$5.23

Customer Charge
Cost Allocated to Customer Charge
omers
omer Charge
Charge

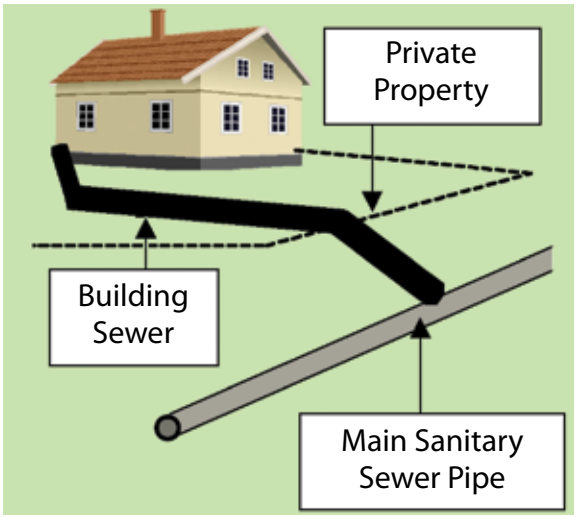
$420,398
665
18

xxxxxxxxxx

Current Fixed Charges				Proposed Fixed Rate Charges			
Meter Size	Fixed Rate: Quarterly	Relationship To 5/6" Meter	Current Fixed Rate - Annual	Meter Size	Fixed Rate Monthly	Fixed Rate: Annual	Fixed Rate: Quarterly
5/8"	$11.60	1	$139.20	5/8"	$7.66	$91.96	$22.99
3/4"	$11.60	1.0	$139.20	3/4"	$7.66	$91.96	$22.99
1"	$13.65	1.2	$163.80	1"	$9.02	$108.21	$27.05
1 1/2"	$18.00	1.6	$216.00	1 1/2"	$11.89	$142.70	$35.67
2"	$25.75	2.2	$309.00	2"	$17.01	$204.14	$51.03
3"		0.0	$0.00	3"	$0.00	$0.00	$0.00
4"		0.0	$0.00	4"	$0.00	$0.00	$0.00

Current Volume Charges:		Proposed Volume Charges:	
First 30,000 gallons:	$1.75	First 30,000 gallons:	$2.37
Next 120,000 gallons:	$1.55	Next 120,000 gallons:	$2.10

Oconomowoc, WI



Understand Your 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.

Legal Authority

Check those items for which you have legal authority.

☐ **Sewer Use Ordinance**, last revised on _____

A sewer use ordinance is probably the most critical legal document you have for your sewer system. You should review it regularly and revise it as needed with legal counsel.

☐ **Pretreatment or Industrial Control Programs** (list all significant users)

High flow and/or high strength wastes can impact the collection system and treatment plant, and thus legal controls need to be in place, either through user fees/surcharges, permits or a Pretreatment Program that limit such discharges.

☐ **Fat, Oil and Grease (FOG) Control** (list all FOG contributing users)

A Grease Control and Inspection Program should be established to protect sewer pipes and lift stations from grease buildup and plugging of sewer pipes and equipment.

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

All connections and discharges to a sewer system by a commercial or industrial user should be approved as regulated through the sewer use ordinance. Sewer televising can be one tool to locate unauthorized discharges.

☐ **Private Property Clear Water** (sumps pumps, roof or foundation drains)

Legal authority to inspect private residences and to prohibit sump pumps or drains that contribute excess clear water to the sewer systems is very important in reducing inflow.

☐ **Private Lateral Inspections/Repairs**

Legal authority to require inspection of private laterals and repairs as needed is very important in reducing infiltration and reducing the risk of basement backups for the homeowner.

☐ **Service and Management Agreements** (list the agreements)

It is important for a utility to be able to enter into contracts for servicing equipment and/or intermunicipal agreements for operating/managing their collection system by other entities, if needed.

☐ **Enforcement Actions** (discuss the steps and procedures)

An Enforcement Program and steps should be clearly spelled out, understood and documented so that in cases where enforcement needs to be taken, it is fair and legally defensible. Legal counsel should review and approve your Enforcement Program.

STEP 4 O&M

Lyndon Sanitary District, WI

West Baraboo, WI

Stevens Point, WI

Lyndon Sanitary District, WI

Operation and Maintenance Activities

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

mainline + manholes + lift stations + 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. You should summarize and review your maintenance activities each year.

Operation and Maintenance Activities

Does your Collection System Annual Maintenance Program include the following activities? Check those items you have done in the last twelve months.

☐ Cleaning	(What % of system last year?)
☐ Root Removal	(What % of system last year?)
☐ Flow Monitoring	(What % of system last year?)
☐ Sewer Line Televising	(What % of system last year?)
☐ Manhole Inspections	(What % of total number of manholes last year?)
☐ Manhole Rehabilitation	(What % of total number of manholes rehabilitated last year?)
☐ Mainline Rehabilitation	(What % of sewer lines rehabilitated last year?)
☐ Private Sewer Inspections	(What % of system last year?)
☐ Private Sewer I/I Removal	(What % of system last year?)
☐ Lift Station O&M	(How many lift stations for the last year?)

Since every collection system is unique, work to find out which maintenance activities and frequencies will give you the best value for the O&M dollar spent. Recommended references for Collection System O&M Programs can be found on page 25.

STEP 5 Standards


Watertown, WI


Wrightstown, WI


Delafield-Hartland, WI

Design and 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.

Design and Performance Standards Procedures

Check those that apply to your collection system and include these documents in your written CMOM Program.

☐ **State Plumbing Code**

Department of Commerce COMM 82, Wisconsin Administrative Code—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.

☐ **State Sewerage System Code(s)**

Department of Natural Resources Chapter NR 110, Wisconsin Administrative Code—Sewerage Systems must be followed when designing and constructing sewage conveyance systems.

☐ **Local Municipal Code Requirement**

Local communities may have their own set of standards and requirements, specific to community needs, in the design and construction of building plumbing and sewerage systems.

Who designs your sewer system and what standards do they follow? Who inspects sewer construction work and what procedures are followed?

Check those that apply below and identify the standards and procedures that are followed for each.

☐ Municipal employees for sewer design work

☐ Municipal employees for sewer construction inspection work

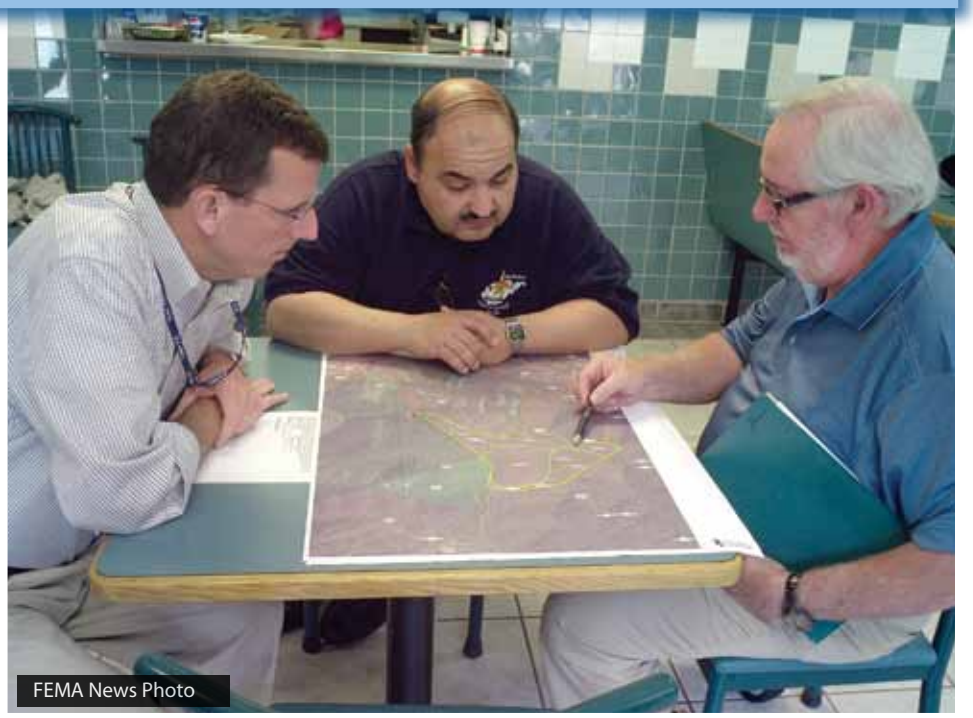
☐ Contracted services for sewer design work

☐ Contracted services for sewer construction inspection work

STEP 6

Emergency Plan

Stoughton, WI



FEMA News Photo

Hobart, WI

Lyndon Sanitary District, WI

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.

Emergency Capability

Check those items which you have in place.

☐ **Alarm System and Routine Testing**

When equipment failure or high wastewater flows occur, especially at lift stations, it is critical that: (1) you have adequate alarm systems in place to notify the proper collection system personnel of the problem; and (2) your alarm systems (visual, audible or dialer) are working; and (3) you can respond quickly. Alarm systems should be regularly tested to ensure their reliability. All lift stations should have an alarm system of some kind. Most should be telemetered.

☐ **Emergency Equipment**

Emergency equipment such as back-up generators, portable pumps, alternative power sources, and pump trucks, should be either on-site or quickly/readily available for emergency operation. In cases where portable equipment is used, the capacity of holding pipes and wet wells should be known so that placement of portable equipment can be prioritized to minimize sanitary sewer overflows and basement backups.

☐ **Emergency Procedures**

As part of an Emergency Response Plan, written detailed procedures should be established for all known emergencies that potentially could occur, such as SSOs, basement backups, power outages, lift station failures, sewer blockages, force main breaks, severe rain events and flooding. Emergency response situations should be routinely practiced as part of employee training.

☐ **Mutual Aid Agreements**

Having a signed mutual aid agreement on file prior to an emergency can greatly facilitate planning and prioritizing by agencies responding to your requests for help. Consider participating in the Wisconsin Water/ Wastewater Agency Response Network (WisWARN). See **http://www.wiswarn.org**

☐ **Communications/Notifications (WDNR, Internal, Public, Media)**

During emergencies, communications are critical. It should be very clear to all response personnel what roles they have and who contacts whom. There should be an internal communication procedure as well as who will be notifying and communicating with external agencies, the public and the media.

☐ **Lessons Learned**

Plan. Act. Review. Do (ReDo). What worked and did not work? Were any mistakes made? What could be improved? Use information gathered during review to revise procedures for future emergencies.

STEP 7

Capacity Assurance


Stevens Point, WI


Kiel, WI


Marshfield, WI


Stevens Point, WI


Stevens Point, WI

Capacity Assurance

How well do you know your sewer system?

A CMOM Program includes an assessment of the adequacy of the collection system to convey wastewater for new connections. It also reviews your system's current flow to determine where your trouble spots are located. Identifying problem areas allows your 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.

Capacity Assurance

Check those documents you have.

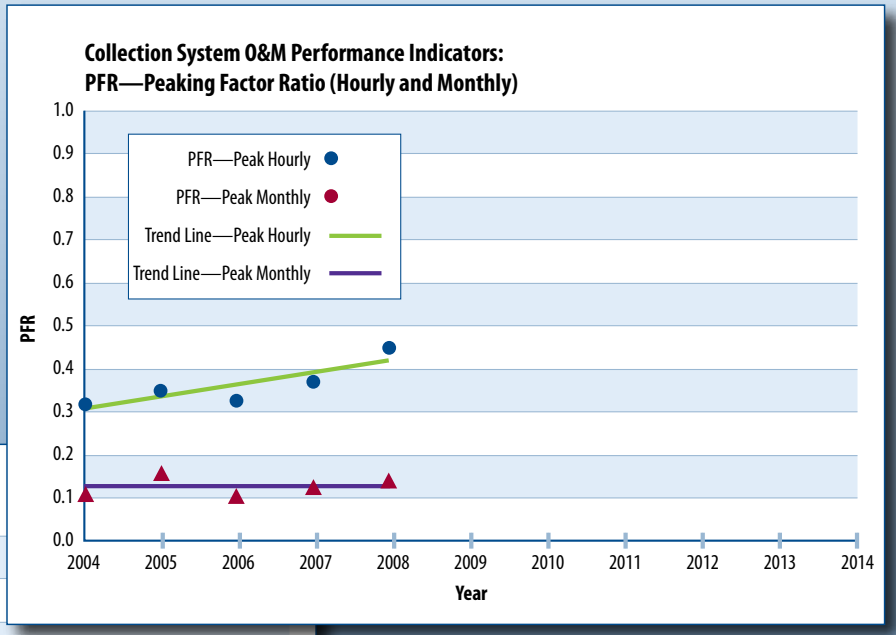
- [ ] Current and up-to-date sewer maps
- [ ] Sewer system plans and specifications
- [ ] Manhole location maps with numbered manholes and GPS coordinates
- [ ] Lift station pump and wet well capacity information
- [ ] Lift station O&M manuals

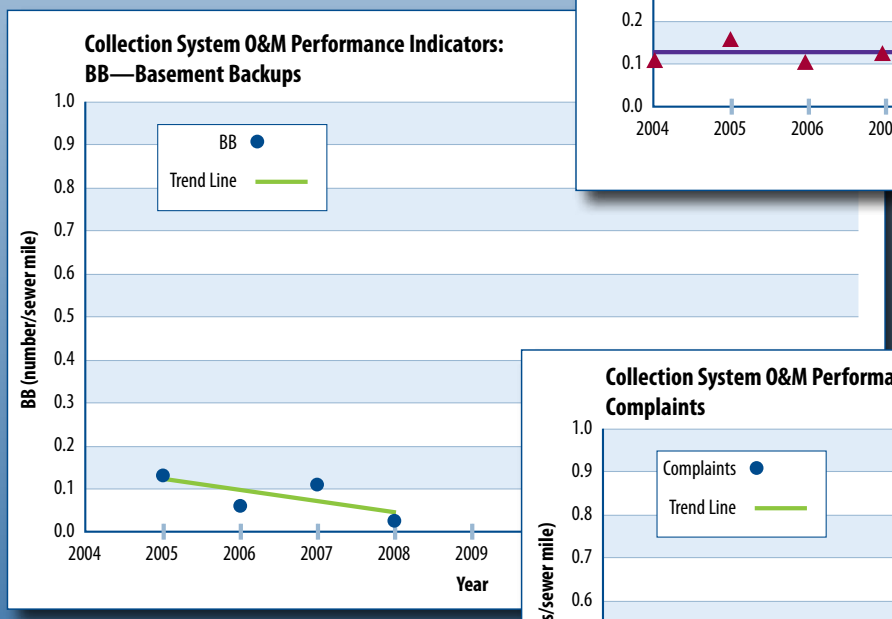
Check those items you have identified within your sewer system.

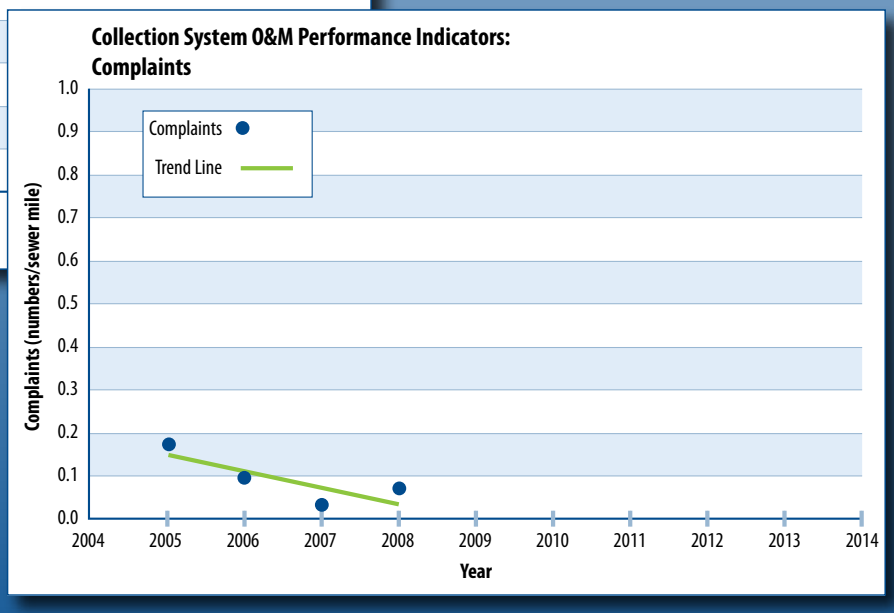
- [ ] Areas with flat sewers
- [ ] Areas with surcharging
- [ ] Areas with bottlenecks or constrictions
- [ ] Areas with chronic basement backups or sanitary sewer overflows (SSOs)
- [ ] Areas with excess debris, solids or grease accumulation
- [ ] Areas with heavy root growth
- [ ] Areas with excessive 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)

STEP 8/9

Annual Self-Audit / Special Studies







Annual Self Audit

The success of your CMOM Program depends upon the careful review of your program annually. Where have you seen improvements and successes? How can you spend your budgeted money most effectively to make your program even better?

The Compliance Maintenance Annual Report (CMAR) Collection System section is, in part, an annual self-evaluation or audit of your collection system CMOM Program. Once you have entered your facility's data into the CMAR, it will create trend graphs for you. Trend graphs for various collection system performance indicators (see opposite page) can help you determine if your 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. Be sure to generate and observe trend graphs to see if you are making progress toward an optimum performing collection system.

Collection System Performance Indicators

- 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)
- Peaking Factor Ratio (Peak Hourly:Annual Daily Average)

Special Studies

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

Check and cite the year of any studies.

- ☐ **Infiltration/Inflow (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.
- ☐ **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.
- ☐ **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.
- ☐ **Lift Station Evaluation Report**—an assessment of lift station conditions, capacity limitations, and recommendations for improvement.
- ☐ **Others** _____

STEP 10 CMAR

COMPLIANCE MAINTENANCE ANNUAL REPORT

Wisconsin Chilton

www.chilton.govoffice.com
info@chilton.govoffice.com
(920) 849-2451 (phone); (920) 849-2025 (fax)

RESOLUTION NO. 1558

RESOLUTION APPROVING OF THE COMPLIANCE MAINTENANCE ANNUAL REPORT FOR THE YEAR 2008

WHEREAS, the State of Wisconsin has established Chapter NR 208, Compliance Maintenance; and

WHEREAS, NR208, Compliance Maintenance requires owners of publicly owned treatment works to take necessary actions to avoid water quality degradation and prevent violations of WPDES permit effluent limits; and

WHEREA
awareness and re
sewerage system
ign and cons
ance encourages actions which promote the owners
nt needs, maximize the useful life of
and initiate formal planning,

COMPLIANCE MAINTENANCE ANNUAL REPORT

Facility Name: Flushing, WI **Last Updated:** **Reporting Year:** 2009

WPDES No. 0047341

GRADING SUMMARY				
SECTION	LETTER GRADE	GRADE POINTS	WEIGHTING FACTORS	SECTION POINTS
Financial Management	A	4.0	1	4
Collection Systems	A	4.0	3	12
TOTAL			4	16
GRADE POINT AVERAGE (GPA) = 4.0		4.00		

Notes:

A = Voluntary Range
B = Voluntary Range
C = Recommendation Range (Response Required)
D = Action Range (Response Required)
F = ActionRange (Response Required)

FEMA News Photo

Appleton, WI

Wisconsin's Compliance Maintenance Program

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.

For more information on the WPDES permit, Compliance Maintenance and CMOM Programs, see these web pages:

- WPDES Permit Program: **http://dnr.wi.gov/org/water/wm/ww**
- Compliance Maintenance Program: **http://dnr.wi.gov/org/water/wm/ww/cmar.html**
- WDNR Collection System Maintenance brochures: **http://dnr.wi.gov/org/water/wm/ww/cmar/brochures.htm**
- WDNR CMOM Web page: **http://dnr.wi.gov/org/water/wm/ww/cmar/cmom.htm**
- The Water Environment Federation (WEF) CMOM Info: **http://www.cmom.net**

Compliance Maintenance Annual Report

Facility Name: Flushing, WI **Reporting Year:** 2008

Sanitary Sewer Collection Systems

1. Do you have a Capacity, Management, Operation & Maintenance(CMOM) requirement in your WPDES permit?

❒ Yes ❒ No

2. Did you have a documented (written records/files, computer files, video tapes, etc.) sanitary sewer collection system operation & maintenance or CMOM Program last calendar year?

❒ Yes (go to question 3)

❒ No (30 points) (go to question 4)

3. Check the elements listed below that are included in your Operation and Maintenance (O&M) or CMOM Program:

❒ **Goals:** Describe the specific goals you have for your collection system:

❒ **Organization:** Do you have the following written organizational elements (check only those that you have):

- ❒ Ownership and governing body description
- ❒ Organizational chart
- ❒ Personnel and position descriptions
- ❒ Internal communication procedures
- ❒ Public information and education program

❒ **Legal Authority:** Do you have the legal authority for the following (check only those that apply):

- ❒ Sewer use ordinance Last Revised MM/DD/YYYY ☐
- ❒ Pretreatment/Industrial control Programs
- ❒ Fat, Oil and Grease control
- ❒ Illicit discharges (commercial, industrial)
- ❒ Private property clear water (sump pumps, roof or foundation drains, etc)
- ❒ Private lateral inspections/repairs
- ❒ Service and management agreements

❒ **Maintenance Activities: details in Question 4**

❒ **Design and Performance Provisions:** How do you ensure that your sewer system is designed and constructed properly?

- ❒ State plumbing code
- ❒ DNR NR 110 standards
- ❒ Local municipal code requirements
- ❒ Construction, inspection and testing
- ❒ Others:

❒ **Overflow Emergency Response Plan:** Does your emergency response capability include (check only those that you have):

- ❒ Alarm system and routine testing
- ❒ Emergency equipment
- ❒ Emergency procedures
- ❒ Communications/Notifications (DNR, Internal, Public, Media etc)

Compliance Maintenance Annual Report

Facility Name: Flushing, WI **Reporting Year:** 2008

Sanitary Sewer Collection Systems

❒ Capacity Assurance: How well do you know your sewer system? Do you have the following?

- ❒ Current and up-to-date sewer map
- ❒ Sewer system plans and specifications
- ❒ Manhole location map
- ❒ Lift station pump and wet well capacity information
- ❒ Lift station O&M manuals

❒ Within your sewer system have you identified the following?

- ❒ Areas with flat sewers
- ❒ Areas with surcharging
- ❒ Areas with bottlenecks or constrictions
- ❒ Areas with chronic basement backups or SSO's
- ❒ Areas with excess debris, solids or grease accumulation
- ❒ Areas with heavy root growth
- ❒ Areas with excessive infiltration/inflow (I/I)
- ❒ Sewers with severe defects that affect flow capacity
- ❒ Adequacy of capacity for new connections
- ❒ Lift station capacity and/or pumping problems

❒ Annual Self-Auditing of your O&M/CMOM Program to ensure above components are being implemented, evaluated, and re-prioritized as needed.

❒ Special Studies Last Year(check only if applicable):

- ❒ Infiltration/Inflow (I/I) Analysis
- ❒ Sewer System Evaluation Survey (SSES)
- ❒ Sewer Evaluation and Capacity Managment Plan (SECAP)
- ❒ Lift Station Evaluation Report
- ❒ Others:

4. Did your sanitary sewer collection system maintenance program include the following maintenance activities? Complete all that apply and indicate the amount maintained

Cleaning		% of system/year
Root Removal		% of system/year
Flow Monitoring		% of system/year
Smoke Testing		% of system/year
Sewer Line Televising		% of system/year
Manhole Inspections		% of system/year
Lift Station O&M		# per L.S/year
Manhole Rehabilitation		% of manholes rehabed
Mainline Rehabilitation		% of sewer lines rehabed
Private Sewer Inspections		% of system/year
Private Sewer I/I Removal		% of private services

Please include additional comments about your sanitary sewer collection system below

Compliance Maintenance Annual Report

Facility Name: Flushing, WI **Reporting Year:** 2008

Sanitary Sewer Collection Systems

5. Provide the following collection system and flow information for the past year:

- ☐ Total Actual Amount of Precipitation Last Year
- ☐ Annual Average Precipitation (for your location)
- ☐ Miles of Sanitary Sewer
- ☐ Number of Lift Stations
- ☐ Number of Lift Station Failure
- ☐ Number of Sewer Pipe Failures
- ☐ Number of Basement Backup Occurrences
- ☐ Number of Complaints
- ☐ Average Daily Flow in MGD
- ☐ Peak Monthly Flow in MGD(if available)
- ☐ Peak Hourly Flow in MGD(if available)

Number of sanitary sewer overflows (SSO) reported (10 points per occurrence)

Date	Location	Cause	Estimated Volume (MG)
None Reported			

Were there SSOs that occurred last year that are not listed above?

❒ Yes ❒ No

If Yes, list the SSOs that occurred:

Performance Indicators

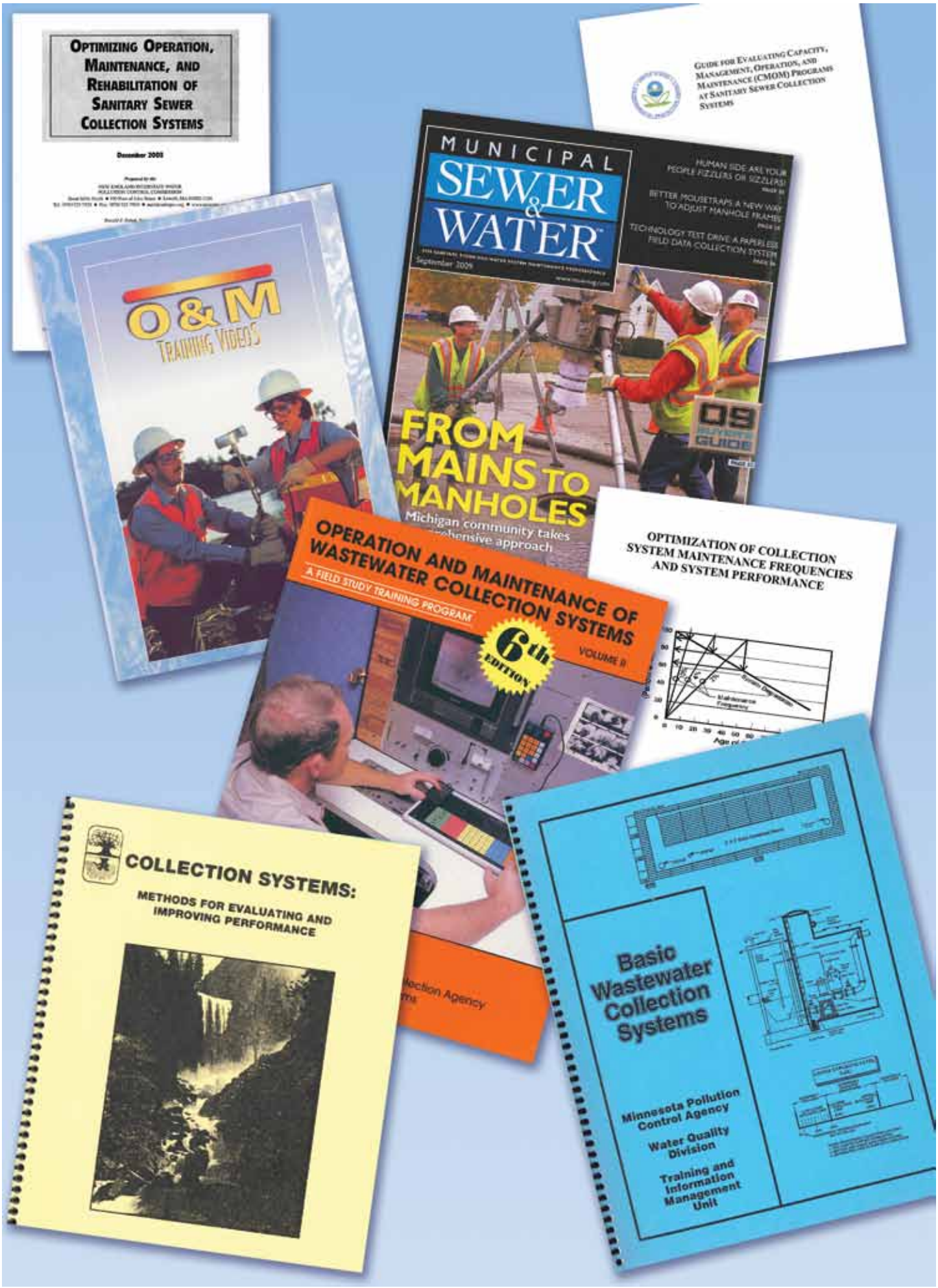
- ☐ Lift Station Failures(failures/ps/year)
- ☐ Sewer Pipe Failures(pipe failures/sewer mile/yr)
- ☐ Sanitary Sewer Overflows (number/sewer mile/yr)
- ☐ Basement Backups(number/sewer mile)
- ☐ Complaints (number/sewer mile)
- ☐ Peaking Factor Ratio (Peak Monthly: Annual Daily Average)
- ☐ Peaking Factor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

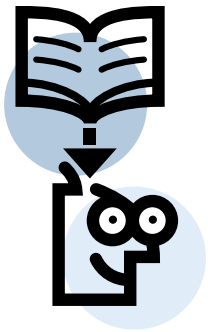
6. Was infiltration/inflow(I/I) significant in your community last year?

❒ Yes ❒ No

If Yes, please describe:

Compliance Maintenance Annual Report		
Facility Name: Flushing, WI		**Reporting Year:** 2008
Sanitary Sewer Collection Systems		
7.	Has infiltration/inflow and resultant high flows affected performance or created problems in your collection system, lift stations, or treatment plant at any time in the past year? ❒ Yes ❒ No If Yes, please describe:	
8.	Explain any infiltration/inflow(I/I) changes this year from previous years?	
9.	What is being done to address infiltration/inflow in your collection system?	
Total Points Generated		
Score (100 = Total Points Generated)		
Section Grade		


Optimizing Operation, Maintenance, and Rehabilitation of Sanitary Sewer Collection Systems
December 2005
Guide for Evaluating Capacity, Management, Operation, and Maintenance (CMOM) Programs at Sanitary Sewer Collection Systems
MUNICIPAL SEWER & WATER
Human Side Are Your People Fizzlers or Sizzlers?
Better Mousetraps A New Way To Adjust Manhole Frames
Technology Text Drive A Paperless Field Data Collection System
September 2009
O&M Training Videos
FROM MAINS TO MANHOLES
Michigan community takes comprehensive approach
09 Buyers Guide
Operation and Maintenance of Wastewater Collection Systems
A Field Study Training Program
6th Edition
Volume II
Optimization of Collection System Maintenance Frequencies and System Performance
Collection Systems:
Methods for Evaluating and Improving Performance
Basic Wastewater Collection Systems
Minnesota Pollution Control Agency
Water Quality Division
Training and Information Management Unit



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Now is the Time to Plan for the Future

Estimated future needs for municipal wastewater treatment infrastructure in Wisconsin through 2020 exceed $3.35 billion (American Society of Civil Engineers). Effective management of wastewater utilities is crucial for municipalities and sanitary districts coping with reduced fiscal budgets. CMOM Programs help create sustainable wastewater treatment systems. Optimizing planned maintenance and prioritizing rehabilitation projects maintains collection system life and performance. This booklet takes you step-by-step through the key components of a CMOM Program to help you develop a cost-effective approach to managing one of your community's most valuable assets.

"Our nation's extensive water infrastructure has the capacity to treat, store, and transport trillions of gallons of water and wastewater per day through millions of miles of pipelines. However, as our infrastructure deteriorates, there are increasing concerns about the ability of this infrastructure to keep up with our future needs."

—George Gray, Ph.D, Assistant Administrator for Research & Development, United States Environmental Protection Agency

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