



# **CAPACITY, MANAGEMENT, OPERATION AND MAINTENANCE (CMOM) PROGRAM ANNUAL REPORT FOR 2014**

Milwaukee Metropolitan  
Sewerage District

June 2015

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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. To oversee and assist with efforts related to the CMOM Program implementation, a CMOM Program Committee consisting of District Staff from the Planning, Research, and Sustainability, Technical Services, Legal Services, and Water Quality Protection Divisions was created. 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 determined the CMOM Program would be implemented for the three main areas of operations: wastewater conveyance, wastewater treatment and watercourse systems. Further, the District viewed the CMOM Program implementation as an opportunity to (1) audit its practices and documentation, (2) bring the documentation under one umbrella to ensure consistent practices, and (3) improve its 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 flooding. 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 with 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 which 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 2014 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 conveyance, treatment plant 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 management, 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 service 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 those caused by circumstances as defined by Title 40 of the Code of Federal Regulations (CFR) §122.41 (m) (4), and minimizing combined sewer overflows (CSOs) in accordance with the current discharge permit.

### *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. Provide information receipt, response activity, and feedback regarding 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 quality meeting or exceeding 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 meets or exceeds 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 bio-solids 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, through updating and implementing its Watercourse Management Plan.

### *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. Provide information receipt, response activity, and feedback regarding customer inquiries on the watercourse systems.

### *Performance Measures*

A complete list of the performance measures and the value/status for 2012 through 2014 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 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. 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 the Agreement was developed during 2007, language was included that requires Veolia to have emergency SSO and CSO response plans in place. In 2008, Veolia submitted their overflow and emergency response plans to the District and has been updating these plans annually.

Veolia is not responsible for responding to watercourse issues with the exception of the stormwater pumping station located at North 42<sup>nd</sup> Street and West Mt Vernon Avenue in the City of Milwaukee. In 2009, the District completed a watercourse emergency response plan, which is put into place 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 continues to perform individual capacity analyses and studies in the conveyance and treatment system as described in Section 5.

The District also has previously completed Watercourse System Plans that outlined the efforts needed to provide flood flow conveyance and protect habitable structures from flood flows.



The District has initiated planning for the 2050 Facilities Plan (FP) in 2014 and the plan is expected to be completed in 2017. Recommendations from the 2050 FP will evaluate and update outstanding recommendations from the 2020 FP.

### 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 2014 Value	Benchmark Value <sup>1</sup>		
			Top Quartile	Median	Bottom Quartile
<b>Program Organization</b>	Organizational Best Practices Index	32.5	40	30	26
<b>Finance</b>	Bond Ratings	AAA (Fitch), Aa1 (Moody's), AA+ (S&P)	AAA <sup>2</sup>	AA <sup>2</sup>	A <sup>2</sup>
<b>Personnel &amp; Safety</b>	Annual Training Hours per Employee	32.2	67	23	18
<b>System Performance</b>	NACWA Peak Performance Award <sup>3</sup>	Platinum	Not applicable		

<sup>1</sup> 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. The 2013 annual data is not available at this time.

<sup>2</sup> Aggregate data from Fitch, Moody's, and S&P grades was used to develop this value.

<sup>3</sup> 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.

Functional Area	Performance Measure	District 2014 Value	Benchmark Value <sup>1</sup>		
			Top Quartile	Median	Bottom Quartile
<b>System Performance</b>	Conveyance System Integrity	0 failures/100 miles of pipe	0.7	2.2	3.3
<b>Asset Management</b>	Planned Maintenance Ratio: Sewers (hours)	62%	73%	83%	95%
<b>Asset Management</b>	Planned Maintenance Ratio: Conveyance Equip (hours)	75%	73%	83%	95%
<b>Asset Management</b>	Planned Maintenance Ratio: Treatment (hours)	46%	73%	83%	95%
<b>Asset Management</b>	O&M Cost per MG Treated	\$1,166/MG	-	\$2,399	-

## 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.

### 2.1.1.1 CHANGES TO THE DEFINED PERFORMANCE MEASURES

Five performance measures had modifications in this reporting period. The first performance measure was moved from the Conveyance service area (objective 2.2.4.2) to the Overall service area (objective 2.2.1.2). Along with the move, the language was updated to cover water quality issues instead of one specific topic. The original measure was written as follows:

- Number of presentations by District personnel that included information on stormwater runoff reduction practices.

The revised language is as follows:

- Number of presentations by District personnel that included information on water quality.

The next performance measure revised references objective 2.2.1.2. The new language reflects that CMOM updates are presented as part of the Asset Management Program update to the Commission. The original measure was written as follows:

- Annual Commission memorandum completed.

The revised language is as follows:

- Annual Asset Management Program update to the Commission completed.

The next two performance measures that were updated reference objective 2.2.3.1. The language was updated to match the terminology used in the current 2013 WDPES permit. The original measures were written as follows:

- Number of in-plant diversions not consistent with permit requirements.
- Volume of in-plant diversions not consistent with permit requirements.

The revised language is as follows:

- Number of in-plant diversions and Combined Sewer Wet Weather Flow Treatment Process events contrary to permit requirements.
- Volume of in-plant diversions and Combined Sewer Wet Weather Flow Treatment Process events contrary to permit requirements.

The final performance measure revised references objective 2.2.4.2. The new language clarifies the measure by including the number of obstructions that were identified in addition to those removed. The original measure was written as follows:

- Number of watercourse obstructions removed that had potential to add new structures to the 1% probability floodplain

The revised language is as follows:

- Number of watercourse obstructions identified and removed that had potential to add new structures to the 1% probability floodplain

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### 2.1.2 EVALUATION OF 2014 PERFORMANCE BASED ON THE DEFINED MEASURES

All of the individual performance measures and the value or status for the years 2012 through 2014 is 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

#### *Improvements Made*

- Annual training hours per employee
- Number of open preventative maintenance (PM) work orders older than 90 days (conveyance equipment and pump stations)
- Reducing backlog of conveyance construction project updates to the geographic information system (GIS)
- Number of open PM work orders older than 90 days (plant equipment)
- Number of gallons of green infrastructure capacity in the planning area

#### *Improvements Desired*

- Reducing backlog of watercourse construction project updates to the geographic information system (GIS)
- Condition monitoring of treatment plant and watercourse assets
- Number of corrective maintenance (CM) work orders older than 90 days (treatment plant equipment)
- Percent of metersheds where compliance or non-compliance has been established

## 2.2 MANAGEMENT PLAN REVISIONS

There were no changes made to the District's objectives, strategies, or tactics during 2014. Minor revisions were made to five performance measures. The changes are described above under Changes to the Defined Performance Measures.

## 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 located 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 2014. 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 will be a living document, with the version completed in February detailing only the improvement tasks planned for 2014).
- Planning efforts under the District's 2050 FP began in 2014 that will follow an Asset Management framework. Five Asset Management Plans specific to District asset systems will be included as deliverables in the District's 2050 FP. Completion of the 2050 FP is scheduled for 2017.
- Initiation of the Asset Management Standards Improvement project began in 2014 and will be complete in 2015. The project will develop consistent standards for data and information required to manage assets by defining things such as asset hierarchy, class, and useful life. A workflow will also be developed and documented for data and information updates. The project will also consist of some data cleanup or asset condition assessments.

### 3.2 PROCESS AND DATA IMPROVEMENTS

Throughout 2014 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 since historically 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. The final step requires updating both the CMMS asset listing and the accounting fixed asset listing with the information obtained from field verification. This step involves

adding, removing and updating assets in both databases and creating a common asset naming and numbering convention so the two lists contain the same information and can be cross-referenced in the future. This work is currently being performed by part-time staff with the oversight of the asset management program manager. As a result of limited staff availability and the challenges associated with such a complex task, this effort will continue through 2015 with an estimated completion in late 2016.

- 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 project 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 an asset table, prepared by the designer and included in the contract plans, that provides a listing of all assets included in the project along with some key asset information including hierarchy location, fixed asset number, CMMS number, asset cost and asset description. As of early 2015 the District has prepared asset tables for 54 projects.
- In 2014, the District began work to assign a Consequence of Failure (COF) score to Metropolitan Interceptor Sewer (MIS) sewers that have not been previously evaluated. Segments are given ratings for level of service, direct cost and risk consequences that translate to a numerical score from 0 to 10. This allows pipeline segments to be ranked from lowest to highest consequence of failure to assist in developing inspection and maintenance schedules as well as rehabilitation and replacement forecasts. The work will continue in 2015.

## 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

One site, SSO 237 – N. Menomonee River, 300 feet east of N 68<sup>th</sup> St, was bulkheaded early in 2014 and is no longer able to overflow. It is still listed in the District's WPDES permit that was finalized on January 8, 2013. SSO 237 was bulkheaded after the addition of BS0405. The level of protection was not impacted by these changes. The SSO and CSO tables included in this

report as Attachments 3 and 4 show the most up-to-date listing of the District's constructed overflow points.

#### 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 5 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 6 to this report.

#### 4.3 EMERGENCY RESPONSE PREPAREDNESS

In 2008, Veolia submitted an overflow response plan and an 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 2014.

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, which is put into place 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 2011 and another update is scheduled for spring of 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 and a new update is scheduled for spring of 2015.

In 2014, 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 on 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, generally called root cause analyses (RCAs).

##### 2014 Root Cause Analyses

There were four RCAs started in 2014, three of which were completed.

- 1. MMSD HEADQUARTERS WHARF WALL FAILURE:** On, or around, January 15, 2014 District staff observed that the wharf wall adjacent to the South Menomonee Canal near the headquarters office had shifted outward toward the canal. The movement was evident from a 6-inch gap that formed between the sidewalk and wall and the outward lean of the wall. In addition, a drop in the sidewalk approximately 35 feet from the wall was observed. A subsurface investigation was done on February 3, 2014 to determine the condition of the existing tie rod connections at three locations. Two tie rod connections at the wharf wall were intact. The tie rod connection at the concrete deadman was broken near the canal side face of the concrete deadman. The wood fender on the canal side of the wharf wall was observed to be damaged, likely from barge impacts. A number of observations were made during the temporary wharf wall repairs performed between February 17<sup>th</sup> and 24<sup>th</sup>, 2014. All but one of the twenty-two tie rods located between the District wharf wall and the Inline System Emergency Wastewater Exit were broken near the wharf wall and/or concrete deadman. One of the six diagonal tie rods, connecting the wharf wall to the deadman, was also broken. All tie rods were sagged in the middle with the sag measuring 18 inches, or more, for most of the tie rods. It was estimated that the wharf wall deflected outward (towards the canal) as much as 20 inches. A settlement analysis was completed and an overall ground settlement of 18 inches was calculated between 1984 and 2014. Settlement from the original construction and backfill of the wharf wall combined with a drop in the canal water surface resulted in a calculated settlement of 13 inches. Subsequent filling activities and further lowering of the canal water surface elevation resulted in an additional 5 inches of calculated settlement. A metallurgical analysis was completed on the tie rods. It was determined they conformed to the requirements as specified in the original construction documents. The tie rods failed in a brittle manor due to single cycle overload, as opposed to an intermittent and repetitive loading condition potentially caused by a series of barge impacts. No significant loss of section due to corrosion was found. Based on the above observations and calculations, it was

determined the wharf wall failed to due to multiple tie rod fractures resulting from a bending stress developed by ground settlement adjacent to the wharf wall.

2. **MAY 2014 COMBINED SEWER OVERFLOW AT CSO145:** On May 12, 2014, approximately 1.3 inches of rain fell in one hour near a central portion of the City of Milwaukee in the combined sewer service area. As a result of the rainfall, enough combined sewer flow was generated and conveyed into the NS12 near surface collector system to cause a combined sewer overflow for five minutes. The five minute overflow event resulted in 0.20 million gallons of combined sewer overflow at CSO145. During the overflow event the gates to the Inline Storage System (ISS) remained open. Before completion of this RCA, a two inch rainfall event occurred on June 18, 2014 that resulted in another overflow at CSO145. The June 18, 2014 event was also analyzed as part of this RCA to evaluate the collector system using data recorded by additional equipment installed following the May 12, 2014 event. A review of the MMSD system and local tributary systems, as well as precipitation and flow monitoring data for the May 12, 2014 and June 18, 2014 events and several other events was conducted. The review indicated that since the construction of the North Hopkins Street Near Surface Collector (NSC) in 2005, six combined sewer overflow events from the NS12 collector system have occurred during wet weather events when the combined sewer gates are still open. In addition, on the downstream end of the NS12 collector system, the hydraulic grade line can reach the ground elevation when the combined sewer gates are closed causing manhole covers to dislodge and flow from the near surface collector to discharge onto the ground surface. Although the actual capacity of the 84-inch diameter NSC was determined to be less than the design capacity, that was not the root cause of the overflow events on May 12, 2014 or June 18, 2014. Structures upstream of the 84-inch diameter NSC at North 28<sup>th</sup> Street and West Hopkins Street restrict flow entering the 84-inch NSC and in turn caused the CSOs. It has been recommended that the NS12 collector system be evaluated through a preliminary engineering or design contract and modified as required to address both the capacity restrictions on the upstream end and the overflowing manholes on the downstream end.
3. **JUNE 2014 SEPARATE SEWER OVERFLOW AT BS0503:** A short, intense precipitation event occurred on June 18, 2014 resulting in over two inches of rain falling on portions of the MMSD service area in one hour. As a result of the rainfall, the MMSD owned bypass station BS0503, located at North 35<sup>th</sup> Street and West Roosevelt Drive in the City of Milwaukee overflowed. Since the ISS did not close to separate sewer inflow on this date, a RCA was prepared to detail the causes and factors that contributed to the overflow. A review of the MMSD conveyance system and local tributary conveyance

systems, as well as precipitation and flow monitoring data for this event and several other events was conducted. The review indicates that the main causes of the overflow were precipitation (approximately a 25-year rainfall recurrence interval (4 percent probability)) and infiltration and inflow from the Milwaukee sanitary system that are above the MMSD peak flow performance standards (based on a 5-year (20 percent probability) wastewater recurrence interval). The MMSD wet weather peak flow management program is working with Milwaukee to develop a plan to reduce infiltration and inflow from the tributary areas.

- 4. JUNE 2014 SEPARATE SEWER OVERFLOW AT BS0404:** A On June 18, 2014, a separate sewer overflow into the Milwaukee River occurred at BS0404 from the District's 72-inch diameter MIS at West Green Tree Road and North River Road in the Village of River Hills. Rainfall began on June 17 and continued into June 18<sup>th</sup>. The recorded rain total was 4.95 inches for both days at the nearest weather station, WS1224, which is located about 250 feet from the overflow site. A RCA has been performed for a separate sewer overflow event and near separate sewer overflow event that have occurred at this site prior to June 18, 2014. It is anticipated that the cause of the overflow will be found consistent with previous analyses: the 72-inch between West Green Tree Road at North River Road and West Mill Road at North Sidney Place has a flow limitation that causes surcharge in the 72-inch MIS high enough to cause overflow at BS0404. The RCA is expected to be completed in 2015.

## SYSTEM EVALUATION AND CAPACITY ASSURANCE PLAN

The District completed the 2020 FP in June 2007, with the plan being 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. A number of 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 has initiated planning for the 2050 FP in 2014 and the plan is expected to be completed in 2017. Recommendations from the 2050 FP will evaluate and update outstanding recommendations from the 2020 FP.

### **The Wet Weather Peak Flow Management Program (WWPFMP)**

The objective of the WWPFMP is to manage 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.

Efforts that were underway in 2014 include:

- As of December 31, 2014, there were 125 monitoring locations installed that included 75 upgraded existing sites.
- Performing analysis on 132 metersheds
- Working with municipal officials of nine municipalities in which metersheds are out of compliance with the peak flow performance standards, based on analyses conducted since 2010, to develop a peak hourly flow rate reduction program to bring the metershed flows into compliance. Overall 23 metersheds are out of compliance, which measure flow from a total of 46 sewersheds.

### **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 utilizing 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.

### **Gravity SSO Conversion to Pump Overflow**

The purpose of this project is to evaluate conversion of gravity overflows to pumped overflows. A gravity overflow is currently the relief for many locations in the District system and during severe precipitation events is often impeded from discharging into the receiving waters because the water level in the receiving water is higher than the water surface elevation in the MIS. This increases the sewage level in the MIS system, potentially increases the sewage level in local systems, and potentially increases the probability of basement backup occurrence. In 2013, a draft report was completed that summarized background information and provides preliminary recommendations for each gravity overflow. The next step is to secure a consultant(s) to complete a Preliminary Engineering Memorandum for each of the outfalls prior to design and construction of the selected alternatives. The schedule for this work is undefined at this time.

### **Demonstration and Installation Projects for Increasing Capacity of the South Shore Water Reclamation Facility**

The purpose of this project is to pilot test a wet weather treatment process for increasing the capacity of the South Shore Water Reclamation Facility. This advanced facilities planning includes evaluation of biological, physical, and chemical innovative treatment technologies. The scope includes a demonstration/field testing of innovative biological, chemical and physical wet weather treatment technologies that are currently developing for wastewater treatment systems. It also includes an assessment of chemical, energy, operational and maintenance, and infrastructure requirements for the available processes. In addition, the scope includes evaluating emerging contaminants such as pharmaceuticals, personal care products, and other trace organic chemicals, and also an analysis of nutrient reduction technologies. The project was completed in June 2014.

### **South Shore Water Reclamation Facility Capacity Improvements**

The purpose of this project is to cost-effectively increase the capacity of the South Shore Water Reclamation Facility that will reduce the risk of sanitary sewer overflows, combined sewer overflows, and basement backups. This project will also reduce the scope of future expansion requirements, assuming that the goal of adding an estimated 20 MGD in operating capacity is achieved. The scope includes completing the preliminary engineering, design, and construction of the projects recommended in the South Shore Water Reclamation Facility Capacity Analysis report (S06014) or alternative projects developed during preliminary engineering. Preliminary engineering work started in August 2013, and will be completed by November 2015. During 2014, more extensive analysis of the plant hydraulics was completed, as well as testing of the secondary clarifier. Options for specific improvements were evaluated and summarized in technical memoranda. The final Preliminary Engineering Report will summarize these recommendations for expanding the plant's hydraulic capacity. Design of the final recommended improvements will be completed by the end of 2017, and construction will follow starting in 2018.

### **Lyons Park Creek Flood Management**

The evaluation portion of this project began in 2011 and will continue into 2015. This project was initiated based on the results from a District-funded study by SEWRPC in 2009 which updated the floodplain boundary and the number of habitable structures at risk of flooding during a one-percent probability flood flow. The purpose of this part of the project is to develop alternatives to remove habitable structures from the one-percent flood flows along Lyons Park Creek, evaluate these alternatives with project stakeholders and determine the recommended alternative.

### **Kinnickinnic (KK) River Watercourse Management Plan Update**

The objective of this watershed planning study is to update the flood management recommendations for the KK River watershed. This project was initiated based on updated 1% annual probability flood flows developed by the Southeastern Wisconsin Regional Planning Commission (SEWRPC) and approved by the Wisconsin Department of Natural Resources in 2014. These updated flood flows are estimated at 15-20% higher than the flood flows that were used as the basis for previous flood management planning efforts within the KK River watershed. The KK River Watercourse Management Plan update will develop comprehensive flood management alternatives to reduce the flood risk throughout the watershed, incorporate the removal of the concrete channel lining for the KK River and its tributaries within these alternatives, incorporate stakeholder and public feedback, and develop a metric to determine the recommended watershed alternative.

### **Climate Change Planning**

The project undertook a Vulnerability Analysis, completed in 2014, to assess how soon impacts of climate change may materialize at a strong enough level to present a meaningful threat to existing or planned facilities or operations. The recommended next steps include (1) “no regrets” actions, which are being addressed in ongoing District activities, (2) data that should be monitored annually to evaluate trends, and (3) information that will be used in development of the 2050 FP. These steps are detailed in the Climate Change Vulnerability Analysis, October 2014.

## **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 2014 to communicate the status of its CMOM Program to various stakeholders. The activities included the CMOM conference, which is attended by satellite municipalities, presentations to District staff, submitting the CMOM Program Annual Report to the WDNR, and updating CMOM Program information on the District’s web site (both internal and external).

Discussed below are the activities of the communication plan that have been completed during 2014:

- Presentations were given in 2014 to the conveyance, treatment, and watercourse groups in the Technical Services Division to explain the new process for tracking assets on capital projects.

- The District held a CMOM conference on March 6<sup>th</sup>, 2014. Public works and engineering staff from the District's satellite municipalities attended. The conference included presentations on the District's sewer system, municipal CMOM audit guidance, importance and use of data, flow meters, directional drilling, and lateral rehabilitation and foundation drain efforts.
- The updated 2014 CMOM Program documentation and Annual Report for 2013 were submitted to the WDNR on June 26, 2014.
- A presentation was given to the Commission on December 22<sup>nd</sup>, 2014, which provided a summary and description of the Asset Management and CMOM Programs.
- The District's publicly accessible CMOM web page was updated to include the updated 2014 CMOM Program documentation and the 2013 CMOM Program Annual Report.
- The District updated its internal CMOM web page to include the updated 2014 CMOM Program documentation and the 2013 CMOM Program Annual Report.

## AUDIT PLAN

The Audit Plan is comprised of three sections: (1) Annual updating which is completed through the Annual Report; (2) Program audit, which is completed through the Program Audit Report and undertaken on a five year cycle, and (3) Program change procedures, which will be implemented following the Program Audit. The CMOM Program was last updated in 2014.

# ATTACHMENTS

***Attachment 1 - CMOM Performance Measures ..... 1-A1***

***Attachment 2 - Changes to CMOM Management Program..... 1-A2***

***Attachment 3 - Separate Sewer Overflow Outfall Locations..... 1-A3***

***Attachment 4 - Combined Sewer Overflow Outfall Locations..... 1-A4***

***Attachment 5 - Satellite Municipality Phone List ..... 1-A5***

***Attachment 6 - District Situational Contact List ..... 1-A6***



## ATTACHMENT 1 - CMOM PERFORMANCE MEASURES

Service Area	Functional Area	Reference Objective <small>*Glossary at end of attachment</small>	Measure <small>* indicates the measure is also a benchmark</small>	2012 Status/Value	2013 Status/Value	2014 Status/Value
<b>OVERALL</b>	<b>Program Organization</b>	2.2.1.1	Asset Management Executive Steering Committee established and functioning	New performance measure for 2013	Yes	Yes
			Asset Management Strategy established and updated annually	New performance measure for 2013	Yes	Yes
			Number of Asset Management Plans developed	New performance measure for 2013	0	0
			Asset Management Team established and functioning	Yes	Yes	Yes
			Organizational Best Practices Index*	27	32 <sup>4</sup>	32.5
	2.2.1.2	Annual cost of the regional CMOM Program activities	\$107,161.09	\$73,877.62	\$50,038.54	
	<b>Communication</b>	2.2.1.2	Annual Asset Management Program update to the Commission completed	Yes	Yes	Yes

<sup>4</sup> Two additional categories have been added to the measure starting in 2013 for a total of nine. This increases the maximum score from 35 to 45. Please refer to the CMOM Program documentation for a full description of what areas are measured by this index.

Service Area	Functional Area	Reference Objective <small>*Glossary at end of attachment</small>	Measure <small>* indicates the measure is also a benchmark</small>	2012 Status/Value	2013 Status/Value	2014 Status/Value
<b>OVERALL CONTINUED</b>	<b>Communication Cont.</b>	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	New performance measure for 2013	249	162	
		2.2.1.4	Percent of overflow and in-plant diversion events for which a public notification was issued	100%	100%	100%
	<b>Finance</b>	2.2.1.3	Bond Ratings*	AAA (Fitch Ratings), Aaa (Moody's), AA+ (S&P)	AAA (Fitch Ratings), Aaa (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 <small>*Glossary at end of attachment</small>	Measure <small>* indicates the measure is also a benchmark</small>	2012 Status/Value	2013 Status/Value	2014 Status/Value
<b>OVERALL CONTINUED</b>	Finance Cont.	2.2.1.3 cont.	Outstanding Debt	1.78%	1.73%	1.62%
			Percent of cash financing (six-year average)	25%	25%	28%
	System Performance	2.2.1.4	CMAR overall score*	JI = 4.00; SS = 3.84	JI = 4.00; SS = 3.79	Waiting on review by WDNR
			Percent of flow into system, resulting from wet weather, that is captured and treated	100.0%	97.3%	98.8%
	Satellite Systems	2.2.1.5	Percent of municipal sewer construction projects receiving QA inspection as defined by the QA program	100%	100%	100%
			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 <small>*Glossary at end of attachment</small>	Measure <small>* indicates the measure is also a benchmark</small>	2012 Status/Value	2013 Status/Value	2014 Status/Value
<b>OVERALL CONTINUED</b>	<b>Personnel &amp; Safety Cont.</b>	2.2.1.6 cont.	Annual training hours per employee*	16.0 hrs/employee	26.9 hrs/employee	32.2 hrs/employee
			Employee Health and Safety Severity Rate	1.9 injury hours/100 full time employees (FTE)	MMSD: 0 injury hours per 100 FTE's Contract Operator: 2.2 injury hours per 100 FTE's <sup>5</sup>	MMSD: 0.8 injury hours per 100 FTE's Contract Operator: 88.3 injury hours per 100 FTE's
<b>CONVEYANCE</b>	<b>System Performance</b>	2.2.2.1	Number of wet weather CSO events	0	2	2
			Ratio of unused volume of the ISS to the wet weather CSO volume for each event	0	4/10/14 - 13.8%, 4/18-19/14 - 13.5%	5/12/14 – NA, 6/18-19/14 – 25.5%
		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

<sup>5</sup> The contract operator's Employee Health and Safety Severity Rate was not tracked as a performance measure prior to the 2013 Annual Report.

Service Area	Functional Area	Reference Objective <small>*Glossary at end of attachment</small>	Measure <small>* indicates the measure is also a benchmark</small>	2012 Status/Value	2013 Status/Value	2014 Status/Value
<b>CONVEYANCE CONTINUED</b>	<b>System Performance Cont.</b>	2.2.2.3 cont.	Number of wet weather SSOs	1	0	1
			Volume of wet weather SSOs	0.16 MG	0	0.80 MG
			Number of wet weather SSOs where the event generated flow is less than the WDNR approved level of protection	1	0	0
			Volume of wet weather SSOs where the event generated flow is less than the WDNR approved level of protection	0.16 MG	0	0
			Percent of total flow entering the conveyance system that is captured and treated	100.0%	98.5%	99.5%
			Number of building backups caused by the loss of capacity or function of a District facility	0 (reported)	1 (reported)	0 (reported)
			Regulatory-approved Industrial Waste Pretreatment Program in operation	Yes	Yes	Yes

Service Area	Functional Area	Reference Objective <small>*Glossary at end of attachment</small>	Measure <small>* indicates the measure is also a benchmark</small>	2012 Status/Value	2013 Status/Value	2014 Status/Value
CONVEYANCE CONTINUED	Asset Management	2.2.2.1	Number of gallons of green infrastructure capacity in the planning area	New performance measure for 2013	4.55 MG <sup>6</sup>	8.54 MG
			Number of rain barrels distributed by the District	915	1,271	1,547
		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	7 contracts	12 contracts
			Backlog of conveyance construction project updates to the GIS	15 contracts	5 contracts	1 contract

<sup>6</sup> This value was updated from last year’s Annual Report due to a number of projects ending up being smaller than what was originally proposed. The value was corrected from 5.32 MG to 4.55 MG.

Service Area	Functional Area	Reference Objective <small>*Glossary at end of attachment</small>	Measure <small>* indicates the measure is also a benchmark</small>	2012 Status/Value	2013 Status/Value	2014 Status/Value
<b>CONVEYANCE CONTINUED</b>	<b>Asset Management Cont.</b>	2.2.2.4 cont.	Percent of conveyance pipeline assets with defined condition and management method as documented in the Asset Information Management System	87.7%	98.9%	98.9% sewers, 0% equipment & pump stations <sup>7</sup>
			Level of Protection <sup>8</sup> 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)	0	212 <sup>9</sup>	22
			Planned maintenance ratio: hours* (sewers)	71%	56%	62%
			Planned Maintenance ratio: count (sewers)	93%	85%	92%

<sup>7</sup> Prior to 2014, equipment and pump station assets were not tracked as part of this measure. Previous values were for sewers only.

<sup>8</sup> Level of Protection is defined as the five year interval, as stated in the approved 2020 FP.

<sup>9</sup> Increase in work orders was due to inspections being scheduled at a time of the year that they could not be performed. The delay in inspections did not adversely affect the operation of the conveyance system.

Service Area	Functional Area	Reference Objective <small>*Glossary at end of attachment</small>	Measure <small>* indicates the measure is also a benchmark</small>	2012 Status/Value	2013 Status/Value	2014 Status/Value
<b>CONVEYANCE CONTINUED</b>	<b>Asset Management Cont.</b>	2.2.2.5 cont.	Planned maintenance ratio: cost (sewers)	81%	52%	52%
			Number of open PM work orders older than 90 days (conveyance equipment and pump stations)	123	162	4 <sup>10</sup>
			Planned maintenance ratio: hours* (conveyance equipment and pump stations)	73%	71%	75%
			Planned maintenance ratio: count (conveyance equipment and pump stations)	77%	76%	79%
			Planned maintenance ratio: cost (conveyance equipment and pump stations)	67%	65%	67%
			Conveyance system integrity* [# collection system failures/total miles in collection system]	0 failures per 100 miles of piping	0.28 failures per 100 miles of piping	0 failures per 100 miles of piping
	<b>Capital Program Implementation</b>	2.2.2.4	Facilities Plan implementation on schedule	Yes	Yes	Yes

<sup>10</sup> Contract operator has taken steps to improve planning and management of work orders to reduce the number of open PM work orders older than 90 days.



Service Area	Functional Area	Reference Objective <small>*Glossary at end of attachment</small>	Measure <small>* indicates the measure is also a benchmark</small>	2012 Status/Value	2013 Status/Value	2014 Status/Value
<b>CONVEYANCE CONTINUED</b>	<b>System Monitoring</b>	2.2.2.2	Percent of metersheds where compliance or non-compliance has been established	New performance measure for 2013	40%	42%
		2.2.2.6	Percent of flow monitors at non-critical sites repaired within 30 consecutive days after problems are identified	New performance measure for 2013	85% <sup>11</sup>	90% <sup>11</sup>
			Percent of non-critical monitoring sites with less than 30 consecutive days of missing or bad data	New performance measure for 2013	85% <sup>11</sup>	85% <sup>11</sup>
			Percent of non-critical monitoring site, rain gauge, and water quality data reviewed for QA within 90 days	New performance measure for 2013	100%	90% <sup>12</sup>
			Percent of flow monitors at critical sites repaired within 5 business days after problems are identified	90% <sup>11</sup>	85% <sup>11</sup>	95% <sup>11</sup>

<sup>11</sup> Sites with active construction contracts under the WWPFPMP with non-functioning equipment have not been repaired since existing equipment has been or will be replaced or abandoned.

<sup>12</sup> A temporary reduction in staff and the addition of monitoring sites in 2014 resulted in a slower than normal turnaround time for QA review. The issue is expected to be resolved in 2015.

Service Area	Functional Area	Reference Objective <small>*Glossary at end of attachment</small>	Measure <small>* indicates the measure is also a benchmark</small>	2012 Status/Value	2013 Status/Value	2014 Status/Value
<b>CONVEYANCE CONTINUED</b>	<b>System Monitoring Cont.</b>	2.2.2.6 cont.	Percent of critical monitoring sites with less than 5 business days of missing or bad data	50% <sup>13</sup>	85% <sup>13</sup>	85% <sup>13</sup>
			Percent of monitoring sites calibrated [check and adjustment as necessary] annually	50% <sup>14</sup>	95% <sup>14</sup>	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	90% <sup>13</sup>	100%	100%
	<b>Customer Service</b>	2.2.2.7	Percent of documented inquiries with a documented response	87%	95%	100%
<b>TREATMENT</b>	<b>System Performance</b>	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

<sup>13</sup> Sites with active construction contracts under the WWPFPMP with non-functioning equipment have not been repaired since existing equipment has been or will be replaced or abandoned

<sup>14</sup> Sites with active construction contracts under the WWPFPMP have received annual calibration since existing equipment has been or will be replaced or abandoned

Service Area	Functional Area	Reference Objective <small>*Glossary at end of attachment</small>	Measure <small>* indicates the measure is also a benchmark</small>	2012 Status/Value	2013 Status/Value	2014 Status/Value
<b>TREATMENT CONTINUED</b>	<b>System Performance Cont.</b>	2.2.3.1 cont.	Number of in-plant diversions and Combined Sewer Wet Weather Flow Treatment Process events contrary to permit requirements	0	0	0
			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%

Service Area	Functional Area	Reference Objective <small>*Glossary at end of attachment</small>	Measure <small>* indicates the measure is also a benchmark</small>	2012 Status/Value	2013 Status/Value	2014 Status/Value
<b>TREATMENT CONTINUED</b>	<b>System Performance Cont.</b>	2.2.3.2	Volume of SSOs that occurred when treatment plant capacity was below the planned wet weather capacity	0	0	0.14 MG
			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	42,563 dry US tons	44,987 dry US tons	42,472 dry US tons
			Percent of produced biosolids that are beneficially reused	100%	100%	100%
	<b>Asset Management</b>	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%	0%
		2.2.3.5	Number of CM work orders older than 90 days (treatment plant equipment)	395	460	488

Service Area	Functional Area	Reference Objective <small>*Glossary at end of attachment</small>	Measure <small>* indicates the measure is also a benchmark</small>	2012 Status/Value	2013 Status/Value	2014 Status/Value
<b>TREATMENT CONTINUED</b>	<b>Asset Management Cont.</b>	2.2.3.5 cont.	Number of PM work orders older than 90 days (plant equipment)	379	256	183 <sup>15</sup>
			Planned maintenance ratio: count of work orders	71%	71%	71%
			Planned maintenance ratio: hours*	57%	54%	46%
			Planned maintenance ratio: cost	43%	42%	36%
			Number of outstanding open PM tasks	New performance measure for 2013	14	17
			Number of outstanding open CM tasks	New performance measure for 2013	71	96
			O&M cost per MG treated*	\$1,243/MG	\$1,043/MG <sup>16</sup>	\$1,166/MG
	<b>Capital Program Implementation</b>	2.2.3.4	Facilities Plan implementation on schedule for treatment plant studies and projects	Yes	Yes	Yes

<sup>15</sup> Contract operator has taken steps to improve planning and management of work orders to reduce the number of open PM work orders older than 90 days.

<sup>16</sup> The 2013 Annual report had an incorrect value of \$1,251/MG. The 2014 report has been updated to reflect the correct amount of \$1,043/MG.

Service Area	Functional Area	Reference Objective <small>*Glossary at end of attachment</small>	Measure <small>* indicates the measure is also a benchmark</small>	2012 Status/Value	2013 Status/Value	2014 Status/Value
<b>WATERCOURSE</b>	<b>Capital Program Implementation</b>	2.2.4.1	Annual number of habitable structures removed from the one-percent probability floodplain	32	18	11
	<b>System Conservation</b>	2.2.4.2	Area of property protected/preserved through District ownership or conservation easement	152 Acres <sup>17</sup>	181 Acres <sup>18</sup>	375 Acres <sup>19</sup>
			Percent of stormwater 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	New performance measure for 2013	0 identified, 0 removed	0 identified, 0 removed
		2.2.4.5	Percent of jurisdictional watercourse with non-concrete streambeds	82%	81%	81%
	<b>Asset Management</b>	2.2.4.3	Number of jurisdictional watercourse construction project updates to the GIS	0 contracts	0 contracts	0 contracts

<sup>17</sup> 2,501 acres to date

<sup>18</sup> The 2013 Annual Report had an incorrect value of 161 acres. The 2014 report has been updated to reflect the correct amount of 181 acres added for a total of 2,682 acres to date.

<sup>19</sup> 3,057 acres to date

Service Area	Functional Area	Reference Objective <small>*Glossary at end of attachment</small>	Measure <small>* indicates the measure is also a benchmark</small>	2012 Status/Value	2013 Status/Value	2014 Status/Value
<b>WATERCOURSE CONTINUED</b>	<b>Asset Management Cont.</b>		Backlog of jurisdictional watercourse construction project updates to the GIS	5 contracts	5 contracts	5 contracts
		2.2.4.3 cont.	Percent of watercourse assets with defined condition and management method documented in the Asset Information Management System	54%	54%	54%
		2.2.4.4	Percent of scheduled watercourse asset inspections completed	100% <sup>20</sup>	100% <sup>21</sup>	100%
			Percent of scheduled watercourse asset criticality assessments completed	New performance measure for 2013	0%	0%
		<b>Customer Service</b>	2.2.4.6	Percent inquiry documentation completed	100%	100%

<sup>20</sup> Culvert and structure asset inspections are scheduled on a three year cycle. No inspections were scheduled for 2012.

<sup>21</sup> No watercourse asset inspections were scheduled for 2013 because there was no system in place to log the inspections. This was resolved for 2014.

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 2014 Report.

## ATTACHMENT 3 - SEPARATE SEWER OVERFLOW OUTFALL LOCATIONS

District Site Number	WPDES Permit ID Number	Location	Pump or Gravity	Current SCADA	Current Portable	Proposed SCADA	Notes
BS0101	220	S Howell Ave at E Grange Ave (ext'd)	Gravity	Yes			
BS0302	233	W Fisher Pkwy at N 106th St	Gravity	Yes			
BS0303	247	W Oklahoma Ave, 100 feet w/o S 74th St	Pump	Yes			
BS0304	242	S 79th St (ext'd) & W Dickenson St (ext'd)	Gravity	Yes			
BS0401	235	N Honey Creek Pkwy & W Wisconsin Ave	Pump	Yes			
BS0402	237	N Menomonee River Pkwy, 300 feet e/o N 68th St	Gravity	No	No	No	Outfall is bulkheaded and will be abandoned in the future. Not able to overflow at this location.
BS0403	234	N Honey Creek Pkwy & W Portland Ave	Gravity	Yes			
BS0404	263	W Green Tree Rd & Milwaukee River	Gravity	Yes			

District Site Number	WPDES Permit ID Number	Location	Pump or Gravity	Current SCADA	Current Portable	Proposed SCADA	Notes
BS0503	226	W Roosevelt Dr & N 35th St	Pump	Yes			
BS0504	214	W Hampton Ave & N Lydell Ave	Gravity	No	No	No	Manually activated gate
BS0505	223	W Villard Ave & N 27th St	Pump	Yes			
BS0506	231	N Range Line Rd & Milwaukee River (east side)	Pump	Yes			
BS0507	229	N 46th St & W State St	Gravity	Yes			
BS0511	207	N 31st St & W Fairmont Ave	Gravity	No	Yes	No	Installed portable on 4/12/2005
BS0512	244	N Lydell Ave & W Lancaster Ave	Gravity	No	No	No	Manually activated gate
BS0513	245	N Lydell Ave & W Montclair Ave	Gravity	No	Yes	Yes	MS0508, and portable meter in overflow pipe
BS0514	209	N 27th St & W Silver Spring Dr	Gravity	No	Yes	No	District expects to turn this over to the City of Milwaukee

District Site Number	WPDES Permit ID Number	Location	Pump or Gravity	Current SCADA	Current Portable	Proposed SCADA	Notes
BS0515	266	200 E River Woods Parkway [Manhole 02140 – s/o E Hampton Rd & N Lydell Ave, s/o Milwaukee River (formerly Pillsbury Silos)]	Gravity	Yes			Level monitored at NS3 Junction Chamber (JC). Multiple conditions must be met on the supervisory control and data acquisition (SCADA) system to confirm overflow.
BS0516	265	4700 N Estabrook Parkway [Manhole 02141 – s/o E Hampton Rd & N Lydell Ave, n/o Milwaukee River (formerly Pillsbury Silos)]	Gravity	Yes			Level monitored at NS3 JC. Multiple conditions must be met on SCADA to confirm overflow.
BS0601	225	S 35th St & W Manitoba St	Pump	Yes			
BS0602	232	S Kinnickinnic Ave & E St Francis Ave	Gravity	Yes			
BS0603	243	W Lincoln Ave, 565 feet w/o S 43rd St	Gravity	No	Yes	No	Site to be checked whether it can be abandoned
MS0409	206	RR Tracks 500' s/o Milwaukee/ Ozaukee County border and 200' w/o Waverly Rd	Gravity	Yes			Level sensor in MS0409, which has a gravity overflow pipe

District Site Number	WPDES Permit ID Number	Location	Pump or Gravity	Current SCADA	Current Portable	Proposed SCADA	Notes
PS0402	264	Ravine Lift Station	Gravity	Yes			

## ATTACHMENT 4 - COMBINED SEWER OVERFLOW OUTFALL LOCATIONS

Receiving water (of combined sewer overflow)	Combined Sewer Outfall Number	Diversion Structure Number	ISS Drop Shaft	Intercepting Structure Number	IS Upstream of DS	Location	Notes
Burnham Canal	189	189	CT07	400	Yes	S 9th St	
Burnham Canal	190	190	CT07	363 & 400A	Yes	S 9th St	
Burnham Canal	191	191	CT07	399	Yes	S 11th St	
Burnham Canal	193	193	CT07	398	Yes	S 13th St	
Burnham Canal	194	194	CT07	360, 361, & 396	Yes	S Muskego Ave	
Kinnickinnic River	19	85046	None	None	N/A	S 1st St at the Kinnickinnic River	MIS Overflow
Kinnickinnic River	148	148	CT08	369	Yes	E National Ave	
Kinnickinnic River	149	149	CT08	362 & 368A	Yes	S of E Walker St	
Kinnickinnic River	150	150	CT08	367	Yes	S of E Washington St	
Kinnickinnic River	151	151	CT08	346	Yes	E Greenfield Ave	
Kinnickinnic River	152	152	KK03	342	Same structure	S Kinnickinnic Ave	
Kinnickinnic River	153	153	KK03	339	Yes	S Kinnickinnic Ave	
Kinnickinnic River	154	154	KK03	341	Yes	S 1st St	
Kinnickinnic River	155	155	KK03	340	Yes	S 1st St	

Receiving water (of combined sewer overflow)	Combined Sewer Outfall Number	Diversion Structure Number	ISS Drop Shaft	Intercepting Structure Number	IS Upstream of DS	Location	Notes
Kinnickinnic River	156	156	KK03	345A & 366	Yes	S 2nd St	
Kinnickinnic River	157	157	KK03	345	Yes	W Rogers St	
Kinnickinnic River	158	158/159	KK03	343, 344A, & 364	Yes	W Becher St	
Kinnickinnic River	159	158/159	KK03	343, 344A, & 365	Yes	W Becher St	
Kinnickinnic River	160	160	KK04	None	Yes	E Lincoln Ave	
Kinnickinnic River	161	161	KK04	330	Same structure	W Lincoln Ave	
Kinnickinnic River	162	162	KK04	331	Same structure	W Lincoln Ave	
Kinnickinnic River	163	163	KK02	328	Yes	S Chase Ave	
Kinnickinnic River	164	164	KK02	327	Yes	S Chase Ave	
Kinnickinnic River	165	165	KK01	325	Same structure	W Cleveland Ave	
Kinnickinnic River	166	166	KK01	325	Same structure	W Cleveland Ave	
Kinnickinnic River	166A	KK1JC01	KK01	None	N/A	S 6th St at W Cleveland Ave	KK1 Junction Chamber
Kinnickinnic River	167	167	KK01	City Manhole	Yes	S 8th St	
Kinnickinnic River	168	168	KK01	City Manhole	Yes	S 14th St	

Receiving water (of combined sewer overflow)	Combined Sewer Outfall Number	Diversion Structure Number	ISS Drop Shaft	Intercepting Structure Number	IS Upstream of DS	Location	Notes
Kinnickinnic River	169	169	KK01	City Manhole	Yes	S 27th St	
Kinnickinnic River	260	DC0103	None	None	N/A	S 6th St & W Oklahoma Ave	Converted from SSO
Lake Michigan	195	195	LMN	338	Same structure	E Bay St	
Lake Michigan	196	196	LMS	335, 336, & 337	Yes	E Russell Ave	
Lincoln Creek	145	145	NS12	500	Yes	N 35th St & W Congress St	
Lincoln Creek	197	BS0502	None	None	N/A	Hampton Ave at 32nd St	
Menomonee River	10	85047	None	None	N/A	W Canal St at 8th St	MIS Overflow
Menomonee River	170	170	CT08	404	Yes	S 2nd St	
Menomonee River	172	172	CT07	197B & 197C	Yes	N Ember La	Upsized in 2007
Menomonee River	173	173/174	CT07	196A & 388	Yes	N 15th St	
Menomonee River	174	173/174	CT07	196A & 388	Yes	N 15th St	
Menomonee River	175	175	CT07	387	Yes	N 17th St	
Menomonee River	176	176	CT5/6	195, 380, & 502	Yes	N 25th St	



Receiving water (of combined sewer overflow)	Combined Sewer Outfall Number	Diversion Structure Number	ISS Drop Shaft	Intercepting Structure Number	IS Upstream of DS	Location	Notes
Menomonee River	177	177	CT5/6	195, 380, & 502	Yes	N 26th St	
Menomonee River	177A	CT5/6	CT5/6	None	N/A	123 N 25th St (CT5,6)	
Menomonee River	178	178	CT5/6	358 & 359A	Yes	S 27th St	
Menomonee River	180	180	CT5/6	357 & 381	No	S 35th St	
Menomonee River	181	181	CT3/4	377	Same structure	W Wisconsin Ave	
Menomonee River	182	182	CT3/4	193A, 372, & 372A	Yes	N 43rd St	
Menomonee River	182A	C182A01	CT3/4	None	Yes	4251 W State St (CT3,4)	54" flow balance overflow
Menomonee River	183	183	CT3/4	183	Yes	N 45th St	IS183 goes to City sanitary
Menomonee River	184	DG08-03	CT02	187A & 188	Yes	N Hawley Rd	
Menomonee River	185	185	CT07	386	Yes	N 9th St (Ext'd)	
Menomonee River	262	BS0405	None	None	N/A	N 59th St & W Trenton Pl	Converted from SSO
Milwaukee River	15	85043	None	None	N/A	N Marshall St at the Milwaukee River	MIS Overflow
Milwaukee River	16	85042	None	None	N/A	W Vliet St ext'd, east of N 3rd St	MIS Overflow

Receiving water (of combined sewer overflow)	Combined Sewer Outfall Number	Diversion Structure Number	ISS Drop Shaft	Intercepting Structure Number	IS Upstream of DS	Location	Notes
Milwaukee River	17	105/017	NS08	None	N/A	N Van Buren St at E Brady St	
Milwaukee River	18	BS0701	None	None	N/A	S Water St at E Bruce St	MIS Overflow
Milwaukee River	51	51	NS07	208	Yes	Point 300' west of N Humboldt Ave & N Weil ext'd	
Milwaukee River	89	NS11JC01	NS11	134	Yes	E Capitol Dr	
Milwaukee River	90	90	NS04	135A	Yes	E Keefe Ave	
Milwaukee River	91	91	NS04	73 & 74A	Yes	E Edgewood Ave	
Milwaukee River	92	92	NS05		Yes	E Auer Ave	
Milwaukee River	94	94	NS05	135	Yes	E Burleigh St	
Milwaukee River	96	NS5A02	NS05	None	Yes	E Locust St	
Milwaukee River	97A	97	NS06	136	Yes	E Park Pl	
Milwaukee River	98	98	NS06	137 & 228	Yes	E Bradford Ave	
Milwaukee River	99	99	NS07	141 & 228A	Yes	E Boylston St	
Milwaukee River	101	101	NS07	230	Yes	N Pulaski St	
Milwaukee River	102	102	NS07	207 & 207A	Yes	N Humboldt Ave	
Milwaukee River	103	103	NS07	231	Yes	N Marshall St	
Milwaukee River	103A	NS7	NS07	None	N/A	1944 N Commerce St	NS07 Junction Chamber
Milwaukee River	104	104	NS07	199 & 200A	Yes	N Holton St	
Milwaukee River	106	106	NS08	209	Yes	N of E Pleasant St	
Milwaukee River	107	107	NS08	210	Yes	E Walnut St	

Receiving water (of combined sewer overflow)	Combined Sewer Outfall Number	Diversion Structure Number	ISS Drop Shaft	Intercepting Structure Number	IS Upstream of DS	Location	Notes
Milwaukee River	108B	108	NS08	233	Yes	E Pleasant St at N Water St	Constructed in 2007 to replace 108 and 108A
Milwaukee River	109	109	NS08	211	Same structure	N of W Cherry St	
Milwaukee River	110	110	NS08	201A & 212	Yes	W Cherry St	
Milwaukee River	111	111	NS08	234	Yes	E Lyon St	
Milwaukee River	112	112	NS09	235	Same structure	E Ogden Ave	
Milwaukee River	113	113	NS09	213	Yes	W McKinley Ave	
Milwaukee River	113A	113A	NS09	214A	Yes	W Juneau Ave (Park West Freeway)	
Milwaukee River	114	114	NS09	215	No	W Juneau Ave	
Milwaukee River	115	115	NS09	216	No	W Highland Ave	
Milwaukee River	116	116	NS09	237	No	E Highland Ave	
Milwaukee River	117	117	NS09	217	No	W State St	
Milwaukee River	118	118	NS09	146 & 238A	No	E State St	
Milwaukee River	119	119	NS09	218	Yes	W Kilbourn Ave	
Milwaukee River	120	120N/120S	NS09	147, 239, 239A, & 239B	No, Same, Same	E Kilbourn Ave	
Milwaukee River	121	121	NS09	219A	Yes	N of W Wells St	
Milwaukee River	122	122	NS09	205, 206, & 220	No	W Wells St	
Milwaukee River	123	123	NS09	198 & 240	No	E Wells St	

Receiving water (of combined sewer overflow)	Combined Sewer Outfall Number	Diversion Structure Number	ISS Drop Shaft	Intercepting Structure Number	IS Upstream of DS	Location	Notes
Milwaukee River	124	124	NS09	221	Yes	N of W Wisconsin Ave	
Milwaukee River	125	125	NS09	222	No	W Wisconsin Ave	
Milwaukee River	126	126	NS10	241	Same structure	E Wisconsin Ave	
Milwaukee River	127	127	NS10	223	No	W Michigan St	
Milwaukee River	128	128	NS10	242	No	E Michigan St	
Milwaukee River	129	129	NS10	224	Yes	N of W Clybourn St	
Milwaukee River	130	130	NS10	225	Yes	W Clybourn St	
Milwaukee River	131	131	NS10	243	No	E Clybourn St	
Milwaukee River	133	NS10F05	NS10	227	Yes	W St. Paul Ave	
Milwaukee River	134	134	NS10	244	No	E St. Paul Ave	
Milwaukee River	135	135	NS10	245	Yes	E Buffalo St	
Milwaukee River	136	136	NS10	246	Same structure	E Chicago St	
Milwaukee River	137	137	CT08	405	Same structure	S 1st Pl	
Milwaukee River	139	139	CT08	406	Yes	E Pittsburgh Ave	
Milwaukee River	140	140	NS10	247	Yes	N Broadway	
Milwaukee River	141	141	CT08	403, 403A & 407	Yes	E Florida St	
Milwaukee River	142	142	NS10	248A	Yes	E Polk St	
Milwaukee River	143	143	CT08	370	Same structure	E Bruce St	
Milwaukee River	144	144	NS08	234A	Yes	E Lyon St	

Receiving water (of combined sewer overflow)	Combined Sewer Outfall Number	Diversion Structure Number	ISS Drop Shaft	Intercepting Structure Number	IS Upstream of DS	Location	Notes
Milwaukee River	146	146	NS07	142A	Yes	N Arlington Pl	
Milwaukee River	147	147	NS09	145 & 236	No	E Juneau Ave	
Milwaukee River	230	BS0501	None	None	N/A	N Richards St & E Congress St	Converted from SSO
South Menomonee Canal	61	EWWE	None	None	N/A	3 <sup>rd</sup> & Seeboth	Emergency Wastewater Exit
South Menomonee Canal	187	187	CT08	401 & 402	Yes	S 4th St	
South Menomonee Canal	188	188	CT08	394	Yes	S 6th St	

## ATTACHMENT 5 - 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	414-425-7510	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	414-761-5301	414-761-5374
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	262-782-6640
Oak Creek	414-768-7060	414-768-7060
River Hills	414-352-0080	414-351-9900
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 6 - 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	Debra Jensen (District) (Backup is Larry Anderson)	225-2143 (Backup 617-1429)
Manhole cover missing	Urgent	Central Control Operator (Veolia)	282-7200 (internal x3491)
Blockage/major debris in the river	Urgent	Dave Fowler (District) (Backup is Patrick Elliott)	277-6368, cell – 559-9883 (Backup 225-2168, Backup Cell – 313-1608)
Facility ownership question	Non-emergency	Debra Jensen (District)	225-2143
Municipal request regarding sewer system	Non-emergency	Debra Jensen (District)	225-2143
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	Dave Fowler (District)	277-6368, cell – 559-9883
Construction site complaint	Non-emergency	Rick Niederstadt (District)	225-2173, cell – 617-6859
Notice of Intent to Discharge into MMSD system	Non-emergency	Sharon Mertens (District)	277-6384

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