Capacity, Management, Operations and Maintenance (CMOM)

PREPARED FOR

Northwest Lake Sewer System Advisory Committee (NWLSSAC)

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SECTION 1 – INTRODUCTION

1.1 Background and Information

The CMOM Technical Subcommittee ("CMOMTS") was formed by the Northwest Lake Sewer System Advisory Committee (NWLSSAC) in January 2007 for the purpose of preparing a CMOM Program Manual for adoption by the Member Utilities.

CMOMTS goals:

- Develop technical recommendations that will, if implemented, successfully mitigate existing and future sanitary sewer system failures including but not necessarily limited to sanitary sewer system backups, overflows and loss of sewage treatment efficiency at the Northwest Regional Water Reclamation Facility (NWRWRF).

- Incorporate those recommendations in a Northwest Lake County (NWLC) Regional CMOM Program for use by NWLCSSAC member utilities in the management, operation and maintenance of their utilities.

- Present Advisory Committee with a CMOM Program Manual.

The NWLSSAC Member Utilities include the following:

Harbor Ridge Utilities, Inc.
Lakes Region Sanitary District
Village of Fox Lake
Village of Hainesville
Village of Round Lake
Village of Round Lake Park
Lake County Public Works
Northwest Regional WRF
Village of Lake Villa
Village of Round Lake Beach
Village of Round Lakes Heights

1.2 CMOM Program Goals

The goals outlined below contribute to the overall mission and address issues of health and safety, cost-efficient operation, enhance and optimize collection system performance and compliance with applicable laws.

- Comply with NPDES Permit requirements
- Operate a continuous CMOM Program
- Establish a standard of practice for the operation of the collection system
- Provide adequate capacity to convey base and peak flows
- Improve system reliability
- Improve customer service
- Identify and reduce sources of inflow / infiltration
- Maintain annual cleaning and inspection programs

- Maintain system assets through cost-effective preventative maintenance and rehabilitation programs
- Improve management, operation and maintenance of collection systems.
- Proactively prevent system failures, SSOs, and system backups
- Respond to system failures, SSOs, and system backups

In addition to these program goals, an effective CMOM Program will also:

- Protect human health
- Protect property from damage
- Protect infrastructure investment by properly maintaining the collection system

1.3 CMOM Program Components

The CMOM Plan includes the following components:

- Section 2 Management Plan
- Section 3 Operation and Maintenance (O&M) Plan
- Section 4 Capacity Plan
- Section 5 Response Plan to SSOs and Emergencies
- Section 6 Condition Assessment Program
- Section 7 Communication Plan
- Section 8 Annual CMOM Review
- Appendices Standard Forms and Documents

1.4 Definitions

The following definitions pertain to this document:

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 sanitary sewer system including sanitary sewers, combined sewers, manholes, pumping stations and associated equipment.
3. **Critical Structures** are system components that are essential to the operation of the sanitary sewer collection system. Failure of critical structures would impact critical customers and/or a large number of customers.
4. **Critical Customers** are customers such as hospitals, schools, municipal facilities (fire station, police station), nursing homes, etc. where maintaining service is a high priority.

5. **Infiltration** is water other than wastewater that enters the collection system from the ground through sources such as defective pipes, pipe joints, connections, or manholes.
6. **Inflow** is water other than wastewater that enters the collection system from the ground through such sources as roof drains, sump pumps, yard drains, foundation drains, manhole covers, cross connections, and other surface water drainage.
7. **I&I** Infiltration & Inflow abbreviation
8. **Sanitary Sewer Overflow (SSO)** is a condition whereby untreated wastewater from the collection system is discharged to the environment prior to reaching the treatment facility. A SSO event can be caused by collection system failures, significant rainfall events, large sources of I&I, and collection system blockages.
9. **IEPA** Illinois Environmental Protection Agency
10. **NPDES** National Pollutant Discharge Elimination System
11. **NWLSSAC** Northwest Lake Sewer System Advisory Committee
12. **SSES** Sanitary Sewer Evaluation Survey

1.5 Legislation

Legislation which requires the monitoring, control and elimination of SSOs includes but is not necessarily limited to the following:

1.5.1 ENVIRONMENTAL SAFETY (415 ILCS 25/) Water Pollutant Discharge Act

Discharges of pollutants to waters used for public water supply, navigation or recreation

1.5.2 TITLE 35: ENVIRONMENTAL PROTECTION SUBTITLE C: WATER POLLUTION CHAPTER I: POLLUTION CONTROL BOARD

Section 306.102 Systems Reliability,
Section 306.303 Excess Infiltration
Section 306.304 Overflows
Part 392 Guidelines for Notification of Restricted Status or Critical Review

1.5.3 TITLE 40--PROTECTION OF ENVIRONMENT (40CFR122.41) CHAPTER I ENVIRONMENTAL PROTECTION AGENCY PART 122--EPA ADMINISTERED PERMIT PROGRAMS: THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

Section 122.41 d) and e)

Note: A proposed USEPA rulemaking concerning SSOs and CMOM programs has been a matter of public discussion since 2001. Current information can be obtained at:

http://www.cfpub.epa.gov/npdes/home.cfm?program_id=4

Relevant excerpts from this legislation are found in Appendix A.

1.5.4 IEPA Compliance Assurance Section Contacts

The Illinois EPA's Compliance Assurance section is the principle contact in matters concerning sanitary sewer overflows. Information concerning this section can be found at: http://www.epa.state.il.us/water/compliance/wastewater/waste-water-compliance-contacts.html.

The following are current IEPA contacts for SSO matters:

IEPA Regional Office

Illinois EPA – DWPC
9511 West Harrison
Des Plaines, IL. 60016

Phone: (847) 294-4000
Fax: (847) 294-4115

IEPA Springfield State Office

Manager - Mike Garretson
Wastewater Compliance Unit Manager - Roger Callaway

Illinois Environmental Protection Agency
Bureau of Water
Compliance Assurance Section #19
1021 North Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9274

Phone: (217) 782-9720
Fax: (217) 557-1407

SECTION 2 – MANAGEMENT PLAN

2.1 Background and Information

The Management Plan describes the approach that the Member Utilities are to take to implement the CMOM Plan. The Management Plan consists of the following components:

1. Organization
2. Management of Assets
3. Customer Service
4. Program Authority
5. Fiscal Responsibility
6. Data Management
7. Standard Design, Construction and Inspection
8. Safety Training
9. Performance Measurements

2.2 Organization

The NWLSSAC Member Utilities include the following:

Harbor Ridge Utilities, Inc.
Lakes Region Sanitary District
Village of Fox Lake
Village of Hainesville
Village of Round Lake
Village of Round Lake Park
Lake County Public Works
Northwest Regional WRF
Village of Lake Villa
Village of Round Lake Beach
Village of Round Lakes Heights

The Member Utilities are part of the Northwest Lake Facilities Planning Area and wastewater treatment and disposal is provided at the Northwest Regional Water Reclamation Facilities which is owned and operated by the Village of Fox Lake. The Member Utilities are subject to the provisions of the "Agreement for Sewage Disposal between the County and Agencies Discharging to the Northwest Sewer System and Treatment Works – Lake County".

Each of the utilities own, operate and maintain the collection systems within their own service area. The Member Utility has the responsibility to staff and fund their Public Works Department for operation and maintenance of their collection system. Most of the individual collection systems discharge to the Northwest Interceptor Sewer for conveyance to the Northwest Regional WRF. The Northwest Interceptor Sewer is owned and operated by the Lake County Public Works Department.

2.3 Management of Assets

The cost-effective management of assets is a critical component of the CMOM program.

2.3.1 All O&M activities are tracked and documented. The forms used to record the O&M work are reviewed and updated on an annual basis.

2.3.2 Sewer Maps. Collection system maps are complete and kept up to date. The overall system map will, at a minimum, identify manholes, sewers with diameters, and pumping stations. The overall system map shall clearly illustrate the piping network of the collection system. The individual sewer atlas maps or GIS system will provide additional system information such as elevations for manholes and sewers, materials of construction, forcemain diameters, pump station capacities. The ultimate goal is for each Member Utility to have a fully developed GIS system.

2.3.3 O&M Programs are discussed in Section 3.

2.3.4 Condition Assessment Program. Each Member Utility shall establish and maintain program to evaluate on a routine basis the condition of the collection system assets. The assessment program is used to plan and budget upcoming rehabilitation and replacement work.

2.3.5 Equipment and Spare Parts. To perform routine operations and maintenance, respond to emergencies and prevent sanitary sewer overflows, it is critical to have adequate equipment and spare parts available. Each Member Utility is responsible for maintaining the necessary equipment and spare parts unique to its collection system to address routine O&M operations and response to emergencies. This inventory shall be reviewed on an annual basis.

2.3.6 The Critical Structures / Components of the collection system are to be identified and monitored on a routine basis. The goal is that each Member Utility develops a list of Critical Structures by April 30, 2014.

2.4 Customer Service

Service delivery is key for a successful CMOM program. The customer service program is monitored, in part, based on the time necessary for response to and resolution of a problem. Documenting these issues provides valuable information related to system functionality, including identification of laterals versus mainline issues. A standard form is recommended to document customer calls and inquires. Tracking and documenting customer calls and inquires allows operators to identify and address problem areas and ensure that the work is documented.

2.5 Program Authority

Legal authority is included in the individual Member Utilities Sewer Use Ordinances. The utilities review and update their ordinances on a regular basis. In general the Member Utilities Sewer Use Ordinances include the following:

2.5.1 Regulations regarding the use of public and private sewers that discharges to the public collection system within each utility.

2.5.2 Regulations that require individual property owners to maintain sewer laterals from the sewer main or property line (per the Member Utility policy) to the building and to prevent unnecessary overburdening of the collection system.

2.5.3 Authority to control infiltration and connections from inflow sources.

2.5.4 Authority to prevent illegal connections and discharges into the collection system.

2.5.5 Fats Oil and Grease (FOG) elimination program. (Each Member Utility has adopted the Lake County's FOG ordinance)

2.5.6 Industrial Pretreatment Program

2.5.7 Standard Specifications for the design and construction of sanitary sewers and lateral connections.

2.6 Fiscal Responsibility

The authority to prepare a budget and secure revenues to finance the operation and maintenance of the individual collection systems is the responsibility of each Member Utility. The Sewer Use Ordinances allow for the collection of revenues to fund the system operation and maintenance typically through a combination of system connection and permit fees, property taxes and user charges which can either be a flat rate or a metered rated fee. The fee schedules are reviewed on a routine basis to ensure revenues track with system expenses.

2.7 Data Management

It is a goal for each Member Utility to have a geographic information system (GIS) in place to document and track system information. In addition to inventorying system information, the GIS data base can also be utilized to document and track O&M activities including inspections, cleaning, rehabilitation and replacement work, flow data

and system performance. If no GIS, an alternate method of documentation shall be utilized.

2.8 Standards for Design, Construction and Inspection

At a minimum, all Member Utilities require all design and construction work to comply with following standards.

2.8.1 Sewer Use Ordinance

2.8.2 Illinois Recommended Standards for Sewage Works

2.8.3 Standard Specifications for Water and Sewer Main Construction in Illinois

2.9 Safety Training

The necessary safety training is unique to each Member Utility's collection system. At a minimum, safety training for staff should include confined space, maintenance practices, and electrical lock out/tag out procedures. The safety training requirements are to be reviewed on an annual basis.

2.10 Performance Measurements

An effective CMOM program monitors and evaluates the operation and maintenance activities and makes adjustments necessary to improve customer satisfaction, system performance and to achieve long-term goals. Performance measurements can be divided into two categories; effectiveness and efficiency.

Effectiveness performance measures are indicative of the value or success of the operation and maintenance activities compared against a standard over time. An example of improved effectiveness would be the reduction of sewer backups per mile of sewer main per year. A decreasing trend over time indicates improved O&M effectiveness / performance.

Efficiency performance measures reflect the frequency at which the measure is performed in the context of time or cost. Efficiency reflects quantity or value but not necessarily quality. An example of improved efficiency would be the reduction of costs for sewer cleaning per mile of sewer main. A decreasing trend of unit costs would indicate improved efficiency performance.

Table 2-1 illustrates the relationship between the program goals, objectives, and O&M activities.

Table 2-1 Program Goals, Objectives, and O&M Activities

Program Goal	Objective	O&M Activities
1. Comply with NPDES Permit requirements	Ensure procedures are in place to identify, report, and mitigate SSOs	Monitor and report Sanitary Sewer Overflows
2. Establish a standard of practice for the operation of the collection system	Establish procedures for performing O&M activities	Routinely review and update the O&M procedures
3. Provide adequate capacity to convey base and peak flows	Gain an understanding of the systems capacity and identify potential bottleneck areas	Perform flow monitoring as appropriate Rehabilitate or replace sewers and manholes
4. Minimize the occurrence of sanitary sewer overflows	Ensure procedures are in place including O&M activities to minimize overflows	Inspect manholes, sewers, and pumping stations Rehabilitate or replace sewers and manholes Perform flow monitoring as appropriate Perform O&M activities
5. Improve system reliability	Confirm the existence of any system components that do not function according to established standards	Inspect manholes, sewers, and pumping stations Rehabilitate or replace sewers and manholes Identify critical system components Document Emergency Response Plan Perform O&M activities
6. Improve customer service	Ensure customer service meets utility's needs	Monitor and record customer complaints and resolutions

Table 2-1 Program Goals, Objectives, and O&M Activities (con't.)

Program Goal	Objective	O&M Activities
7. Identify and manage sources inflow & infiltration	Establish a program to reduce I&I	Inspect manholes, sewers, and pumping stations Rehabilitate or replace sewers and manholes Perform O&M activities
8. Maintain annual cleaning and inspection programs	Establish a program to maintain system assets	Perform cleaning and inspection per schedule
9. Maintain system assets through cost-effective preventative maintenance and rehabilitation programs	Ensure preventative maintenance is performed Conduct condition assessments	Inspect manholes, sewers, and pumping stations Rehabilitate or replace sewers and manholes Perform O&M activities
10. Operate a continuous CMOM program	Establish a program for monitoring the CMOM Program	Complete annual report Review annual reports Review and update the CMOM plan every three years

SECTION 3 – OPERATION AND MAINTENANCE PLAN

3.1 Background and Information

Operation and Maintenance Programs for a collection system are critical to properly operate and maintain the system and to provide for future service and expansion. O&M programs can often identify system problems before they become failures which can disrupt service. Collection system inspections are a key component of the O&M program to determine structural integrity, system performance, sources of inflow and infiltration, and illegal connections. The critical inspection programs in a successful O&M program include the following:

1. Inspection of sewers
2. Inspection of manholes
3. Inspection of pumping facilities
4. Inspection of critical structures
5. Inspection of air relief valves
6. Sewer cleaning
7. Inspection of grease traps
8. Root control / removal
9. System rehabilitation
10. Code compliance – construction, connections, discharges

3.2 Inspection of Sewers

3.2.1 One hundred percent of the sewers are to be inspected within a ten (10) year period with a minimum of ten percent (10%) of the sewers inspected per year on a cumulative basis. (For example, if 40% an entity's sewers are inspected the first year, additional inspection is not required until the 5th year.)

3.2.2 Known problem areas of the collection system are to be inspected on a more frequent basis. Areas of known debris accumulation, FOG problems, root intrusion, SSO events, siphon sewers, flat/back pitched sewers, and defective areas previously identified but not repaired, etc. are to be inspected up to annually as necessary.

3.2.3 Sewer inspections are performed by using closed circuit television camera (CCTV)

3.2.4 The standardized sanitary sewer report documents the assessment of the sewer system. The sanitary sewer report should include a recommended repair or replace program for the problems areas identified during the inspection work.

3.3 Inspection of Manholes

3.3.1 One hundred percent of the system manholes are to be inspected within a ten (10) year period with a minimum of ten percent (10%) of manholes inspected per year on a cumulative basis.

3.3.2 Problem manholes are to be inspected on a more frequent basis. Areas of known debris accumulation, FOG problems, forcemain discharge manholes, SSO events, high groundwater, and snow plowing areas, and rims below floodplain elevations, etc. are to be inspected up to annually as necessary.

3.3.3 Manhole inspections shall consider the structural integrity, condition of joints, chimney seals, frame and cover, and ladder rungs, root intrusion, and debris accumulation.

3.3.4 Based on the condition assessment report, a recommendation shall be made for future inspections, repair or replacement.

3.4 Inspection of Pumping Facilities

3.4.1 All pumping facilities are to be inspected weekly (at a minimum).

3.4.2 All mechanical, electrical, and instrumentation equipment are to be inspected and tested to verify their operation.

3.4.3 Piping systems and equipment shall be inspected for leaks.

3.4.4 Equipment run times and/or flows (as applicable) are to be documented and compared to historical data.

3.4.5 The wet well is to be inspected for the accumulation of debris and FOG. All wet wells are to be cleaned annually (at a minimum).

3.4.6 An in-depth annual inspection shall be performed to evaluate the condition of mechanical, electrical and instrumentation equipment including equipment wear, lubrication, vibration and performance. The results of these in-depth inspections shall be compared against the manufacturer's specifications and historical results.

3.4.7 A general condition assessment report of the facility should be performed and required maintenance items are to be noted and scheduled for service, repair or replacement.

3.5 Inspection of Critical Structures

3.5.1 All critical structures are to be inspected monthly.

3.5.2 All critical structures are to be inspected during significant wet weather events.

3.5.3 Critical structures are to be cleaned / repaired on an as needed basis based on the inspection of the structures.

3.6 Inspection of Air Relief Valves

3.6.1 All air relief valves are to be inspected monthly.

3.6.2 Air valves shall be tested to ensure proper operation.

3.6.3 Air valves shall be cleaned and repaired as necessary based on inspections.

3.7 Sewer Cleaning

3.7.1 One hundred percent of the sewers are to be cleaned within a ten (10) year period with a minimum of ten percent (10%) of the sewers cleaned per year on a cumulative basis. The sewer cleaning work is typically performed in conjunction with the sewer inspection and CCTV work.

3.7.2 Sewer cleaning is performed to remove debris and sediment in the sewers to prevent blockages and potential overflows.

3.7.3 Areas of critical service and/or known problem areas are to be cleaned on a more frequent basis. Areas of known debris accumulation, FOG problems, root intrusion, SSO events, siphon sewers, flat/back pitched sewers, and defective areas previously identified but not repaired, etc. are to be cleaned up to annually as necessary.

3.8 Inspection of Grease Traps

3.8.1 All grease traps are to be inspected annually.

3.8.2 Inspections of grease traps shall document that the grease traps are being cleaned on routine basis (review pumping tickets), plumbing connections are maintained, and required maintenance is being performed.

3.8.3 Suspect grease traps shall be inspected on a more frequent basis.

3.8.4 Periodic witnessing of grease trap cleaning operations should be conducted to ensure proper cleaning and maintenance procedures are being performed.

3.9 Root Control

3.9.1 Root intrusion in collection systems can result in blockages and overflows. Control of roots is to be done in combination with the routine inspections and cleaning to reduce potential blockages and overflows.

3.9.2 Root removal / control will be done on as needed basis.

3.10 System Rehabilitation

3.10.1 Each inspection report shall include a prioritized listing for repairs and/or replacement. The system repairs shall be prioritized based on their severity with priority placed on structural deficiencies and I&I activity.

3.10.2 Sewer repair or replacement to address structural deficiencies, major root intrusion and I&I shall be performed at the earliest opportunity. Such repair or replacement work should, when possible, be coordinated with other scheduled or anticipated work. The commitment is to repair or replace within two (2) years all sewers identified as requiring repair or replacement, if repair or replacement cannot be completed in the two years, the community is to provide a schedule identifying when it will be completed. Replace pipes if the annualized cost of repair and maintenance significantly exceeds the cost of replacement.

3.10.3 Manhole repair or replacement to address structural deficiencies and I&I shall be performed at the earliest opportunity. Such repair or replacement work should, when possible, be coordinated with other scheduled or anticipated work. The commitment is to repair or replace within two (2) years all manholes identified as requiring repair or replacement, if repair or replacement cannot be completed in the two years, the community is to provide a schedule identifying when it will be completed.

3.10.4 Pumping facility repairs to address structural deficiencies, mechanical piping leaks, reduced pumping capacities and I&I shall be performed at the earliest opportunity. Such repair work should, when possible, be coordinated with other scheduled or anticipated work. The commitment is to repair deficiencies within two (2) years following their discovery, if repair or replacement cannot be completed in the two years, the community is to provide a schedule identifying when it will be completed.

3.10.5 All critical structure defects shall be repaired as soon as possible. The commitment is to repair deficiencies within two (2) years following their

discovery, if repair or replacement cannot be completed in the two years, the community is to provide a schedule identifying when it will be completed.

3.10.6 All grease trap defects shall be repaired as soon as possible. The commitment is to repair deficiencies within two (2) years following their discovery, if repair or replacement cannot be completed in the two years, the community is to provide a schedule identifying when it will be completed.

3.10.7 All air relief valve defects shall be repaired as soon as possible. The commitment is to repair deficiencies within two (2) years following their discovery, if repair or replacement cannot be completed in the two years, the community is to provide a schedule identifying when it will be completed.

The submitted prioritization report should be submitted annually and identify the year that the repair/rehabilitation/or replacement is to take place (within the two (2) year period), if repair or replacement cannot be completed in the two years, the community is to provide a schedule identifying when it will be completed.

3.11 Code Compliance

3.11.1 Businesses are to be inspected for compliance with the ordinances and codes. An important part of the code compliance inspections are to ensure industrial pretreatment standards are being met, grease traps are in service and being maintained, inspection manholes are installed and maintained and service connections are not being made without permits.

3.11.2 New developments are to be inspected for compliance with the ordinances and codes. An important part of the code compliance inspections for new developments are to ensure that design and construction standards are being met and that service connections are not being made without permits.

SECTION 4 – CAPACITY PLAN

4.1 Background and Information

The goal of each Member Utility is to do their part to maintain sufficient capacity for dry weather flows, ability to convey peak wet weather flows and capacity for future connections within the regional system as a whole. The capacity plan shall also provide a review of the collection system to identify trouble spots within the collection system. Identifying the problem areas will allow the Member Utilities to make the necessary repairs and improvements to the system to improve service, reduce overflows and backups, and reduce sources of inflow and infiltration.

4.2 Capacity

4.2.1 Collection system shall have no dry weather capacity restrictions.

4.2.2 Each Member Utility shall continue to review flows during wet weather events to identify and reduce inflow and infiltration.

4.2.3 Each Member Utility shall have an on-going inspection program to identify sources of inflow and infiltration.

4.2.4 Each Member Utility shall enforce their ordinances on a continuous basis to ensure that inflow and infiltration is being reduced to the extent practical.

4.3 Field Investigations

4.3.1 Perform field investigations on regular basis to identify inflow and infiltration, system defects, and problem areas.

4.3.2 Problem areas, backups, and overflows are investigated, documented and reported.

4.3.3 Observations and recommendations from the field investigations are to be used to enhance the O&M program and to provide repair, rehabilitation and replacement recommendations.

4.4 Flow Monitoring

4.4.1 Flow monitoring should be performed to evaluate system flows and to evaluate system capacity constraints.

4.4.2 Visual monitoring of system flows shall be performed to evaluate system flows. The visual monitoring shall be performed during dry weather and wet conditions to establish baseline dry weather flows and to track wet weather flows. The results of the visual monitoring shall be reviewed against prior observations to

gauge any changes in flow. Weather conditions should also be considered during the wet weather flow observations.

4.4.3 If visual flow monitoring indicates a significant increase of dry weather flows without an expansion of the service area and/or a significant increase of wet weather flows, an investigation of the service area shall be performed. Field investigations may include sewer televising, dye testing, smoke testing and/or flow monitoring with flow metering equipment.

4.4.4 Flow meter readings for pumping stations equipped with flow meters shall be documented during both dry weather and wet weather conditions and compared against historical data to evaluate system flows and capacity. New pumping stations with a design capacity of 1,200 gpm or more shall be equipped with flow meters.

4.4.5 For pumping stations equipped with hour meters, the pump run times shall be documented during both dry weather and wet weather conditions and compared against historical data to evaluate system flows and capacity.

4.4.6 Dry and wet weather flow monitoring in areas of high I&I should be performed to quantify and confirm I&I flow.

4.5 I&I Reduction

4.5.1 Each Member Utility shall have an ordinance for property owners to maintain their service connection and prohibit connection of clean water sources to the sanitary sewer.

4.5.2 Each Member Utility shall make system repairs to reduce public system sources of inflow and infiltration.

4.5.3 Each Member Utility should continue to review alternative programs to eliminate clear water inflow and infiltration into the sanitary sewer system.

4.5.4 Each Member Utility should encourage homeowners and businesses to disconnect downspouts, sump pumps, footing drains, area drains that are connected to the sanitary sewer system.

4.6 Facility Planning

4.6.1 Northwest Lake Facility Plan shall be reviewed and updated periodically to ensure that sufficient system capacity will be in place for the planned future growth.

4.6.2 Number of current service connections, number of committed service connections and available system capacity shall be documented, reviewed, and updated annually.

4.6.3 Record and review number of new services being made per year.

4.7 Capacity Assurance Check List

- ☐ Current and up to date Sewer System Map
- ☐ Current Facility Plan
- ☐ Current and up to date number of service connections
- ☐ Current and up to date system flow rates (dry and wet weather) – Pump Station Records
- ☐ Pump Station Capacities
- ☐ Program to monitor bottleneck / capacity constriction areas / problem areas
- ☐ Infiltration / Inflow Analysis
- ☐ Sewer System Evaluation Survey
- ☐ Flow Monitoring Program

SECTION 5 – Response Plan SS0s and Emergencies

5.1 Background and Information

Each Member Utility is committed to provide reliable sanitary sewer service to its customers and minimize the potential damage to waterways, infrastructure, homes and businesses due to sanitary sewer overflows (SSO). The response plan shall outline the procedures to respond to overflows and emergencies, documents the work performed, and identifies the appropriate parties to receive notification.

5.2 SSO Response Plan

Each Member Utility to develop a SSO Response Plan by April 30, 2015. Plans to be reviewed and updated as appropriate. The SSO Response Plan shall, at a minimum, include the following elements:

1. Identification of known or potential overflow sites

2. Procedure for receipt of notification of a SSO event
    - Time and date call was received
    - Caller's name and phone number
    - Location of problem
    - Description of problem and observation
    - Any other information that may assist responders

3. Procedure for notification / communication of SSO events
    - Responders
    - Emergency Management Officials
    - Municipal Officials
    - Regulatory Agencies
    - Affected Customers / Public

4. Third Party Notice Plan
    - Describes how, under various overflow scenarios, the public, as well as other entities, would be notified of overflows that may endanger health
    - Identifies overflows that would be reported
    - Identifies who shall receive notification
    - Identifies the specific information that would be reported
    - Includes a description of the lines of communication
    - Includes the identities of responsible officials

5. Procedure for responders
    - Required personnel (in-house staff and contract services)
    - Required equipment
    - Probable response activities and methods

- Response time standards
- Information to be communicated to affected property owners and others:
  - Nature of expected response
  - Anticipated timeframe of response activities
  - Contact information
- Persons/agencies to be notified of the SSO event
- Post response reporting standards including reasons for the SSO and the necessary actions to prevent the same or similar SSO occurrence in the future

6. Investigation procedures for determining the cause of the SSO event

7. Documentation of maintenance procedures for individual incidents

8. Documented training for field personnel, including first responders, covering all procedures and methods used to respond to SSO events

9. IEPA Sanitary Sewer Overflow or Bypass Notification Summary Report, see Appendix B.

5.3 Major Emergencies Response Plan

Each Member Utility to develop a Major Emergencies Response Plan by April 30, 2016. Plans to be reviewed and updated as appropriate. The Major Emergencies Response Plan shall, at a minimum, include the following elements:

1. Introduction and Background

2. Description of System (including system map(s))
   - System Size
   - System Components
     - Collection System
     - Pump Stations and Forcemains

3. List of Critical Customers (hospitals, schools, municipal facilities, fire station, police station, nursing homes, etc.)

4. Procedure for notification / communication of emergencies
   - Responders
   - Emergency Management Officials
   - Municipal Officials
   - Regulatory Agencies

- Affected Customers / Public

5. List and Location of Critical System Components
    - Pipe Connections (ID interceptors)
    - Pump Stations (table with key information for each pump station)

6. Potential Threats and Response Procedures (for each include step by step procedures including responder responsibilities, required equipment and anticipated timeline)
    - Manmade
        - Mechanical equipment disabled
        - Primary power source disrupted
        - Secondary / emergency power source disrupted
        - Alarm system failure
        - Assault of field staff
        - Theft
        - Arson
        - Vandalism
    - Accidental
        - Illicit discharge
        - Sewer blockage
        - Sewer overflow
        - Forcemain breakage
        - Mechanical equipment failure
    - Natural Threats
        - Flooding
        - Tornados
        - Snow / Ice Storms
        - Other (severe wind, lightning, etc.)

7. Preventative Measures
    - Access Control
    - Barriers (physical)
    - Backflow preventers
    - Testing and Maintenance

8. Emergency Contact Information Directory

SECTION 6 – CONDITION ASSESSMENT

6.1 Background and Information

The Condition Assessment involves documentation and inspection of the sanitary sewer collection system to assess the condition of the Member Utility's sanitary sewer infrastructure. The information gathered during the assessment is used to plan and budget for repair, rehabilitation and replacement of the system components. Recommendations for additional inspections and cleaning are made from these assessments. Listed below are several key elements that are part of the Condition Assessment process.

6.2 Condition Assessment Purpose

6.2.1 The purpose of the condition assessment is to utilize a proactive and coordinated asset management-based approach to assessing the sanitary sewer system condition and remaining useful life, and managing rehabilitation and replacement of the system components.

6.2.2 The condition assessment program will guide the Member Utilities to be able to more effectively and proactively prioritize and implement system inspections, cleaning, repairs, rehabilitation and replacement of the system components needed in order to identify and address sources of inflow and infiltration, assure sufficient capacity in both dry and wet weather, and to reduce SSOs and backups.

6.3 Condition Assessment Key Elements

6.3.1 The tools listed in Section 3 – Operation and Maintenance Plan and Section 4 – Capacity Plan will be used for the condition assessment. These tools include but are not limited to inspection, cleaning, smoke testing, dye testing, root control and flow monitoring.

6.3.2 System inspections and O&M activities are recorded and documented utilizing the Member Utility's standard forms.

6.3.3 The data from the inspections is reviewed and evaluated by operations staff. The condition of the system components is assessed and rated. Current assessments are compared against the previous assessments.

6.3.4 Based on the condition assessment rating, recommendations are made on a continuing basis to repair, rehabilitate and replace system components to maintain the Member Utility's assets.

6.3.5 Analysis of system performance, maintenance history, age of materials, and structural condition is also used to prioritize system recommendations.

6.4 Condition Assessment Recommendations

6.4.1 Recommendations to repair, replace and rehabilitate the components of the sanitary sewer system are to be based on the condition assessment.

6.4.2 Depending upon the severity of the condition, the recommended system improvements may be performed by operations staff or by contract services.

6.4.3 Solutions for repair and rehabilitation will depend upon the condition of the system components, effectiveness of reducing I&I, and use of the appropriate technology for correcting the deficiency.

6.4.4 The condition assessment recommendations are to be utilized by each Member Utility to plan and budget for the system O&M and capital improvements.

SECTION 7 – COMMUNICATION PLAN

7.1 Background and Information

Member Utilities communicate with system customers, government officials and the IEPA on a regular basis for primarily non-emergency conditions and events. The objective of the communication plan is to keep officials and the public informed of operation and maintenance activities.

7.2 CMOM Communication

CMOM related topics identified for future and continued discussion may include:

1. Financial impact to O&M operations
2. Sanitary Sewer Collection System O&M activities
3. Problems areas in the system
4. Sanitary Sewer Overflows
5. Sanitary Sewer System Backups
6. Meeting the CMOM goals
7. Cost effective reduction of inflow and infiltration
8. Other topics of interest and concern

7.3 Methods of Communication to Customers and the Public

Each Member Utility utilizes unique and individual methods of communicating information to system customers and officials. In general the common methods of communication may include the following:

- Board meetings which are open to the public and the purposes of the meetings are to discuss and determine policy related to finance, department reports, personnel, operations, communications and other utility business

- Municipal/Utility websites to post utility news, emergency notifications, meeting minutes, and other events, as appropriate

- Periodic newsletters that are distributed to system customers

- Periodic mailings included in utility bills

- Reverse 911 or similar call system

7.4 Reporting Methods for Internal Operations and to the Northwest Technical Advisory Committee

Each Member Utility utilizes a number of reporting methods to communicate the activities of the O&M operations staff. These methods may include:

- Monthly Board or Committee meetings
- Periodic staff meetings
- Monthly reports to the government boards and officials
- Budget Reports
- Annual Report Data (Calendar Year: January through December)

SECTION 8 – ANNUAL CMOM REVIEW

8.1 Background and Information

The CMOM Review is necessary to ensure that the Plan is properly implemented, goals and objectives are met, and performance measures are reviewed, evaluated, and updated on a regular basis.

The CMOM Plan provides the framework and documentation to implement the programs that each Member Utility is currently performing. The CMOM Plan is meant to be a working document and will be updated as needed.

As part of the Review, the following will be done:

1. Review the CMOM Plan
2. Monitor the Plan
3. Provide recommendations
4. Update the CMOM Plan

8.2 Review the CMOM Plan

8.2.1 Reviews are to be performed by the Northwest Technical Advisory Committee at minimum every five (5) years.

8.2.2 Review the Plan for the following:

8.2.2.1 Goals are applicable to each Member Utility.

8.2.2.2 Goals and strategies are applicable to and meet the requirements of the Northwest Regional Water Reclamation Facility's NPDES permit.

8.2.2.3 Performance measures are being met.

8.2.2.4 Budget is adequate to meet the needs of the CMOM Plan.

8.3 Annual CMOM Plan Performance Evaluation and Monitoring

8.3.1 Northwest Technical Advisory Committee will monitor the implementation and measure the effectiveness of the program through performance measures.

8.3.2 Northwest Technical Advisory Committee will perform an annual review of goals and performance measures to evaluate the program effectiveness.

8.3.3 Each Member Utility will update and complete the Annual CMOM Summary Report. See Appendix C and D and E for an example copy of the annual summary reports.

8.3.4 The Northwest Technical Advisory Committee will review all Annual Reports from all Member Utilities to determine compliance of each with the CMOM Plan.

8.4 Provide Recommendations

8.4.1 Each Member Utility will obtain recommended plan revisions and/or updates from operations staff.

8.4.2 Provide recommendations to the Northwest Technical Advisory Committee for updating the CMOM Plan.

8.5 Update the CMOM Plan

8.5.1 Northwest Technical Advisory Committee will update the CMOM Plan based on the review, feedback from operations staff and review recommendations.

8.5.2 Provide updated copies of the CMOM Plan to Member Utilities, IEPA and other required agencies.

Appendix A – Legislation

ENVIRONMENTAL SAFETY
(415 ILCS 25/) Water Pollutant Discharge Act.
(415 ILCS 25/0.01) (from Ch. 85, par. 1700)

Sec. 0.01. Short title. This Act may be cited as the Water Pollutant Discharge Act. (Source: P.A. 86-1324.)

(415 ILCS 25/1) (from Ch. 85, par. 1701)

Sec. 1. It is hereby declared that it is the public policy of the State of Illinois that there should be no discharges of oil or other pollutants into or upon any waters which are or may be used for the purposes of providing a water supply for any city, town or village, or for purposes of recreation or navigation and that those persons responsible for such discharges shall bear the costs of removal. (Source: P. A. 77-1605.)

(415 ILCS 25/2) (from Ch. 85, par. 1702)

Sec. 2. For purposes of this Section, unless the context otherwise requires, the term--

(a) "oil" means oil of any kind or in any form including, but not limited to, petroleum, fuel oil, sludge and oil refuse;

(b) "other pollutants" mean any floating materials which may cause unsightly appearance on the surface of such waters or are detrimental to aquatic life or the water quality of such waters;

(c) "discharge" includes, but is not limited to, any spilling, leaking, pumping, pouring, emitting, emptying or dumping;

(d) "remove" or "removal" refers to removal of oil, or other pollutants, from the waters and taking such other action as may be necessary to minimize damage to the public health or welfare from discharges of oil or other pollutants;

(e) "facility" means any facility of any kind located in, on, or under land or waters and watercraft of every description;

(f) "waters" mean all waters of any river, stream, watercourse, pond, or lake wholly or partly within the territorial boundaries of the State of Illinois;

(g) "governmental body" means cities, villages, incorporated towns or any units of local government;

(h) "owner or operator" means any person owning or operating any facility;

(i) "person" includes an individual, firm, corporation, association or partnership. (Source: P. A. 77-1605.)

(415 ILCS 25/3) (from Ch. 85, par. 1703)

Sec. 3. The discharge of oil in quantities which exceed the standards adopted by the Pollution Control Board, or the discharge of other pollutants directly or indirectly into the waters is prohibited. (Source: P. A. 77-1605.)

(415 ILCS 25/4) (from Ch. 85, par. 1704)

Sec. 4. Whenever any oil or other pollutant is discharged in violation of Section 3 of this act, any governmental body having such waters within its territorial limits is authorized to act to remove or arrange for the removal of such oil or other pollutants. (Source: P. A. 77-1605.)

(415 ILCS 25/5) (from Ch. 85, par. 1705)

Sec. 5. The owner or operator of such facility from which oil or other pollutants are discharged in violation of Section 3 of this Act, shall be liable to such governmental body for the actual costs incurred for the removal of such oil or other pollutants. Such governmental body may, if necessary, bring an action in the circuit court for the recovery of the actual costs of removal, plus reasonable attorneys fee, court costs and other expenses of litigation. (Source: P.A. 79-1358.)

(415 ILCS 25/6) (from Ch. 85, par. 1706)

Sec. 6. Nothing in this act shall affect or modify the liabilities of any owner or operator for damage to any publicly-owned or privately-owned property resulting from a discharge or removal of oil or other pollutants; nor shall this act be construed as affecting or modifying any other existing authority or act. (Source: P. A. 77-1605.)

TITLE 35: ENVIRONMENTAL PROTECTION
SUBTITLE C: WATER POLLUTION
CHAPTER II: ENVIRONMENTAL PROTECTION AGENCY
TITLE 35: ENVIRONMENTAL PROTECTION
SUBTITLE C: WATER POLLUTION
CHAPTER I: POLLUTION CONTROL BOARD
PART 306
PERFORMANCE CRITERIA

SUBPART A: SYSTEMS RELIABILITY

Section 306.101 Preamble

This part contains specific requirements and prohibitions concerning existing and potential sources of water pollution. Unless the contrary is clearly indicated, all references to "Parts" or "Sections" are to Ill. Adm. Code, Title 35: Environmental Protection. For example, "Part 309" is 35 Ill. Adm. Code 309, and "Section 309.101" is 35 Ill. Adm. Code 309.101.

Section 306.102 Systems Reliability

a) Malfunctions: All treatment works and associated facilities shall be so constructed and operated as to minimize violations of applicable standards during such contingencies as flooding, adverse weather, power failure, equipment failure, or maintenance, through such measures as multiple units, holding tanks, duplicate power sources, or such other measures as may be appropriate.

Section 306.303 Excess Infiltration

Excess infiltration into sewers shall be eliminated, and the maximum practicable flow shall be conveyed to treatment facilities.
(Source: Section 306.303 renumbered from Section 306.103(a) at 7 Ill. Reg. 5682, effective April 19, 1983)

Section 306.304 Overflows

Overflows from sanitary sewers are expressly prohibited.
(Source: Section 306.304 renumbered)

TITLE 35: ENVIRONMENTAL PROTECTION
SUBTITLE C: WATER POLLUTION
CHAPTER II: ENVIRONMENTAL PROTECTION AGENCY
TITLE 35: ENVIRONMENTAL PROTECTION
SUBTITLE C: WATER POLLUTION
CHAPTER I: POLLUTION CONTROL BOARD

PART 392
GUIDELINES FOR NOTIFICATION OF
RESTRICTED STATUS OR CRITICAL REVIEW
PURSUANT TO 35 ILL. ADM. CODE 306.105

SUBPART A: INTRODUCTION
Section 392.101 Purpose
This policy constitutes the guidelines governing notification by the Agency to sanitary districts and other wastewater treatment or transportation authorities of Restricted Status or Critical Review. Definitions of Restricted Status and Critical Review as well as the criteria utilized by the Agency for determination of Restricted Status and Critical Review are herein presented. The Agency shall notify sanitary districts, other wastewater treatment or transportation authorities, and the public of Restricted Status or Critical Review in accordance with the procedures established herein.

Section 392.102 Definitions
"Agency" means the Illinois Environmental Protection Agency.

"Critical Review" shall be defined as the Agency determination, pursuant to Section 39 of the Environmental Protection Act (Ill. Rev. Stat. 1981, ch. 111 1/2, par. 1039) and 35 Ill. Adm. Code 309.241, that a sewer is approaching hydraulic capacity or that a sewage treatment plant is approaching design capacity such that additional sewer connection permit applications will require close scrutiny to determine whether issuance would result in a violation of the Act or Regulations.

"Restricted Status" shall be defined as the Agency determination, pursuant to Section 39 of the Environmental Protection Act (Ill. Rev. Stat. 1981, ch. 111 1/2, par. 1039) and 35 Ill. Adm. Code 309.241, that a sewer has reached hydraulic capacity or that a sewage treatment plant has reached design capacity, such that additional sewer connection permits may no longer be issued without causing a violation of the Act or Regulations.

"Sewer Connection" means a sewer for which a construction permit is required under 35 Ill. Adm.Code 309.202.

Section 392.202 Criteria for Placing Sewage Treatment Plants on Restricted Status

The Agency may place a sewage treatment plant on Restricted Status when any of the following conditions exists, as shown by Agency field inspections, operational reports, records of permits issued, or other information:

a) Hydraulic overloading of the treatment plant as determined by a comparison of the permitted design capacity of the plant with the actual average monthly flows measured at the plant during the three low-flow months in the preceding 12-month period, adjusted to include all outstanding (permitted but not connected) permits issued by the Agency, or other information on hydraulic loading of the plant available to the Agency (i.e., water pumpage, recent development, demographic and meteorological data, etc.);

(more)

Section 392.203 Criteria for Placing Sewers and Lift Stations on Restricted Status

a) The Agency may place sanitary sewers and lift stations on Restricted Status in order to prevent overflows as expressly prohibited 35 Ill. Adm. Code 306.103(b). Restricted Status may be imposed upon the confirmation of overflows in the form of basement backups, overflows of sanitary sewer manholes, or sanitary sewer overflow devices.

TITLE 40--PROTECTION OF ENVIRONMENT
40 CFR122.41
CHAPTER I--ENVIRONMENTAL PROTECTION AGENCY

PART 122--EPA ADMINISTERED PERMIT PROGRAMS: THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

Subpart C--Permit Conditions

Sec. 122.41 Conditions applicable to all permits (applicable to State programs, see Sec. 123.25).

The following conditions apply to all NPDES permits. Additional conditions applicable to NPDES permits are in Sec. 122.42. All conditions applicable to NPDES permits shall be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to these regulations (or the corresponding approved State regulations) must be given in the permit.

(d) Duty to mitigate. The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

(e) Proper operation and maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

(more)

Source:
http://a257.g.akamaitech.net/7/257/2422/14mar20010800/edocket.access.gpo.gov/cfr_2002/julqtr/40cfr122.41.htm

Appendix B – IEPA Sanitary Sewer Overflow Report Form

Illinois Environmental Protection Agency

Bureau of Water • 1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276

Sanitary Sewer Overflow or Bypass Notification Summary Report

- Within 24 hours of the occurrence, notify the Illinois EPA regional wastewater staff by telephone, FAX, email or voice mail, if staff are unavailable.
- Within 5 days of the occurrence, provide a written report describing the overflow or bypass, including all information requested on this form. The permittee is required to submit this form or other equivalent written notification to the Illinois EPA at:

Bureau of Water/Compliance Assurance Section - MC #19
1021 North Grand Avenue East
P.O. Box 19276
Springfield, IL 62794-9276

NOTE: You may complete this form online, save a copy locally, print, sign and submit it to the BOW/CAS MC #19, at the above address. You may also print the form before completing it by hand, signing and submitting it.

Failure to notify the Illinois EPA as specified may result in fines up to $10,000 for each day of violation.

Instructions: Use this form to report all unscheduled sanitary sewer overflow or bypass occurrences. Attach additional information as necessary to explain or document the overflow or bypass. For the purpose of this report, an overflow or bypass is defined as the discharge of untreated sewage from the sanitary sewer collection system to a surface water and/or ground due to circumstances such as those identified by the check boxes in the overflow or bypass details section of this form.

Use one form per occurrence. A single occurrence may be more than one day if the circumstances causing the overflow or bypass results in a discharge duration of more than 24 hours. If there is a stop and restart of the overflow or bypass within 24 hours, but it is caused by the same circumstances, report it as one occurrence. If the discharges are separated by more than 24 hours, they should be reported as separate occurrences.

24 Hour Notification Information

Permittee (Municipality or Facility Name): _____ Permit Number: _____ Person Representing Permittee Who Contacted IEPA: _____

Date: _____ Time: _____ AM ☐ PM ☐ IEPA Office Contacted: _____ Name of IEPA Employee Contacted: _____

Sanitary Sewer Overflow or Bypass Details

Date and Duration of Overflow or Bypass Occurrence (complete a separate form for each occurrence):

Start Date: _____ Time: _____ AM ☐ PM ☐ Duration of the overflow or bypass (hours and minutes): _____

Estimated Volume of Wastewater Discharged (gallons): _____

WWTP Flow During bypass (report in MGD): Not applicable for a collection system SSO. _____

Location of the Overflow or Bypass: _____

Circumstances Causing the Overflow or Bypass (check all that apply)

☐ Rain ☐ Power Outage ☐ Equipment Failure ☐ Other (explain below)
☐ Snow Melt ☐ Broken Sewer ☐ Widespread Flooding

Provide a narrative description to further explain why the overflow or bypass occurred. For example, describe what equipment failed. What caused the power outage, or what plugged the sewer. Flooding should only be indicated, as a cause if there is significant flooding that is caused by high river, stream, or lake water levels, not just localized high water in the street.

Wet Weather (if applicable)

Date(s) and Duration of Rainfall:

Start Date:	Time:	AM PM	End Date:	Time:	AM PM	Amount of Rainfall (inches)	Amount of Snow Melt (inches)
		☐ ☐			☐ ☐		

Contributing Soil Conditions (saturated, frozen, soil type)

Where Did the Discharge from the Overflow or Bypass Go? (check all that apply)

Provide the name of the local receiving water that the wastewater enters, which could be a nearby stream, river, lake, or wetland. If discharge does not enter directly into surface water, but indirectly by way of a ditch or storm sewer, trace the path of the ditch or storm sewer to find the receiving water.

☐ Runs on ground and absorbs into the soil

☐ Ditch: Name of surface water it drains to:

☐ Storm Sewer: Name of surface water it drains to:

☐ Surface water direct discharge:

☐ Basement Back-ups, (Number & use (i.e.residential, commercial) of buildings affected):

☐ Other, describe:

Actions to Correct This Occurrence and Prevent Future Owerflows or Bypasses

Describe what actions were taken to minimize the volume of wastewater discharged from the overflow or bypass reported on this form. Also describe what actions are planned to prevent or minimize future overflows or bypassess. Illinois law and NPDES permits prohibit overflows or bypasses, unless certain specified conditions are met. Sanitary sewer overflows and bypasses may be the subject of enforcement action.

Report Completed By

Contact Person:
Street Address:
PO Box:
City: State:
Zip Code: Phone:
County:

Authorized Representative Contact Information

Contact Person:
Title:
Street Address:
PO Box:
City: State:
Zip Code: Phone:
County:

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

Authorized Representative Name (Print) Title

Authorized Representative Signature Date

Appendix C – Annual Flow Summary Report

ANNUAL FLOW SUMMARY

I. General Information

A. Agency Name _____

B. Agency Address

Street _____

City _____ State _____ Zip _____

C. Contact Person _____

D. Contact Information

Telephone _____ Fax _____

Email _____

E. Data Provided as of _____

II. Pumping Station Annual Flow Summary

	Pump Station No.	Station Hours	Flow Gallons	Notes
Previous Year				
Current Year				
Previous Year				
Current Year				
Previous Year				
Current Year				
Previous Year				
Current Year				
Previous Year				
Current Year				

	Pump Station No.	Station Hours	Flow Gallons	Notes
Previous Year				
Current Year				
Previous Year				
Current Year				
Previous Year				
Current Year				
Previous Year				
Current Year				
Previous Year				
Current Year				

III. Critical Structure Annual Flow Summary

	Structure Name	Visual Observations (flow depth)				Notes
		¼ Dia	½ Dia	¾ Dia	Surcharged	
Previous Year						
Current Year						
Previous Year						
Current Year						
Previous Year						
Current Year						
Previous Year						
Current Year						
Previous Year						
Current Year						

APPENDIX C – FLOW SUMMARY

	Structure Name	Visual Observations (flow depth)				Notes
		¼ Dia	½ Dia	¾ Dia	Surcharged	
Previous Year						
Current Year						
Previous Year						
Current Year						
Previous Year						
Current Year						
Previous Year						
Current Year						
Previous Year						
Current Year						

Appendix D – Annual Summary Report

SYSTEM INVENTORY SUMMARY

I. General Information

A. Agency Name _____

B. Agency Address

Street _____

City _____ State _____ Zip _____

C. Contact Person _____

D. Contact Information

Telephone _____ Fax _____

Email _____

E. Data Provided as of _____

II. Collection System Description/Inventory

A. Number of Service Connections

Residential	Commercial	Industrial	Total

B. Gravity Sewer Inventory

Pipe Diameter (in)	Material	Length (ft)
Total Length of Sewers (ft)		

C. Total Number of Manholes _____

D. Siphon Sewer Inventory

Pipe Diameter (in)	Material	Length (ft)
	Total Length of Siphon Sewers (ft)	

E. Forcemain Inventory

Pipe Diameter (in)	Material	Length (ft)
	Total Length of Forcemain (ft)	

F. Air/Vacuum Release Valve Inventory

Diameter (in)	Manufacturer	Number
Total Number of Air/Vacuum Valves		

G. Pumping Station Summary

Station No.	Capacity (GPM)	No. of Pumps	Horsepower of Pumps	Discharge Manhole	Emergency Power

H. Other Critical Structure Summary

Name / Location	Description

CMOM ACTIVITY SUMMARY

for period _____

(Cumulative % tracked since _____)

I. Inspection Summary

Description	Quantity	%	Estimated Cost for Future Repair
Gravity Sewer Cleaning (ft.)			
Forcemain Cleaning (ft.)			
Root Control / Removal (ft.)			
Sewer Televising (ft.)			
Number of Defects Identified Current Year		(Details Attached)	
Manhole Inspections (no.)			
Number of Defects Identified Current Year		(Details Attached)	
Pumping Station Inspections (no.)			
Number of Defects Identified Current Year		(Details Attached)	
Critical Structure Inspections (no.)			
Number of Defects Identified Current Year		(Details Attached)	
Air Release Valve Inspections (no.)			
Number of Defects Identified Current Year		(Details Attached)	
Grease Trap Inspections (no.)			
Number of Defects Identified Current Year		(Details Attached)	
Other Inspections (Smoke Testing, Dye, etc.)			

II. Repair Summary

Description	Quantity	Notes	Cost
Manhole Repairs			
Manhole Replacements			
Sewer Spot Repairs			
Sewer Lining			
Sewer Replacement			
Pump Repairs (major items)			
Pump Replacement			
Generator Repairs (major items)			
Building Repairs (major items)			
Other Repairs:			

III. CMOM Activity Checklist

Confirm	CMOM Activity
	Review/Update System Inventory
	Sewer Atlas Up-to-Date
	Parts Inventory Reviewed
	Ordinances Reviewed
	Budget Review for CMOM Activities
	Fees/Rates Reviewed
	Safety Training Requirements Reviewed
	Safety Training Completed/Current
	Review Critical Structure List
	Review Major Emergency Response Plan
	Review SSO Response Plan
	Grease Trap Inspections Completed (See Details Attached)
	Code Compliance Inspections Completed (See Details Attached)
	Wetwells Cleaned
	Lift Station Flow Monitoring Records Reviewed (See Attached)
	Special Studies Completed _____

IV. Performance Indicators (#'s)

Quantity	CMOM Performance Indicator
	Pump Station Failure – mechanical
	Pump Station Failure – electrical
	Sanitary Sewer Overflows
	Basement Backups (not private service related)
	Complaints Received (not private service related)
	Complaints Resolved (not private service related)
	Other Items:

V. Sanitary Sewer Overflows (SSO's) Reported

Date	Location	Cause[1]	Estimated Volume

1. Attach SSO Report Form for each event

_____ None Reported

Were there any SSOs that occurred last year that are not listed above? If yes, list:

_____

_____

_____

_____

Appendix E

Community (System Owner) Name

20XX

CMOM Checklist

“ ”

Mayor

Mayor (please enter)

Clerk

Clerk (please enter)

Treasurer

Treasurer (please enter)

Attorneys

Attorneys (please enter)

Trustees

Trustees (please enter)

Date Submitted:

Click here to enter a date.

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(Name of Community) CMOM Plan

Table of Contents

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Introduction

Nationwide, the issue of aging infrastructure has become a hot topic of discussion. The failure of collection systems leads to concerns regarding protection of the public health and preservation of the environment. The USEPA has determined that generally, lack of reinvestment into sewer collection systems has led to structural failures, basement backups, as well as the release of untreated/partially treated water into waterways that result in violations of the Clean Water Act.

In an effort to quantify and address collection system issues, the USEPA determined that it would utilize the NPDES permit system to compel communities to develop Capacity, Management, Operations and Maintenance (CMOM) Plans. The Illinois Environmental Protection Agency (IEPA) has included special conditions within NPDES permit renewals which require the development of CMOM plans. These special conditions are descriptive but are not prescriptive with respect to all of the elements of the plan, and how they are to be addressed. Therefore, each CMOM and the level of effort required is specific to the community.

The following checklist includes fillable fields that include selecting specific answers, dates, numbers, etc. For convenience and simplicity reasons, some of the fields allow for additional documentation. However, if the provided space is insufficient, additional documents can be appended to the annual report. The majority of the following questions came from the IEPA checklist used during the Annual Review of the NWRWRF CMOM program, and were used to expedite the IEPA review process.

Critical Structure Rehabilitation/Replacement Commitment

As part of the CMOM program each community is responsible for identifying and reporting critical items within their collection system on a yearly basis. Each report shall include a prioritized listing for repairs and/or replacement. The system repairs shall be prioritized based on their severity with priority placed on structural deficiencies and I&I activity.

Sewer repair or replacement to address structural deficiencies, major root intrusion and I&I shall be performed at the earliest opportunity. Such repair or replacement work should, when possible, be coordinated with other scheduled or anticipated work. The commitment is to repair or replace within two (2) years all sewers identified as requiring repair or replacement, if repair or replacement cannot be completed in the two years, the community is to provide a schedule identifying when it will be completed. Replace pipes if the annualized cost of repair and maintenance significantly exceeds the cost of replacement.

Manhole repair or replacement to address structural deficiencies and I&I shall be performed at the earliest opportunity. Such repair or replacement work should, when possible, be coordinated with other scheduled or anticipated work. The commitment is to repair or replace within two (2) years all manholes identified as requiring repair or replacement, if repair or replacement cannot be completed in the two years, the community is to provide a schedule identifying when it will be completed.

Pumping facility repairs to address structural deficiencies, mechanical piping leaks, reduced pumping capacities and I&I shall be performed at the earliest opportunity. Such repair work should, when possible, be coordinated with other scheduled or anticipated work. The commitment is to repair deficiencies within two (2) years following their discovery. All identified critical structures, grease trap, and air relief valve defects shall be repaired as soon as possible, and within two (2) years following their discovery, if repair

or replacement cannot be completed in the two years, the community is to provide a schedule identifying when it will be completed.

The submitted prioritization report should be submitted annually and identify the year that the repair/rehabilitation/or replacement is to take place (within the two (2) year period), if repair or replacement cannot be completed in the two years, the community is to provide a schedule identifying when it will be completed.

General Information

Prepared By	First Name Last Name
Title	Title
Date	Date
Community/District	Community/District
Address	Address Line 1 Address Line 2
City/Zip Code	City State, 00000
Telephone No	(000) 000 - 0000
E-mail	E-mail

Treatment Facility Information

Facility	Northwest Regional WWTF
NPDES Permit No	IL0020958
Permit Issue Date	4/2/2015
Permit Expiration Date	3/31/2020

Service Area Information

Miles of Sewer	000 Miles
Number of Manholes	000 - Manholes
Number of System Connections	000 - Residential Services 000 - Non-Residential Users
Population Served	Total Population - 000
Total Potable Water Sold	000 Gallons - Total Potable Water Sold to Residential Users 000 Gallons – Total Potable Water Sold to Non-Residential Users
Is there a PTOW Pretreatment Program in Place? Name of Authority?	Choose an item. Name of Authority
Age distribution of Collection System	0-5 Years Old - 000 ft 5-25 Years Old - 000 ft 26-50 Years Old - 000 ft 51-75 Years Old - 000 ft 75-100 Years Old - 000 ft >100 Years Old - 000 ft

Pipe Inventory

Gravity Sewer	PCCP	HDPE	RCP	PVC	VCP	DI	CI	Other (please fill in).	Other (please fill in).
< 8 in.	000 ft.	000 ft.	000 ft.	000 ft.	000 ft.	000 ft.	000 ft.	000 ft.	000 ft.
8 in.	000 ft.	000 ft.	000 ft.	000 ft.	000 ft.	000 ft.	000 ft.	000 ft.	000 ft.
10 in.	000 ft.	000 ft.	000 ft.	000 ft.	000 ft.	000 ft.	000 ft.	000 ft.	000 ft.
12 in.	000 ft.	000 ft.	000 ft.	000 ft.	000 ft.	000 ft.	000 ft.	000 ft.	000 ft.
14 in.	000 ft.	000 ft.	000 ft.	000 ft.	000 ft.	000 ft.	000 ft.	000 ft.	000 ft.
16 - < 24 in.	000 ft.	000 ft.	000 ft.	000 ft.	000 ft.	000 ft.	000 ft.	000 ft.	000 ft.
24 - < 36 in.	000 ft.	000 ft.	000 ft.	000 ft.	000 ft.	000 ft.	000 ft.	000 ft.	000 ft.
36 - 48 in.	000 ft.	000 ft.	000 ft.	000 ft.	000 ft.	000 ft.	000 ft.	000 ft.	000 ft.
60 in.	000 ft.	000 ft.	000 ft.	000 ft.	000 ft.	000 ft.	000 ft.	000 ft.	000 ft.

Forcemains	RCP	PVC	DI	CI	Other (please fill in).
3 in.	000 ft.	000 ft.	000 ft.	000 ft.	000 ft.
4 in.	000 ft.	000 ft.	000 ft.	000 ft.	000 ft.
6 in.	000 ft.	000 ft.	000 ft.	000 ft.	000 ft.
8 in.	000 ft.	000 ft.	000 ft.	000 ft.	000 ft.
10 in.	000 ft.	000 ft.	000 ft.	000 ft.	000 ft.
12 in.	000 ft.	000 ft.	000 ft.	000 ft.	000 ft.
14 in.	000 ft.	000 ft.	000 ft.	000 ft.	000 ft.
16 in.	000 ft.	000 ft.	000 ft.	000 ft.	000 ft.
18 in.	000 ft.	000 ft.	000 ft.	000 ft.	000 ft.
20 in.	000 ft.	000 ft.	000 ft.	000 ft.	000 ft.
24 in.	000 ft.	000 ft.	000 ft.	000 ft.	000 ft.

System Mapping

Are "as-built" plans (record drawings) or maps retained and available for use by field crews?	Choose an item.
Is sewer information maintained in GIS format and include the following? (Check all that apply)	☐ - Locations ☐ - Pipe Material ☐ - Rim Elevations ☐ - Invert Locations and Elevations
Does the municipality maintain atlases instead of a GIS System?	Choose an item.
Does the municipality maintain record drawings of all sewers on file?	Choose an item.
Are the system maps updated annually?	Choose an item.
What process is used to update the system maps? Including, repairs/replacement.	Click here to enter text.
How do field crews record changes or inaccuracies in the maps?	Click here to enter text.
Do the sewer maps include the following (shown on maps or in GIS System)? (Check all that apply)	☐ - Scale ☐ - Access and Overflow Point ☐ - Property Lines ☐ - Pipe Material ☐ - Dimensions of Easements ☐ - Pipe Diameter ☐ - North Arrow ☐ - Direction of Flow ☐ - Length Between the Centers of The Up/Down Stream Manholes
Is information concerning the following attributes collected? (Check all that apply)	☐ - Manholes ☐ - Overflows/Diversions ☐ - Cleanouts ☐ - Pump Stations ☐ - Building Sewers ☐ - Municipal or Other Boundaries ☐ - Forcemains ☐ - Laterals ☐ - Grease Traps ☐ - Air Release Valves ☐ - Main, Trunk, And Interceptor Sewers ☐ - Other Landmarks (Roads, Water Bodies, Etc.)

Repairs and Rehabilitations

	Current Year (Please Enter)	Total Cost (Est.)
Number of Point Repairs Completed	- 000	$ 000
Number of Private Services Rehabilitated	- 000	$ 000
Please complete and attached Appendix D.		

Sewer Use Ordinance (SUO)

Please attach an electronic, hard copy, or link to the Community Website showing the current SUO Program.	Choose an item. Click here to enter text.
Does the SUO contain procedures for the following? Please attach all three.	☐ - Inspection Standards ☐ - Pretreatment Requirements ☐ - Building/Sewer Permits Issued
Does the SUO contain general prohibitions of the following materials:	☐ - Fire and Explosion Hazards ☐ - Obstructive Materials ☐ - Oils or Petroleum ☐ - Corrosive Materials ☐ - Materials Which May Cause Interference at The Wastewater Treatment Plant ☐ - Building Structures Over the Sewer Lines ☐ - Defects in Service Laterals Located on Private Property
Does the SUO contain procedures and enforcement actions for the following:	☐ - Fats, Oils, And Grease (FOG) ☐ - Building Structures Over the Sewer Lines ☐ - Storm Water Connections (Sump Pumps, Gutters, Foundation Drains, Etc.) To Sanitary Lines ☐ - Defects in Service Laterals Located on Private Property
Does the CMOM describe the owner or operator inspection program in-place for grease traps? Who is responsible for inspections?	Choose an item. Click here to enter text.
Have the grease traps been inspected this year in accordance with the CMOM program?	Choose an item.
How many grease traps do you have?	000 – Grease Traps
At what frequency are the grease traps inspected?	Choose an item.
Is there a process in place for enforcing the SUO?	Choose an item.
Have there been any enforcement actions within the past 12 months?	Choose an item.
Are standards, inspections, and approval for new connections clearly documented in a sewer use ordinance (SUO)?	Choose an item.

Continuing Sewer Assessment Plan

Have Inflow / Infiltration (I/I) problems been identified in the collection system? What did the owner / operator cite as the problems associated with I/I? (Manhole overflows, basement flooding, SSOs, stream impacts, threats to CWS)	Choose an item. Click here to enter text.
What is the basis that the owner or operator uses to prioritize their investigation, repairs and rehabilitation related to mitigating I/I?	Click here to enter text.
How often is the plan updated?	Choose an item.

Flow Monitoring/Capacity Analysis

Has the collection system been delineated into major/minor drainage basins?	Choose an item.
Are there permanent meters at each point of discharge to the regional system? Is the flow data stored and available for use within the capacity analysis/model for the regional system?	Choose an item. Choose an item.
How frequently are the meters checked?	Choose an item – Permanent Meters
Do the flow meter checks include the following? (Check all that apply)	☐ - Calibration ☐ - Checking the Desiccant ☐ - Flow Meter Inspection Crew ☐ - Battery Power Level
Are records maintained for each time a meter is checked?	Choose an item.
In leu of flow monitoring, please attach an electronic or hard copy flow estimate. (Include pump run times as available [Day, Week, Month] and pump capacity)	Choose an item. Click here to enter text.
Does the system experience any of the following?	☐ - Sewer Surcharges ☐ - Combined Sewer Overflows ☐ - Basement Backups ☐ - Sewer Overflows
Can the sewer system operator definitively certify that there is adequate capacity within the collection system on the IEPA sewer extension permit application? How?	Choose an item. Click here to enter text.
Do you have all the necessary data for a capacity study? (Check all that are currently on file)	☐ - Rim Elevations ☐ - Invert Elevations and Locations ☐ - Lengths ☐ - Pipe Size ☐ - Flow Monitoring Data
Has the system been modeled?	Choose an item.

When was the system modeled? If not, when will it be modeled?	Date Date
What percentage of the collection system has a 1 year, 5 year, and 10 year level of protection from violation of the Clean Water Act? (protection from basement backups, sewer overflows, combined sewer overflows)	000 % - 1-year level of Protection 000 % - 5-year level of Protection 000 % - 10-year level of Protection

Smoke Testing and Dye Testing

What is the guideline for the maximum amount of the line to be smoked at one time (feet or miles)?	000 - Feet 000 - Miles
Are there guidelines for the weather conditions in which smoke testing should be conducted? Please elaborate.	Choose an item. Click here to enter text.
Do the written records contain the location, address and description of the smoke element that produced a positive result?	Choose an item.
Are positive results documented with labeled photographs?	Choose an item.
What percentage of the system has been smoke tested? Please attach an electronic or hard copy map showing the areas tested.	000 % - Smoke Tested Choose an item. Click here to enter text.
Do you have a dye testing program to identify sources of I/I into the system? Please attach an electronic or hard copy map showing the areas tested.	Choose an item. Choose an item. Click here to enter text.
Are there written procedures for dye testing? Please elaborate.	Choose an item. Click here to enter text.
Have you performed dye testing to determine cross flooding from storm sewers? Please attach an electronic or hard copy map showing the areas tested.	Choose an item. Choose an item. Click here to enter text.
Do the written records contain the location, address and description of the dye element that produced a positive result?	Choose an item.
Are positive results documented with labeled photographs and/or CCTV tapes?	Choose an item.
What percentage of the system has been dye tested? Please attach an electronic or hard copy map showing the areas tested.	000 % - Dye Tested Choose an item. Click here to enter text.

Closed Circuit TV (CCTV) Inspection

What percentage of the system has been TV inspected since adoption of the CMOM program? What percentage was inspected this year? Does this meet the 10% per year televising requirement? At what frequency is the system being CCTV'd? (%/year)	000 - % Complete 000 - % Complete this year. Choose an item. 000 - % Complete each year
Were manholes inspected in accordance to MACP? Was all pipeline inspected according to PACP? Were all lateral connections inspected according to LACP?	Choose an item. Choose an item. Choose an item.

If no, is there documentation explaining the codes used for internal TV reporting?	Choose an item.
Please attach an electronic or hard copy map of the areas that have been televised, or the CCTV program. Identify segments with defects.	Choose an item. Click here to enter text.

Do the internal TV recording logs include the following? (Check all that apply.)	☐ - Inspection Crew ☐ - Distance Recorded by Internal TV ☐ - Location and Identification of the Line Being Televised by Manholes ☐ - Pipe Defects Identified by Footage from the Starting Manhole ☐ - Recommendations for Further Action
Are the tapes linked to your GIS system?	Choose an item.

Private Sector Building or Lateral Inspections

What triggers an inspection? (Basement backup, building permit, transfer of property, time, etc.)	Click here to enter text.
Are inspections authorized by ordinance?	Choose an item.
Are there written procedures for the inspections?	Choose an item.
How many inspections were performed last year? Are they documented?	000 – Inspections Choose an item.
How many sewer laterals were repaired?	000 – Sewer Lateral Repairs
How many illegal sump pumps were removed?	000 – Removed
How many illegal foundation/yard drains were removed?	000 – Removed
Please attach an electronic or hard copy map of the locations found/repaired.	Choose an item. Click here to enter text.

Maintenance Quantities	Two years Prior (Enter Year)	Current Year (Enter Year)	Total	% Contracted Out
Cleaning (miles)	000	000	000	000
Root Removal (miles)	000	000	000	000
Mainline blockages cleared	000	000	000	000
House blockages cleared	000	000	000	000
Other	000	000	000	000

Maintenance Man-hour Estimates	Two years Prior (Enter Year)	Current Year (Enter Year)	Total
Cleaning	000	000	000
Root removal	000	000	000
Mainline blockages	000	000	000
House blockages	000	000	000
Other	000	000	000
Total Man-hours	000	000	

Hydrogen Sulfide Monitoring and Control

Does the collection system have a hydrogen sulfide problem?	Choose an item.
Are odors a frequent source of complaints?	Choose an item.
Do you have a corrosion control program in place?	Choose an item.
Does the utility have written procedures for the application of chemical dosages?	Choose an item.
Are the chemical dosages, dates, and locations documented?	Choose an item.
Are the following methods used for hydrogen sulfide control? (Check all that apply)	☐ - Aeration ☐ - Chlorine ☐ - Iron Salts ☐ - Sodium Hydroxide ☐ - Hydrogen Peroxide ☐ - Potassium Permanganate ☐ - Bioxide ☐ - Other

Collection System Management

Organizational Structure

Is there an organizational chart that shows the overall personnel structure for the collection system, including operation and maintenance staff?	Choose an item.
Is collection system staff responsible for any other duties, such as, road repair or maintenance, O&M of the storm water collection system?	Choose an item.
Total number of equivalent full time O&M personnel (including administrative support of O&M department)	000 - Personnel.
What O&M work is contracted out, if any? What percent of the total O&M workload is this (estimate)?	Click here to enter text. 000 %

Training

Is there a formal training program? Does the CMOM list the training requirements for the collection system personnel? Please attach an electronic or hard copy of the training program, if available.	Choose an item. Choose an item. Choose an item. Click here to enter text.
Does the training program address the fundamental mission, goals, and policies of the utility? Please attach an electronic or hard copy of the utility mission, goals and policies.	Choose an item. Choose an item. Click here to enter text.
Do you provide training in the following areas? (Check all that apply.)	☐ - Safety ☐ - Routine Line Maintenance ☐ - Confined Space Entry ☐ - Pipe Repair ☐ - SSO/Emergency Response ☐ - Traffic Control ☐ - Public Relations ☐ - Pump Station Operations/Maintenance ☐ - Lock-Out/Tag-Out ☐ - Record Keeping ☐ - Electrical/Instrumentation ☐ - Other Please Specify.
Is there a system to track employee training?	Choose an item.

Collection System Management: Management Information Systems (MIS)

Does the CMOM identify the types of work reports prepared by the collection system managers/staff?	Choose an item.
How long are records kept for?	Choose an item.
Does CMOM list standard operating practices (SOP) for tracking the following:	☐ - Complaint Investigations ☐ - Work Orders ☐ - Preventative Maintenance ☐ - Inspections ☐ - Equipment/Tools Tracking ☐ - Parts Inventory ☐ - Monitoring/Sampling ☐ - Safety Incidents
Please attach an electronic or hard copy for each of identified CMOM Standard Operating Practices (SOP).	Choose an item. Click here to enter text.

SSO Notification Program

Does the owner or operator have SOPs for notifying the IEPA, local Health Department, and the drinking water purveyor of all SSO events? Please attach hard or electronic copies of the SOPs.	Choose an item. Choose an item. Click here to enter text.
Are the above notification procedures dependent on the size or location of the overflow? If so, does the CMOM describe this procedure?	Choose an item. Choose an item.
Is there a standard form for recording overflow events? Does it include the following?	Choose an item. ☐ - Date and Time ☐ - Location ☐ - Type ☐ - Receiving Water ☐ - Duration of Overflow ☐ - Cause ☐ - Names of Affected Water ☐ - How it was stopped ☐ - Cleanup Efforts ☐ - Timeline ☐ - Long-term Remedies ☐ - Estimated Flow/Volume Discharged

Tracking SSOs

What percent of backups/SSOs are caused by the following?	000 % - I/I – Wet Weather 000% - Roots 000 % - Grease 000% - Pipe Failure 000 % - Other Click here to enter text.

Equipment and Collection System Maintenance

Are there established maintenance and performance goals? If yes, please state the goals.	Choose an item. Click here to enter text.
What is the quantity of total staff hours that are devoted to regularly scheduled maintenance? (As opposed to reactive or emergency maintenance.)	000 - Annual Maintenance Hours

Manholes

Do you have a routine manhole inspection and assessment program?	Choose an item.
Are there written procedures for manhole inspections?	Choose an item.
Is there a data management system for tracking manhole inspection activities?	Choose an item.
Do the records for manhole/pipe inspection include the following? (Check all that apply.)	☐ - Conditions of the Cover ☐ - Presence of Corrosion ☐ - Conditions of the Frame ☐ - Inspection Crew ☐ - If Repair is Necessary ☐ - Evidence of Surcharge ☐ - Accumulations of Grease, Debris, Or Grit ☐ - Offsets of Misalignments ☐ - Wastewater Flow Characteristics (Flowing Freely/Backed Up) ☐ - Atmospheric Hazards Measurements (Especially Hydrogen Sulfide) ☐ - Manhole Identifying Number/Location ☐ - Details on Defects That Cause Cracks or Breaks in The Manhole or Pipe
Please attach an electronic or hard copy map of the manhole inspected this year. Identify manholes requiring repair.	Choose an item. Click here to enter text.

Sewer Cleaning

What percentage of the system has been cleaned since adoption of the CMOM program? What percentage of the system was cleaned this year? Does this meet the 10% per year cleaning requirement?	000 - % Complete 000 - % Complete this year. Choose an item.
Please attach an electronic or hard copy map of the areas that have been cleaned since CMOM adoption.	Choose an item. Click here to enter text.
Are blockage locations plotted on maps and correlated with other data such as pipe size and material?	Choose an item.
Which of the following information do Sewer Cleaning Records contain?	☐ - Date and Time ☐ - Method of Cleaning ☐ - Cause of Stoppage ☐ - Routine Cleaning Activity
Is there a program to identify sewer line segments that have chronic problems and stipulates that these segments be cleaned on a more frequent schedule? If so, please attach an electronic or hard copy map identifying those locations.	Choose an item. Choose an item. Click here to enter text.
Please attach an electronic or hard copy map of the sewers cleaned this year.	Choose an item. Click here to enter text.

Sewer Cleaning – Chemical Cleaning and Root Removal

Does the owner or operator have a root control program?	Choose an item. Choose an item.

If so, please attach an electronic or hard copy map identifying those locations.	Click here to enter text.
Are chemical cleaners used? If so, does the CMOM identify which chemical cleaners are used? Are MSDS available?	Choose an item. Choose an item. Choose an item.
How often, and by what method, are the chemical cleaners applied?	Choose an item. Click here to enter text.
Please attach an electronic or hard copy map of the sewers chemically cleaned or root removed has occured this year.	Choose an item. Click here to enter text.

Collection System Operation

Budgeting

Please attach an electronic, hard copy, or link to the Community Website showing the current User Rates.	Choose an item. Click here to enter text.
What is the average annual sewer service fee ($/1000 gal)?	$ 000 /1000 gal.
At what frequency are user rates evaluated and adjusted?	Choose an item.
Does the CMOM address whether the current level of funding from its revenues is sufficient?	Choose an item.
Does the maintenance budget allocate funds for the following?	☐ - Predictive Maintenance ☐ - Preventative Maintenance ☐ - Corrective Maintenance ☐ - Emergency Maintenance
What percentage of the utilities overall budget is allocated to maintenance of the collection system?	000 % - Predictive Maintenance (Tracking Design, Life Span, and Scheduled Parts Replacements) 000 % - Preventative Maintenance (Identifying/Fixing System Weaknesses Such as Cracks and Leaks) 000 % - Corrective Maintenance (Fixing System Components That Are Functioning but Not At 100%, For Example Partially Blocked Lines) 000 % - Emergency Maintenance (Reactive Maintenance, Overflows, Equipment Breakdowns)
How are priorities determined for budgeting for O&M?	Click here to enter text.
Does the owner/ operator maintain a fund for future equipment and infrastructure replacement?	Choose an item.
Please attach an electronic, hard copy, or link to the Community Website showing the current Budget.	Choose an item. Click here to enter text.
Identify future maintenance needs (complete Appendix D-1 Inspection Summary).	Choose an item. Click here to enter text.

Maintenance/Capital Budget History

TOTAL DOLLARS SPENT		
	Two Years Prior (Enter Year)	Previous Year (Enter Year)

Annual Maintenance Costs	$ 000	$ 000
Annual Repair Costs	$ 000	$ 000
Identify projects completed this year (complete Appendix D – 2 Repair Summary)		Choose an item. Click here to enter text.
Please attach an electronic or hard copy map of manhole repairs/replacement, sewer lining/replacement, spot repairs, pump repair/replacement this year.		Choose an item. Click here to enter text.

Safety

Does the owner or operator have SOPs for the following?	☐ - Lockout/Tag Out ☐ - MSDS ☐ - Chemical Handling ☐ - Trenching and Excavation ☐ - Confined Spaces Permit Program ☐ - Biological Hazards in Wastewater ☐ - Traffic Control (Barricades) And Work Site & Public Safety ☐ - Electrical and Mechanical Systems ☐ - Pneumatic and Hydraulic Systems Safety
Is there a permitting system for confined space entry procedure for manholes, wet wells, etc.?	Choose an item.
Does the owner or operator possess the following equipment items?	☐ - Confined Space Ventilation Equipment ☐ - Tripods or Non-Entry Rescue Equipment ☐ - Equipment to Enter Manholes ☐ - Portable Crane/Hoist ☐ - Atmospheric Testing Equipment ☐ - Gas Detectors (Oxygen Sensors, H_2s Monitors, Methane Gas, and LEL Metering)?
CMOM specify the frequency for review of safety procedures and revisions when necessary? With what frequency?	Choose an item. Choose an Item.

Emergency Preparedness and Response

Does the owner or operator have an emergency response plan?	Choose an item.
How often is the plan reviewed and updated? Date it was last updated?	Choose an item. Date of recent update.
Does the plan take into consideration the following?	☐ - Vulnerable Points Within the System ☐ - Severe Natural Events ☐ - Mitigation Measures ☐ - Failure of Critical System Components ☐ - Vandalism or Other Third-Party Events ☐ - Root Cause Analysis Protocol
Are staff trained and drilled to respond to emergency situations? Are their roles & responsibilities detailed for all personnel who respond to emergencies?	Choose an item. Choose an item.
Are there emergency operation procedures for equipment and processes? Including 24/7	Choose an item.

notification of IEMA; Local Health Department; and drinking water authorities?	Choose an item.
Does the procedure include an up-to-date list of the names, titles, phone numbers, and responsibilities of all personnel involved?	Choose an item.
Does the owner or operator possess containment techniques (booms, inlet covers) to protect the storm drainage systems?	Choose an item.

Engineering - Construction

Please attach electronic, hard copies or web link(s) to the Community Website for information including the following: • Design Standards • Construction Standards • Construction Supervising/Testing Practices • Life Cycle Cost Analysis	Design Standards Choose an item. Click here to enter text. Construction Standards Choose an item. Click here to enter text. Construction Supervising/Testing Practices Choose an item. Click here to enter text. Life Cycle Cost Analysis Choose an item. Click here to enter text.
Are O&M staff involved in the design review process?	Choose an item.
Does the owner or operator follow standard procedures in conducting their construction inspection and testing program (Standard Specifications for Water and Sewer Main Construction in Illinois, 5th ed.)? How is the new gravity sewer construction tested? (Infiltration, exfiltration, deflection testing, etc.) Conformance with IEPA Permit requirements?	Choose an item. Click here to enter text. Choose an item.
Are new manholes tested for inflow and infiltration?	Choose an item.
What tests are performed on pump stations? Are records kept for all tests performed on pump stations?	Click here to enter text. Choose an item.
What tests are performed on force mains? Are records kept for all tests performed on force mains?	Click here to enter text. Choose an item.

Communication and Customer Service

Does the owner or operator have a formal procedure in place to evaluate and respond to complaints?	Choose an item.
Are specifics on their complaint records system included? Please elaborate.	Choose an item. Click here to enter text.
Do customer service records include the following information?	☐ - Personnel Who Received the Complaint ☐ - Nature of Complaint ☐ - Location of Problem ☐ - Date Complaint Filed ☐ - Follow-up Action ☐ - Date Follow-up Action Assigned ☐ - Date Complaint Resolved

	☐ - Feedback to Customer ☐ - Cause of the Problem
How many people are available to answer calls (during workday and after hours)?	000 - During the Workday 000 - After Hours.
What is the average number of non-emergency calls received per week?	000 - Calls.

Pump Station General

The total number of pump stations within the system is recorded? Is the location and design (submersible, wet-well/dry-well, suction lift) recorded? Please attach an electronic or hard copy.	Choose an item. Choose an item. Choose an item. Click here to enter text.
A contingency plan for a loss of power situation is in place?	Choose an item.
How is loss of power at a station dealt with? (i.e. on-site electrical generators, alternate power source, portable electric generator(s))	Click here to enter text.
Is there a list of available equipment for pump station bypass? Please attach an electronic or hard copy.	Choose an item. Choose an item. Click here to enter text.
Detail investigative process in-place for causation analysis of the pump station failure and measures taken to prevent future failures?	Choose an item.
Are Standard Operation Procedures (SOPs) and Standard Maintenance Procedures (SMPs) used for each station?	Choose an item.
Is there an alarm system to notify personnel of pump station failures and overflows?	Choose an item.
Does the utility use a supervisor control and data acquisition (SCADA) system?	Choose an item.
Is there a procedure for maintaining pump operations (manually or automatically) during wet weather to increase in-line storage of wet weather flows?	Choose an item.
Are operation logs maintained for all pump stations?	Choose an item.
Are the original manuals that contain the manufacturer's recommended maintenance schedules for all pump stations equipment easily available?	Choose an item.
How many pump stations have pump capacity redundancy?	000 - Pump Stations with Capacity Redundancy.
How many pump stations have back-up power sources?	000 - Pump Stations with Back-Up Power.
How many pump stations have dry weather capacity limitations?	000 - Pump Stations with Dry Weather Capacity Limitations.
How many pump stations have wet weather capacity limitations?	000 - Pump Stations with Wet Weather Capacity Limitations.
How many pump stations have running time errors?	000 - Pump Stations with Running Time Errors.

Inspection

Included is the frequency of the pump stations inspections? With what frequency?	Choose an item. Choose an item.
Is there a checklist?	Choose an item.
Are records maintained for each inspection?	Choose an item.
Do pump station inspections include the following information? (Check all that apply)	☐ - Pump Packing ☐ - Pump Bearings ☐ - Pump Suction Pressure ☐ - Pump Discharge Pressure ☐ - Pump Motor Amperage ☐ - Pump Motor Temperature ☐ - Pump Motor Voltage ☐ - Pump Motor Shaft Alignment ☐ - Check and Pressure Relief Valves ☐ - Check Oil Levels and Lubrication ☐ - Exercise the Emergency Generator (If Present) ☐ - Wet Well Levels Are Properly Set.
How frequently are the lead, lag, and backup pumps rotated?	Choose an item If other, please specify.

Emergency Response and Monitoring

How are lift stations monitored?	Click here to enter text.
Is there an Emergency Operating Procedure for each pump station?	Choose an item.
Individual(s) is(are) identified to respond to system failures and overflows? Who responds to lift station failures and overflows? How are they notified?	Choose an item. Name of Individual. Click here to enter text.

Recordkeeping

Are operations logs maintained for all pump stations?	Choose an item.
Records include frequency with which the pumps are serviced?	Choose an item.
Pump run times are maintained for all pumps?	Choose an item.
Elapsed time meters used to assess performance?	Choose an item.
Annual draw down tests conducted?	Choose an item.

Routine Force Mains and Air/Vacuum Valves

Forcemains are inspected with regular frequency? With what frequency?	Choose an item. Choose an item.
Detail investigative process in-place for causation analysis of force main failure and measures taken to prevent future failures?	Choose an item.
Does the owner or operator have a regular maintenance/inspection program for air/vacuum valves?	Choose an item.