CAPACITY, MANAGEMENT, OPERATION AND MAINTENANCE (CMOM) PROGRAM ANNUAL REPORT FOR 2017

Milwaukee Metropolitan
Sewerage District

June 2018

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PROGRAM OVERVIEW

The Milwaukee Metropolitan Sewerage District (District) updated and submitted to the Wisconsin Department of Natural Resources (WDNR) documentation of its Capacity, Management, Operation and Maintenance (CMOM) Program in June 2014. This documentation was an update to the original CMOM program documents that were developed in 2007. The updates incorporated changes identified through an overall program audit that was performed in 2012. To oversee and assist with efforts related to the CMOM Program, a CMOM Committee consisting of District staff from the Planning, Research, and Sustainability, Technical Services, Legal Services, and Water Quality Protection divisions has been in place since 2007. Changes to the Program are made through consensus of the committee. The CMOM Committee also provides oversight on the preparation of the CMOM Program Annual Report.

The District CMOM Program includes the three primary areas of operations: wastewater conveyance, wastewater treatment, and watercourse systems. Further, the District CMOM Program provides a process to (1) audit District practices and documentation, (2) bring the documentation under one umbrella to ensure consistent practices, and (3) improve management of capital assets.

The CMOM Program is used as a method for the District to document current and proposed activities that are intended to help the District achieve goals related to overflows, effluent quality, and watercourse flood management. In addition, the annual reporting and auditing effort allows periodic assessment of practices and procedures and implementation of systematic improvements.

1.1 REPORT PURPOSE

The CMOM Program Annual Report provides summary descriptions of CMOM Program activities (past and planned) and is intended to be a communication tool. The report is intended for District staff, regulatory authorities, customers, and the general public. The report serves four general purposes:

1. To provide an overview of the activities completed under the CMOM Program on an annual basis;
2. To describe and document changes to the CMOM Program documentation on an annual basis, which may include changes to objectives, strategies, tactics, and performance measures;
3. To describe the activities that are planned or currently being undertaken under the CMOM Program; and

4. To meet the requirements of the District's Wisconsin Pollutant Discharge Elimination System (WPDES) Permit from the Wisconsin Department of Natural Resources (WDNR) under section 4.3 Asset Management, which states "By June 30 of each year the Permittee will complete and submit to the Department a CMOM update report."

The report consists of this Program Overview section plus one section for each of the CMOM Program Plans that are summarized below.

1.2 PROGRAM SUMMARY BY PLAN

The District's CMOM Program includes a Management Plan, Asset Management Program, Overflow Response Plan, System Evaluation and Capacity Assurance Plan (SECAP), Communication Plan, and Audit Plan. A general description of each plan is included immediately below. Significant activities that took place in 2017 under each plan are discussed in the individual chapters devoted to each plan. Performance measures are included in the CMOM Program under the Management Plan, and are included as Attachment 1.

Management Plan

The Management Plan describes the goals and objectives of the District related to wastewater conveyance, wastewater treatment and watercourse systems, the strategies and tactics the District is employing to achieve the goals, and the performance measures being used to assess attainment of the goals.

The goals of the CMOM Program for the District are divided into four areas: 1) Overall; 2) Conveyance; 3) Treatment; and 4) Watercourse.

The goal and objectives for each of the four areas are listed below.

Overall Goal

The MMSD will implement and continuously improve a cost-effective CMOM Program based upon best practices for wastewater conveyance, wastewater treatment and watercourse systems, which results in maximizing the capacity of the existing and planned facilities to convey and treat wastewater, providing flood management, and improving water quality in the MMSD planning area. The program must be consistent with goals from other MMSD policies and facilities plans.

Overall Objectives

1. Continue the support of the CMOM Program within the District organizational structure.
2. Communicate the goals and objectives of the CMOM Program to internal and external stakeholders, monitor the CMOM Program, and institute program modifications.
3. Continue to maintain adequate financial planning.

4. Continue to comply with regulatory requirements.
5. Continue to support and monitor the regional CMOM program.
6. Continue to maintain a safe work environment and facilities and also sustain a competent workforce.

Conveyance Goal

The MMSD will implement and continuously improve a CMOM Program with the intent of eliminating all SSOs except as allowed by Title 40 of the Code of Federal Regulations, §122.41 (m) (4), and minimizing combined sewer overflows (CSOs) in accordance with the current WPDES permit and Long Term Control Plan.

Conveyance Objectives

1. Establish CMOM program elements specific to minimizing the number and volume of CSOs.
2. Continue to implement and support the Wet Weather Peak Flow Management Program.
3. Where possible, establish additional practices to prevent sanitary sewer overflows (SSOs), maintain or improve system performance, and avoid preventable failures.
4. Continue to establish and document level of protection, design, and performance standards for new conveyance assets constructed in the District service area, and consider documented and predicted changes in climate.
5. Minimize the cost of conveyance asset ownership while maintaining necessary stewardship of assets and achieving defined protection levels.
6. Enhance District level of knowledge and understanding of wet weather flows and system response to precipitation and other factors.
7. Promptly and accurately respond to customer inquiries.

Treatment Goal

The MMSD will implement a CMOM Program for cost-effective wastewater treatment that will achieve and sustain:

- Effluent, biosolids, and air emissions that comply with regulatory and permit requirements
- Sustain operational readiness, reliability, and redundancy for liquid and solids processing
- Achieve asset management implementation
- Improve coordination of wastewater treatment plant operations with collection system facilities and staff
- Improve proper work management related to maintenance

Treatment Objectives

1. Continue to provide effluent quality that complies with Wisconsin Pollutant Discharge Elimination System (WPDES) permit requirements and effluent quality goals.
2. Continue to optimize effectiveness of wet weather treatment capacity.

3. Continue to manage biosolids in a manner that maximizes beneficial reuse in a cost effective manner.
4. Continue to document capacity, design and performance standards for new treatment plant assets, and consider documented and predicted changes to climate.
5. Minimize the cost and acceptable levels of risk of wastewater treatment asset ownership while achieving performance levels.

Watercourse Goal

The MMSD will implement and continuously improve a CMOM Program intended to minimize the risk of flooding associated with the one percent probability flood event to habitable structures along jurisdictional streams in an environmentally responsible and cost-effective manner, according to MMSD Rules, Chapter 13, and Watercourse Management Plans.

Watercourse Objectives

1. Within jurisdictional streams, cost-effectively remove or reduce the consequences to habitable structures from flooding associated with the one-percent probability flood event.
2. Reduce the likelihood of new habitable structures being added to the one-percent probability floodplain.
3. Establish and document level of protection (inflow and infiltration reduction and flood risk reduction), design, and performance standards for new assets in the watercourse system.
4. Minimize the cost of watercourse asset ownership while maintaining necessary stewardship of assets and achieving defined protection levels.
5. Continue to be a leader in the effort to improve the area's water quality.
6. Promptly and accurately respond to customer inquiries regarding watercourses.

Performance Measures

A complete list of the performance measures and the value/status for 2015 through 2017 is included in Attachment 1. The purpose of the performance measures is to track District activities over time and gauge achievement of District objectives.

Some of the performance measures are also benchmarking measures that can be used to quickly gauge the overall performance of the District against other wastewater utilities. These performance measures are shown in Table 1.

Asset Management Program

The Asset Management Program has evolved to become an organizational management strategy that impacts all facets of the CMOM Program as well as issues outside the scope of the District CMOM program. This section provides a description of asset management principles, a brief history of asset management implementation at the District, an overview of the program

drivers, the organizational structure to implement asset management, a description of the continuous improvement process being implemented to integrate asset management within the District, and a listing of key program documentation.

Overflow Response Plan

The Overflow Response Plan describes the measures the District has put in place to be aware of, respond to, and provide notification of overflows from the District system.

The District's contract operator, Veolia Water Milwaukee (Veolia), has the equipment and personnel and is required by the District (through the Agreement for operation and maintenance services) to be the first responder for emergencies and overflows from the conveyance system. As required in the Agreement, Veolia has developed overflow and emergency response plans that are submitted and reviewed annually by the District.

Veolia is not responsible for responding to watercourse issues with the exception of the stormwater pumping station located at North 42nd Street and West Mt Vernon Avenue in the City of Milwaukee. In 2009, the District completed a watercourse emergency response plan that is implemented when there is the threat of severe rain, flooding, or issuance of a flood warning by the National Weather Service. This is updated on an as-needed basis. In 2011, the District prepared an Emergency Action Plan (EAP) for the Milwaukee County Grounds Dam. The EAP describes actions to be taken during an unusual or emergency event at the Milwaukee County Grounds Dam. The EAP is updated annually with a review by stakeholders biennially.

System Evaluation and Capacity Assurance Plan (SECAP)

The SECAP describes actions the District has taken and will take to determine capacity requirements, evaluate system capacity, and undertake capacity enhancement measures.

The District completed and submitted the 2020 Facilities Plan (2020 FP) to the WDNR in June of 2007. The 2020 FP was a broad-scope effort and looked not only at facilities required for the District to provide services, but also at methods of improving the quality of the region's water resources. As part of the 2020 FP development process, an analysis of the capacity requirements and available storage and capacity was performed to determine additional facilities needed through the year 2020. The 2020 FP recommended additional treatment and conveyance facilities that may be needed, depending on several factors, including population growth, additional monitoring and analysis, success of I/I reduction efforts, etc.

The District initiated planning for the 2050 Facilities Plan (FP) in 2014 and the plan is expected to be completed in early 2019. The 2050 FP will evaluate and update outstanding recommendations from the 2020 FP related to conveyance and treatment capacity requirements. Using an asset management approach to produce the 2050 FP also is establishing a process of continually evaluating assets.

The District also continues to perform individual capacity analyses and studies in the conveyance and treatment system as described in Section 5 of the Program documentation.

The District also has previously completed Watercourse System Plans that outline the efforts needed to provide flood flow conveyance and protect habitable structures from flood flows. The plans are primarily updated in response to updated floodplain conditions. The area floodplains are periodically updated by regional agencies and the municipalities to reflect updated flood risks based on changes to hydrologic conditions, hydraulic conditions, or both.

Communication Plan

The Communication Plan serves to document the types and frequency of communications that will be prepared and distributed regarding the CMOM Program and CMOM Program Annual Report.

Audit Plan

The Audit Plan serves to define the method, responsibilities, timeline, and documentation that will be used to complete an audit of the District CMOM Program. The first audit and program update of the CMOM Program was completed in 2014. The process, findings and actions to be taken based on the audit results are described in Section 7 of the Program documentation.

TABLE 1: BENCHMARKED PERFORMANCE MEASURES

Functional Area	Performance Measure	District 2017 Value	Benchmark Value[1]		
			Top Quartile	Median	Bottom Quartile
Program Organization	Organizational Best Practices Index	37	40	30	26
Finance	Bond Ratings	AAA (Fitch), Aa1 (Moody's), AA+ (S&P)	AAA[2]	AA[2]	A[2]
Personnel & Safety	Annual Training Hours per Employee	29.7	67	23	18
System Performance	NACWA Peak Performance Award[3]	Platinum	Not applicable		
System Performance	Conveyance System Integrity	0 failures/100 miles of pipe	0.7	2.2	3.3
Asset Management	Planned Maintenance Ratio: Sewers (hours)	61%	73%	83%	95%
Asset Management	Planned Maintenance Ratio: Conveyance Equip (hours)	72%	73%	83%	95%
Asset Management	Planned Maintenance Ratio: Treatment (hours)	52%	73%	83%	95%
Asset Management	O&M Cost per MG Treated	$1,110/MG	-	$2,399	-

[1] Benchmark is defined in *Benchmarking Performance Indicators for Water and Wastewater Utilities: 2012 Annual Survey Data and Analyses Report, Copyright 2014, American Water Works Association.*
[2] Aggregate data from Fitch, Moody's, and S&P grades was used to develop this value.
[3] The National Association of Clean Water Agencies (NACWA) Peak Performance Awards is a benchmark across various wastewater utilities across the country. Platinum is the highest award possible.

MANAGEMENT PLAN

This section of the report discusses changes to the defined performance measures and evaluation of the District's performance using the defined measures. Review of performance using defined measures is intended to be an evaluation of the District's status with respect to achieving its goals and objectives. The review then provides impetus to continue existing strategies and tactics or to modify them to better achieve the objectives.

2.1 PERFORMANCE MEASURES

Performance measures were originally defined in section 2.2.6 of the CMOM Program documentation submitted to the WDNR in June 2007. The updated performance measures are now defined in section 2.7 of the updated CMOM Program documentation submitted to the WDNR in June 2014. Future modifications to the measures will continue to be documented in the annual reports.

2.1.1 CHANGES TO THE DEFINED PERFORMANCE MEASURES

No performance measures had modifications in this reporting period.

2.1.2 EVALUATION OF 2017 PERFORMANCE BASED ON THE DEFINED MEASURES

All the individual performance measures and the value or status for the years 2015 through 2017 are included in Attachment 1 to this report. A review of recent performance measures indicates the following District strengths, areas in which improvements have been made, and areas in which improvements should be focused.

District Strengths

- Treatment plant effluent quality
- Achieving objectives related to overflows
- Managing operation of the Inline Storage System
- Beneficial reuse of biosolids
- Financial status
- Reducing the number of open preventative maintenance (PM) work orders older than 90 days (conveyance equipment, pump stations, and sewers)

- Elimination of conveyance and watercourse construction project updates backlog to the geographic information system (GIS)

Improvements Made

- Organizational Best Practices Index
- Percent of treatment plant and conveyance field site assets with defined condition

Improvements Desired

- Perform additional condition monitoring of treatment plant and watercourse assets
- Reduce the number of corrective maintenance (CM) and preventative maintenance (PM) work orders older than 90 days (treatment plant equipment)
- Increase annual training hours per employee
- Increase the number of presentations by District personnel that include water quality information

2.2 MANAGEMENT PLAN REVISIONS

There were no changes made to the District's objectives, strategies, tactics or performance measures during 2017.

ASSET MANAGEMENT PROGRAM

The District Asset Management Program was initially developed as a chapter of the CMOM Program, titled the "Asset Management Plan." The Asset Management Program has evolved to become a management strategy that is being implemented throughout the organization that impacts all facets of the CMOM Program as well as organizational issues outside the scope of the District CMOM program. The District will continue to include information and updates on the Asset Management Program within the CMOM Program documentation and annual reports; however, the level of detail previously included in the "Asset Management Plan" will be in other Asset Management Program documents and referenced in the CMOM Program documents. Revisions to the CMOM Program documentation that have been incorporated in 2014 as a result of the first program audit reflect the reduced level of detail regarding Asset Management that is contained within the CMOM Program.

3.1 GAP ANALYSIS/AM STRATEGY

In 2013, the District identified the need to perform a gap analysis to identify progress of the Asset Management Program and determine the current gaps required to be closed. A gap analysis is a systematic process to characterize or profile an organization's current asset management (AM) business practices. A gap analysis measures where an organization is in its AM practices relative to where it wants to be within a specified period of time. The gap, as one might expect, is the distance between the "as is" of the current environment and the "to be" of the desired future state of the organization. This was the first overall program evaluation since the original gap analysis that was performed during development of the CMOM program. After evaluating several different gap analysis tools that could be used, including the original 2005 gap analysis format developed in the CMOM Strategic Plan, the SAM-GAP tool developed by the Water Environment Research Foundation (WERF) was selected. It was determined that WERF's SAM-GAP tool was the most applicable since it has been rigorously tested over time, is updated against current best practices, is industry specific (water and wastewater), and allows performance to be easily updated over time using a web-based tool.

Recommendations of the gap analysis were reviewed and used to develop the 2014 Asset Management Strategy that identified the specific areas of improvement to be addressed in future years. Recommendations from the 2013 gap analysis and the corresponding improvements identified to be implemented have helped establish the direction of the asset management program. Significant improvements to the program that have been identified are listed below with a brief description of their status:

- Development of a Commission-level policy defining Asset Management that was approved in April 2014.
- Development of an Asset Management Strategy document to define continuous improvement tasks required that was completed in February 2014. (The Strategy document is a living document that is updated as tasks are completed and new tasks are added).
- Planning efforts under the District's 2050 FP follow an Asset Management framework. An Asset Management Plan covering the District asset systems (Conveyance, Treatment, Watercourse, Administrative Facilities, and Green Infrastructure) will be included as a deliverable in the 2050 FP. Completion of the 2050 FP is scheduled for 2019.
- Initiation of the Asset Management Standards Improvement project began in 2014 and was completed in 2017. The project developed consistent standards for data and information required to manage assets by defining things such as asset hierarchy, class, and useful life. A workflow was developed and documented for data and information updates. The project also consisted of some data cleanup.

3.2 PROCESS AND DATA IMPROVEMENTS

Throughout 2017, the District continued to improve asset management processes and data quality and accuracy. Several significant efforts are listed below.

- The District continued the process of reconciling treatment plant asset data by reviewing both the computerized maintenance management software (CMMS) asset listing and the accounting fixed asset listing. The two lists are compared against each other to obtain a complete list of assets. The two lists do not always share a common asset numbering or naming convention. After the comprehensive list of assets is compiled, the assets are field verified to confirm they are still in service and to obtain available asset numbering information that is physically attached to the assets. Hard copy construction transmittal documents are also reviewed to obtain costs and installation dates. The final step requires updating the District's asset management database, which in turn updates the CMMS program on a weekly basis. A significant amount of this work was completed in 2017. However, it will be a continuous task that will go beyond 2017.
- The District continued the improved process to identify assets added, removed, or modified under capital projects. The new process was developed in 2012 and requires meetings early in the design phase of projects between the District project manager, consultant designer, contract operator, and District asset management staff to specifically discuss the assets being added, modified, or removed on a project. The deliverable from the meetings is a project table, prepared by asset management staff and included in the contract plans, that provides a listing of all assets included in the project along with some key asset information including MMSD asset number, CMMS number, asset description, asset cost, and substantial completion date. The tables are generated and stored in the asset management database. As of early 2018, the District has prepared asset tables for 171 projects.
- In 2015, the 2050 FP team developed an organizational risk methodology that will be used consistently across the organization to score risks. The methodology incorporates an assessment of both the Likelihood of Failure and Consequence of Failure due to identified risks to develop a risk score. The risk scoring will be used to help prioritize areas of investment for both Operations and Maintenance activities and Capital Improvements. The scoring system will allow comparison of risks between different asset systems to more consistently prioritize spending. In 2016, this method was used to initially populate risk registers for all five asset systems. The risk registers are being used to develop capital projects and are continuously updated.

- In 2016, a Business Case Evaluation (BCE) tool was developed as part of the 2050 FP. The tool assesses risks by assigning scores across seven categories based on likelihood and consequence of failure. Next, alternatives are developed and evaluated for risk reduction and cost estimate. Finally, a summary and recommendation is completed. The 2050 FP team began using the tool to evaluate the highest risks further to identify the best alternatives. Asset Management staff also began preparing BCEs. As of early 2018, 26 BCEs have been developed.
- In 2017, reconciliation of the asset database and fixed-asset accounting database began. Currently, those are maintained independently and are not linked. The work will continue into 2018.

OVERFLOW RESPONSE PLAN

The overflow response plan (ORP) included with the CMOM Program documentation includes listings of outfall locations (both SSO and CSO), as well as methods in place for knowing there is an overflow, response procedures, analysis, and public notifications. These plans are documented and implemented when responding to overflows and emergencies.

4.1 OUTFALL LOCATIONS

No changes were made to outfall locations in 2017. A full list of the SSOs and CSOs can be found in Exhibits 1-7 and 1-8 of the *Collection Systems Annual Inventory and Performance Report*.

4.2 CONTACT LISTS

The District's list of municipal phone numbers for emergency situations has been updated. The updated list is included as Attachment 3 to this report. The District's situational contact list has been updated and sent out to the satellite municipalities. The contact list is included as Attachment 4 to this report.

4.3 EMERGENCY RESPONSE PREPAREDNESS

In 2008, Veolia submitted the initial overflow response plan and emergency response plan. The overflow response plan details the steps to be taken when a potential overflow is identified, whether it is an SSO or CSO. The steps include notifications, dispatch of crews, containment,

and feedback. The emergency response plan includes actions to be taken during various emergency situations including severe weather, spills of hazardous substances into the conveyance system, power failures, and other treatment plant and conveyance system emergencies that impact the collection, conveyance, and treatment of sewage. Veolia provides annual updates to both the overflow response plan and emergency response plan. Both plans were updated in 2017.

With the transition of the operating contract from United Water to Veolia in 2008, the District removed the duties related to watercourse maintenance and responding to watercourse issues and emergencies. With this change, the District began tracking watercourse related emergencies and complaints. In 2009, the District completed a watercourse emergency response plan that is implemented when there is the threat of severe rain, flooding, or issuance of a flood warning by the National Weather Service. The most recent update was completed in 2015. In 2011, the District prepared an Emergency Action Plan (EAP) for the Milwaukee County Grounds Dam. The EAP describes actions to be taken during an unusual or emergency event at the Milwaukee County Grounds Dam. The most recent update was completed in 2013. Both documents are expected to be updated in 2018.

In 2017, the District and Veolia responded to numerous non-emergency and emergency situations such as spills, odor complaints, damage to District assets, and debris in the watercourse systems.

4.4 INCIDENT ANALYSIS

Since 2006, the District has been preparing documentation, generally called root cause analyses (RCAs), regarding pipe breaks, equipment and infrastructure problems, overflows, and those Combined Sewer Wet Weather Flow Treatment Process events that are not consistent with the WPDES permit. This report will focus on events that are, or may be, noncompliant with the WPDES permit.

2017 Root Cause Analyses

There was one RCA completed for 2017.

1) **2017 South Shore Water Reclamation Facility (SSWRF) Effluent Issues:** SSWRF effluent ammonia increased in 2017, particularly during the summer months. It was determined that there were various contributing causes, and not one single root cause. The causes and proposed corrective actions are summarized below.
    a) Ineffectiveness of RAS chlorination to control filaments due to poor distribution.
        i) Process has been modified by Veolia with injector flow meters.

b) Influent septicity and resultant volatile fatty acids (VFAs) that contributed to the proliferation of filaments causing poor settling.
   i) Pump to SSWRF when dewatering the Inline Storage System (ISS) or add Lake Michigan water during low-flow periods.
   ii) Install pre-aeration in grit basin effluent wet wells or primary influent channels.
   iii) Direct flow to WRFs by least amount of time in sewer.
c) Primary clarifier sludge blankets were more than five feet thick.
   i) Maintain lower sludge blanket levels. This will require more digester volume.
d) Poor scum collection in the primary clarifiers contributing to filament generation.
   i) Run scum collection manually a minimum of once per day, 7 days a week.
   ii) Capital project to re-establish automatic operations of system.
e) Fine bubble aeration system that can no longer meet the oxygen demand to the plant on a regular basis, particularly for Total Kjeldahl Nitrogen (TKN).
   i) Material capital repair and replacement (MCRR) project to repair ceramic plate concrete to stop leaks.
   ii) Capital project to redesign membrane basins incorporating tapered layout and increasing diffuser area.
   iii) Do both of the above actions in conjunction with a capital project for biological phosphorus removal (Bio-P) installation to provide a selector zone for each aeration basin.
f) Increase in organic and nitrogen loading to the plant exceeding oxygen delivery capacity.
   i) Improve aeration efficiency with the corrective actions listed in (e).
   ii) Properly install anoxic zones for biochemical oxygen demand (BOD) update without aeration.
   iii) Identify source of the increase in nitrogen.
g) Periodic spikes in surfactant loading negatively affecting dissolved oxygen (DO) delivery and inhibiting nitrification.
   i) Send flyer to large load contributors about the effects of surfactants on WRFs.
   ii) Work with large load contributors on pre-treatment options.

SYSTEM EVALUATION AND CAPACITY ASSURANCE PLAN

The District completed the 2020 FP in June 2007 and was approved by the Wisconsin Department of Natural Resources in December 2007. This plan addresses the long-term, overall evaluation of the capacity requirements and available capacity of the wastewater system. Several advanced planning items were identified in the 2020 FP that address specific

capacity evaluations. Short descriptions of these and other capacity-related programs and projects that are being undertaken by the District are included below.

The District initiated planning for the 2050 FP in 2014 and the plan is expected to be completed in 2019. Recommendations from the 2050 FP will evaluate and update outstanding recommendations from the 2020 FP related to conveyance and treatment plant capacity requirements. The District will continue to operate under the 2020 FP until the 2050 FP is complete.

The Wet Weather Peak Flow Management Program (WWPFMP)

The objective of the WWPFMP is to limit peak wet weather flows in the tributary municipal sewer systems to levels at or below the performance standards listed in Chapter 3 of the District's Rules. In addition to changing the District rules to require management within the identified performance, the District, working in collaboration with the satellite municipalities, developed a Program that will ensure continued long-term compliance with the peak flows identified for the satellite municipalities. If metersheds do not comply with maximum allowable peak hourly flow rates, then the District notifies the municipality responsible for the metershed and requests action to reduce peak flows.

As of December 31, 2017:

- 151 monitoring locations have been installed that include 136 area velocity meters, 18 level meters, and 4 magnetic meters. Some sites have more than one meter.
- 71 of the 145 metersheds have been analyzed for compliance/non-compliance. Of the 71, 44 metersheds have been identified as compliant, 21 metersheds have been identified as non-compliant and 6 are inconclusive. The remaining six metersheds will be analyzed in the future once sufficient and reliable monitoring data has been collected.
- The District is working with municipal officials of the nine municipalities that have metersheds out of compliance with the peak flow performance standards to develop peak hourly flow rate reduction programs.

Adaptive Implementation Plan

The Adaptive Implementation Plan was developed to allow the District to respond to actual changes in population and land use as well as additional data collected through flow monitoring to plan and implement identified projects in a timely manner. By using data to evaluate the region's development and flows in the District conveyance system, it ensures that regional dollars are spent appropriately to meet the needs of the region. As a requirement of the 2013

WPDES permit, the District submits an annual report to the WDNR updating the Adaptive Implementation Plan schedule.

Jones Island East Plant RAS Header Replacement

The purpose of this project is to ensure the integrity and capacity of Return Activated Sludge (RAS) processing within the Secondary Treatment process. The project scope is to design and construct the replacement of the 48", 140-foot-long East Plant RAS steel discharge header pipe. The existing pipeline has experienced multiple failures and is not currently being used. A bypass header was constructed and is currently being utilized to convey RAS flows; however, the bypass header has less capacity than the old header. Capacity constraints in the process may impact effluent quality and the ability to comply with the District's WPDES permit effluent limits. Construction has begun and is expected to be complete in 2019.

South Shore Thickening Process Capacity Enhancements

The purpose of this project is to increase process capacity and flexibility between treatment facilities by increasing solids handling capacity at the South Shore Water Reclamation Facility (SSWRF). The project scope is to evaluate, design and implement two additional gravity belt thickeners (GBTs) and all related appurtenances. The scope will also include removal of some or all decommissioned centrifuge systems. The project is an outcome of the most recent draft of the Biosolids Facility Plan and Addendum 4 of the 2020 FP. The original thickening process used 10 centrifuges. Three of the original centrifuges have been replaced by GBTs. The remaining seven are no longer in use because of maintenance and operation difficulties. Preliminary engineering was completed in 2016 and the project is also being evaluated as part of the 2050 FP. Design is slated to start in 2020, with construction beginning in 2021.

South Shore Water Reclamation Facility Capacity Improvements

The purpose of this project is to cost-effectively increase the capacity of the SSWRF to reduce the risk of sanitary sewer overflows, combined sewer overflows, and basement backups. After Preliminary Engineering work was completed, the project was split into two contracts, S02008 and S03003. The design for both contracts was originally scheduled for completion by December 31, 2017. To align these projects with overall facilities planning, MMSD sent a request to WDNR to remove the requirement to complete the final design by the end of 2017. During the summer of 2017, Design Reports were completed for both projects, but the plans for final design were changed as follows:

- S02008 (SS Capacity Improvements – Preliminary and Secondary Treatment): Certain projects from the 2017 Design Report have proceeded to final design, while others are currently on hold. The projects currently being designed include: 1) aeration basin step-feed repairs and improvements, including a new project to replace four large step-feed valve replacements; 2) modifications to one test front clarifier to improve hydraulics, along

with instrumentation that will be installed to monitor clarifier performance; and 3) a new project to install flow meters in the effluent outfall channel.

- S03003 (SSWRF Post-Secondary Capacity Improvements): All the improvements described in the 2017 Design Report were put on hold and did not proceed to final design and construction. Starting in March 2018, the District began developing the scope for a Preliminary Blending Evaluation to determine which improvements are required for the implementation of blending. This will include hydraulic modeling and analysis of additional disinfection requirements.

Watercourse and Flood Management Projects

There are several watercourse projects that involve removing structures from the floodplain. The purpose of these projects is to prevent floodwater from entering the conveyance system. The projects are as follows:

- 30th Street Corridor Wet Weather Relief
- Concordia Avenue
- Western Milwaukee Phases 2A and 2B
- Western Milwaukee Real Estate & Environmental Assessment
- Honey Creek Watercourse Management Plan and BMPs
- Kinnickinnic River Watershed Flood Management
- Oak Creek Flood Management - Floodproofing/Acquisition
- Phase II Corridor & SEWRPC Studies

COMMUNICATION PLAN

The Communication Plan documents the types and frequency of communications that are prepared and presented or distributed regarding the implementation of the CMOM Program.

The District conducted several activities during 2017 to communicate the status of its CMOM Program to various stakeholders. The activities included submitting the CMOM Program Annual Report to the WDNR and updating CMOM Program information on the District's internal and external web sites.

AUDIT PLAN

The Audit Plan is comprised of three sections: (1) Annual updating that is completed through the Annual Report; (2) Program audit that is completed through the Program Audit Report and

undertaken on a five-year cycle, and (3) Program change procedures that will be implemented following the Program Audit. The latest comprehensive update of the CMOM Program was completed in 2014, following the last audit.

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ATTACHMENTS

ATTACHMENT 1 - CMOM PERFORMANCE MEASURES

Service Area	Functional Area	Reference Objective *Glossary at end of attachment	Measure * indicates the measure is also a benchmark	2015 Status/Value	2016 Status/Value	2017 Status/Value
OVERALL	Program Organization	2.2.1.1	Asset Management Executive Steering Committee established and functioning	Yes	Yes	Yes
			Asset Management Strategy established and updated annually	Yes	Yes	Yes[4]
			Number of Asset Management Plans developed	0	0	1[5]
			Asset Management Teams established and functioning	No[6]	Yes[7]	Yes
			Organizational Best Practices Index*	34.5	35.5	37
		2.2.1.2	Annual cost of the MMSD CMOM Program activities	$199,758.96	$183,970.31	$205,151.00
	Communication	2.2.1.2	Annual Asset Management Program update to the Commission completed	Yes	Yes	No[8]

[4] The Asset Management Strategy will be updated on the same schedule as the District Strategic Plan. The next update will be in 2020.
[5] One Asset Management Plan is in progress as part of the 2050 FP and will be completed in 2018.
[6] The Asset Management department was working on a revised format of teams to coincide with the five asset systems.
[7] Based on staffing, there are two teams: Conveyance and Water Reclamation Facilities.
[8] Executive staff wanted to limit presentations to the Commission so this was eliminated.

Service Area	Functional Area	Reference Objective *Glossary at end of attachment	Measure * indicates the measure is also a benchmark	2015 Status/Value	2016 Status/Value	2017 Status/Value
OVERALL CONTINUED	**Communication Cont.**	2.2.1.2 cont.	CMOM page on the District's SharePoint site updated annually to include new reports and communications	Yes	Yes	Yes
			CMOM page on the District's public web site updated annually to include new reports and communications	Yes	Yes	Yes
			Annual CMOM report completed on time	Yes	Yes	Yes
			Number of presentations by District personnel that included information on water quality	181	116	83
		2.2.1.4	Percent of overflow and in-plant diversion events for which a public notification was issued	100%	100%	100%
	Finance	2.2.1.3	Bond Ratings*	AAA (Fitch Ratings), Aa1 (Moody's), AA+ (S&P)	AAA (Fitch Ratings), Aa1 (Moody's), AA+ (S&P)	AAA (Fitch Ratings), Aa1 (Moody's), AA+ (S&P)
			Six-year capital financing plan is updated and revised annually	Yes	Yes	Yes

Service Area	Functional Area	Reference Objective *Glossary at end of attachment	Measure * indicates the measure is also a benchmark	2015 Status/Value	2016 Status/Value	2017 Status/Value
OVERALL CONTINUED	**Finance Cont.**	2.2.1.3 cont.	Outstanding Debt	1.79%	1.49%	1.46%
			Percent of cash financing (six-year average)	26%	26%	27%
	System Performance	2.2.1.4	CMAR overall score*	JI = 4.0; SS = 4.0	JI = 4.0; SS = 3.75	Waiting on review by WDNR
			Percent of flow into system, resulting from wet weather, that is captured and treated	97.8%	99.6%	99.9%
	Satellite Systems	2.2.1.5	Percent of municipal sewer construction projects receiving QA inspection as defined by the QA program	100%	100%	70%
			Percent of sewer plans reviewed by the District within deadlines established by the sewer plan review process	100%	100%	100%
	Personnel & Safety	2.2.1.6	Annual regulatory training completed	Yes	Yes	Yes

Service Area	Functional Area	Reference Objective *Glossary at end of attachment	Measure * indicates the measure is also a benchmark	2015 Status/Value	2016 Status/Value	2017 Status/Value
OVERALL CONT.	**Personnel & Safety Cont.**	2.2.1.6 cont.	Annual training hours per employee*	28.4 hrs/employee	33.6 hrs/employee	29.7 hrs/employee
			Employee Health and Safety Severity Rate	MMSD: 2.0 injury hours per 100 FTE's Contract Operator: 0 injury hours per 100 FTE's	MMSD: 19.1 injury hours per 100 FTE's Contract Operator: 0 injury hours per 100 FTE's	MMSD: 0.8 injury hours per 100 FTE's Contract Operator: 124.4 injury hours per 100 FTE's
CONVEYANCE	**System Performance**	2.2.2.1	Number of wet weather CSO events	1	2	0
			Ratio of unused volume of the ISS to the wet weather CSO volume for each tunnel event	11.0%	8/30: NA, 9/7-8: 60%	NA
		2.2.2.2	Wet Weather Peak Flow Management Plan remains active	Yes	Yes	Yes
		2.2.2.3	Number of dry weather overflows	0	0	0

Service Area	Functional Area	Reference Objective *Glossary at end of attachment	Measure * indicates the measure is also a benchmark	2015 Status/Value	2016 Status/Value	2017 Status/Value
CONVEYANCE CONTINUED	**System Performance Cont.**	2.2.2.3 cont.	Number of wet weather SSOs	1	0	1
			Volume of wet weather SSOs	2.03 MG	0 MG	1,450 G
			Number of wet weather SSOs where the event generated flow is less than the WDNR approved level of protection	0	0	0
			Volume of wet weather SSOs where the event generated flow is less than the WDNR approved level of protection	0 MG	0 MG	0 MG
			Percent of total flow entering the conveyance system that is captured and treated	98.4%	99.8%	99.9%
			Number of building backups caused by the loss of capacity or function of a District facility	0 (reported)	0 (reported)	0 (reported)
			Regulatory-approved Industrial Waste Pretreatment Program in operation	Yes	Yes	Yes

Service Area	Functional Area	Reference Objective *Glossary at end of attachment	Measure * indicates the measure is also a benchmark	2015 Status/Value	2016 Status/Value	2017 Status/Value
CONVEYANCE CONTINUED	Asset Management	2.2.2.1	Number of added gallons of green infrastructure capacity in the planning area since 2013[9]	1.12 MG (annual); 14.11 (cumulative)	10.39 MG (annual); 24.50 MG (cumulative)	4.10MG (annual); 28.60 (cumulative)
			Annual number of rain barrels distributed by the District	899	920	740
		2.2.2.3	Percent completion of post-overflow review process within one year	100%	100%	100%
		2.2.2.4	Number of conveyance construction project updates to the GIS	2 contracts	4 contracts	0 contracts
			Backlog of conveyance construction project updates to the GIS	1 contract	0 contract	0 contracts

[9] Prior year figures are adjusted on an annual basis. Figures are originally determined during the design phase of projects, but can often change due to issues such as lack of funding or differing site conditions.

Service Area	Functional Area	Reference Objective *Glossary at end of attachment	Measure * indicates the measure is also a benchmark	2015 Status/Value	2016 Status/Value	2017 Status/Value
CONVEYANCE CONTINUED	Asset Management Cont.	2.2.2.4 cont.	Percent of conveyance pipeline assets with defined condition and management method as documented in the Asset Information Management System	98.9% sewers, 0% equipment & pump stations	98.9% sewers, 0% equipment & pump stations	99.9% sewers, 49% equipment & pump stations
			Level of Protection[10] defined and approved by the WDNR for the wastewater system	Yes	Yes	Yes
		2.2.2.5	Number of open PM work orders older than 90 days (sewers)	2	0	0
			Planned maintenance ratio[11]: hours (sewers)	64%	71%	61%
			Planned Maintenance ratio: count (sewers)	92%	94%	92%

[10] Level of Protection is defined as the five-year interval, as stated in the approved 2020 FP.
[11] Planned maintenance ratios indicate the amount of preventative and predictive maintenance compared to all maintenance, which includes corrective maintenance.

Service Area	Functional Area	Reference Objective *Glossary at end of attachment	Measure * indicates the measure is also a benchmark	2015 Status/Value	2016 Status/Value	2017 Status/Value
CONVEYANCE CONTINUED	**Asset Management Cont.**	2.2.2.5 cont.	Planned maintenance ratio: cost (sewers)	54%	65%	54%
			Number of open PM work orders older than 90 days (conveyance equipment and pump stations)	5	7	3
			Planned maintenance ratio: hours (conveyance equipment and pump stations)	74%	69%	72%
			Planned maintenance ratio: count (conveyance equipment and pump stations)	79%	81%	83%
			Planned maintenance ratio: cost (conveyance equipment and pump stations)	63%	59%	64%
			Conveyance system integrity [# collection system failures/total miles in collection system]	0 failures per 100 miles of piping	0 failures per 100 miles of piping	0 failures per 100 miles of piping
	Capital Program Implementation	2.2.2.4	Facilities Plan implementation on schedule	Yes	Yes	Yes

Service Area	Functional Area	Reference Objective *Glossary at end of attachment	Measure * indicates the measure is also a benchmark	2015 Status/Value	2016 Status/Value	2017 Status/Value
CONVEYANCE CONTINUED	System Monitoring	2.2.2.2	Percent of metersheds where compliance or non-compliance has been established	43%[12]	45%[11]	45%[11]
		2.2.2.6	Percent of flow monitors at non-critical sites repaired within 30 consecutive days after problems are identified	95%	95%	95%
			Percent of non-critical monitoring sites with less than 30 consecutive days of missing or bad data	90%	85%	85%
			Percent of non-critical monitoring site, rain gauge, and water quality data reviewed for QA within 90 days	90%	90%	95%
			Percent of flow monitors at critical sites repaired within 5 business days after problems are identified	95%	95%	95%
			Percent of critical monitoring sites with less than 5 business days of missing or bad data	90%	85%	85%

[12] A total of 74 metersheds were not analyzed for compliance because of a lack of sufficient data. More time is needed to capture the necessary data. Metersheds will be analyzed in the future after sufficient and reliable monitoring data has been collected.

Service Area	Functional Area	Reference Objective *Glossary at end of attachment	Measure * indicates the measure is also a benchmark	2015 Status/Value	2016 Status/Value	2017 Status/Value
CONVEYANCE CONTINUED	System Monitoring Cont.	2.2.2.6 cont.	Percent of monitoring sites calibrated [check and adjustment as necessary] annually	100%	100%	100%
			Percent of rain gauges calibrated [check and adjustment as necessary] annually	100%	100%	100%
			Percent of critical monitoring site data reviewed for QA within 30 days	100%	100%	100%
	Customer Service	2.2.2.7	Percent of documented inquiries with a documented response	100%	100%	100%
TREATMENT	System Performance	2.2.3.1	Receipt of Gold or Platinum NACWA Peak Performance Award	Yes - Received Platinum Award for both plants	Yes - Received Platinum Award for both plants	Yes - Received Platinum Award for both plants
			Number of in-plant diversions and Combined Sewer Wet Weather Flow Treatment Process events contrary to permit requirements	0	0	0

Service Area	Functional Area	Reference Objective *Glossary at end of attachment	Measure * indicates the measure is also a benchmark	2015 Status/Value	2016 Status/Value	2017 Status/Value
TREATMENT CONTINUED	System Performance Cont.	2.2.3.1 cont.	Volume of in-plant diversions and Combined Sewer Wet Weather Flow Treatment Process events contrary to permit requirements	0	0	0
			Percent of time effluent Ammonia is in compliance with WPDES permit	100%	100%	100%
			Percent of time effluent biochemical oxygen demand is in compliance with WPDES permit	100%	100%	100%
			Percent of time effluent fecal coliform count is in compliance with WPDES permit	100%	100%	100%
			Percent of time effluent Phosphorous is in compliance with WPDES permit	100%	100%	100%
			Percent of time effluent total suspended solids is in compliance with WPDES permit	100%	100%	100%
		2.2.3.2	Volume of SSOs that occurred when treatment plant capacity was below the planned wet weather capacity	0 MG	0 MG	1,450 G

Service Area	Functional Area	Reference Objective *Glossary at end of attachment	Measure * indicates the measure is also a benchmark	2015 Status/Value	2016 Status/Value	2017 Status/Value
TREATMENT CONT.	System Performance Cont.	2.2.3.2 cont.	Number of SSO events that occurred when treatment plant capacity was below the planned wet weather capacity	0	0	1
		2.2.3.3	Total mass of biosolids produced	40,803 dry US tons	40,113 dry US tons	45,341 dry US tons
			Percent of produced biosolids that are beneficially reused	100%	100%	99.9%
	Asset Management	2.2.3.4	Planned wet weather capacity is defined (by the 2020 Facilities Plan) and approved by the WDNR for the Wastewater System	Yes	Yes	Yes
			Percent of treatment plant assets with defined condition and management method as documented in the Asset Information Management System	0%	0%	50%
		2.2.3.5	Number of CM work orders older than 90 days (treatment plant equipment)	455	503	411
			Number of PM work orders older than 90 days (plant equipment)	243	313	267
			Planned maintenance ratio: count of work orders	71%	72%	71%
			Planned maintenance ratio: hours	48%	50%	52%

Service Area	Functional Area	Reference Objective *Glossary at end of attachment	Measure * indicates the measure is also a benchmark	2015 Status/Value	2016 Status/Value	2017 Status/Value
TREATMENT CONT.	Asset Management Cont.	2.2.3.5 cont.	Planned maintenance ratio: cost	38%	37%	42%
			Number of outstanding open PM tasks	5	25	28
			Number of outstanding open CM tasks	46	139	94
			O&M cost per MG treated*	$1,141/MG	$1,207/MG	$1,110/MG
	Capital Program Implementation	2.2.3.4	Facilities Plan implementation on schedule for treatment plant studies and projects	Yes	Yes	Yes
WATERCOURSE	Capital Program Implementation	2.2.4.1	Annual number of habitable structures removed from the one-percent probability floodplain	15	12	1
	System Conservation	2.2.4.2	Area of property protected/preserved through District ownership or conservation easement since 2007	125 Acres (annual); 3,182 Acres (cumulative)	251 Acres (annual); 3,433 Acres (cumulative)	214 Acres (annual); 3,647 Acres (cumulative)
			Percent of storm water management plans reviewed within the timeframe allowed	100%	100%	100%
			Number of watercourse obstructions identified and removed that had potential to add new structures to the 1% probability floodplain	0 identified, 0 removed	3 identified, 3 removed	3 identified, 3 removed

Service Area	Functional Area	Reference Objective *Glossary at end of attachment	Measure * indicates the measure is also a benchmark	2015 Status/Value	2016 Status/Value	2017 Status/Value
WATERCOURSE CONTINUED	**System Conservation Cont.**	2.2.4.5	Percent of jurisdictional watercourse with non-concrete streambeds[13]	80%	81%	81%
	Asset Management	2.2.4.3	Number of jurisdictional watercourse construction project updates to the GIS	5 contracts	1 contract	0 contracts
			Backlog of jurisdictional watercourse construction project updates to the GIS	0 contracts	0 contracts	0 contracts
			Percent of watercourse assets with defined condition and management method documented in the Asset Information Management System	54%	83%	83%
		2.2.4.4	Percent of scheduled watercourse asset inspections completed	100%	95%	100%
			Percent of scheduled watercourse asset criticality assessments completed	0%	0%	0%
	Customer Service	2.2.4.6	Percent inquiry documentation completed	100%	100%	100%

[13] The size of the District's watercourse jurisdiction can change year to year. This can cause the percentage of non-concrete streambeds to fluctuate independently from how much concrete was removed.

REFERENCE OBJECTIVE GLOSSARY		
OVERALL	2.2.1.1	Continue the support of the CMOM Program within the District organizational structure
	2.2.1.2	Communicate the goals and objectives of the CMOM Program to internal and external stakeholders, monitor the CMOM Program, and institute program modifications
	2.2.1.3	Continue to maintain adequate financial planning
	2.2.1.4	Continue to comply with regulatory requirements
	2.2.1.5	Continue to support and monitor the regional CMOM program
	2.2.1.6	Continue to maintain a safe work environment and facilities and also sustain a competent workforce
CONVEYANCE	2.2.2.1	Establish CMOM program elements specific to minimizing the number and volume of CSOs
	2.2.2.2	Continue to implement and support the Wet Weather Peak Flow Management Program.
	2.2.2.3	Where possible, establish additional practices to prevent SSOs, maintain or improve system performance, and avoid preventable failures.
	2.2.2.4	Continue to establish and document level of protection, design, and performance standards for new conveyance assets constructed in the District service area, and consider documented and predicted changes in climate.
	2.2.2.5	Minimize the cost of conveyance asset ownership while maintaining necessary stewardship of assets and achieving defined protection levels.
	2.2.2.6	Enhance District level of knowledge and understanding of wet weather flows and system response to precipitation and other factors.
	2.2.2.7	Provide information receipt, response activity, and feedback regarding customer inquiries.
TREATMENT	2.2.3.1	Continue to provide effluent quality that meets or exceeds WPDES permit requirements and effluent quality goals.
	2.2.3.2	Continue to optimize effectiveness of wet weather treatment capacity.
	2.2.3.3	Continue to manage bio-solids in a manner that maximizes beneficial reuse in a cost effective manner.
	2.2.3.4	Continue to document capacity, design and performance standards for new treatment plant assets, and consider documented and predicted changes to climate.
	2.2.3.5	Minimize the cost and acceptable levels of risk of wastewater treatment asset ownership while achieving performance levels.
WATERCOURSE	2.2.4.1	Within jurisdictional streams, cost-effectively remove or reduce the consequences to habitable structures from flooding associated with the one-percent probability flood event.
	2.2.4.2	Reduce the likelihood of new habitable structures being added to the one-percent probability floodplain.
	2.2.4.3	Establish and document level of protection (inflow and infiltration reduction and flood risk reduction), design, and performance standards for new assets in the watercourse system.
	2.2.4.4	Minimize the cost of watercourse asset ownership while maintaining necessary stewardship of assets and achieving defined protection levels.
	2.2.4.5	Continue to be a leader in the effort to improve the area's water quality.
	2.2.4.6	Provide information receipt, response activity, and feedback regarding customer inquiries on the watercourse systems.

ATTACHMENT 2 - CHANGES TO CMOM MANAGEMENT PROGRAM

This Attachment intentionally left blank for the 2017 Report.

ATTACHMENT 3 - SATELLITE MUNICIPALITY PHONE LIST

Municipality	Business Hours	After hours / weekends
Bayside	414-351-8811	414-351-8800
Brookfield	262-782-0199	262-782-0199 or 262-787-3700
Brown Deer	414-357-0120	414-371-2900
Butler	262-783-2525	262-783-2525
Caledonia	262-681-3900	262-939-3409
Cudahy	414-769-2216	414-769-2260
Elm Grove	262-782-6700	262-786-4141
Fox Point	414-351-8900	414-351-9900
Franklin	414-425-2581	414-425-2522
Germantown	262-250-4721	262-253-7780
Glendale	414-228-1710	414-228-1753
Greendale	414-423-2133	414-423-2121
Greenfield	414-761-5374	414-761-5301
Hales Corners	414-529-6140	414-529-6140
Menomonee Falls	262-532-4800	262-532-1700
Mequon	262-236-2913	262-242-3500
Milwaukee	414-286-2489	414-286-2489
Muskego	262-679-4128	262-679-4130
New Berlin	262-786-7086	262-446-5070
Oak Creek	414-768-7060	414-768-7060
River Hills	414-352-0080	414-247-2300
St. Francis	414-481-2300	414-481-2232
Shorewood	414-847-2650	414-847-2610
Thiensville	262-242-3720	262-242-2100
Wauwatosa	414-471-8422	414-471-8422
West Allis	414-302-8800	414-302-8000
West Milwaukee	414-645-6238	414-645-2151
Whitefish Bay	414-962-6690	414-962-6690

ATTACHMENT 4 - DISTRICT SITUATIONAL CONTACT LIST

Situation	Urgency	Direct to	Phone number
Water in basement	Critical	Central Control Operator (Veolia)	282-7200 (internal x3491)
Sewage overflow	Critical	Central Control Operator (Veolia)	282-7200 (internal x3491)
Spill of a hazardous substance into the sewer system	Critical	Central Control Operator (Veolia)	282-7200 (internal x3491)
Clogged MIS or structure	Critical	Central Control Operator (Veolia)	282-7200 (internal x3491)
Illegal dumping into a sewer	Urgent	Central Control Operator (Veolia)	282-7200 (internal x3491)
Illegal dumping into catch basin	Urgent	Central Control Operator (Veolia)	282-7200 (internal x3491)
Contractor hit District facility	Urgent	Ricardo Santiago(District) (Backup is Bob Rebitski)	225-2262, cell – 232-1826 (Backup cell – 617-1438)
Manhole cover missing	Urgent	Central Control Operator (Veolia)	282-7200 (internal x3491)
Blockage/major debris in the river	Urgent	Patrick Elliott (District)	225-2168, cell – 313-1608)
Facility ownership question	Non-emergency	Emily Champagne (District)	225-2180
Municipal request regarding sewer system	Non-emergency	Kevin Jankowski (District)	225-2111
How much water is in the deep tunnel	Non-emergency	District Public web site	www.mmsd.com – click on weather center
How much rainfall have we received	Non-emergency	District Public web site	www.mmsd.com – click on weather center
Odor complaint	Non-emergency	Central Control Operator (Veolia)	282-7200 (internal x3491)
Maintenance of a District conveyance facility	Non-emergency	Central Control Operator (Veolia)	282-7200 (internal x3491)
Watercourse maintenance issue (e.g. grass cutting, graffiti, snow plowing)	Non-emergency	Patrick Elliott (District)	225-2168, cell – 313-1608
Construction site complaint	Non-emergency	Ricardo Santiago (District)	225-2262, cell – 232-1826
Notice of Intent to Discharge into MMSD system	Non-emergency	Sharon Mertens (District)	277-6384

*NOTE: ALL PHONE NUMBERS ARE AREA CODE (414)