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# Capacity, Management, Operation and Maintenance (CMOM) Program

## Annual Report for 2015

Menomonee Falls Sewer Utility  
Village of Menomonee Falls, WI

June 2016

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Director of Utilities

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## Section 1: PROGRAM OVERVIEW

The Village of Menomonee Falls developed and first submitted to the Milwaukee Metropolitan Sewerage District (MMSD) and Wisconsin Department of Natural Resources (WDNR) documentation of its Capacity, Management, operation and Maintenance (CMOM) Program in June 2009.

The CMOM Plan (with performance measures) for the Village of Menomonee Falls was required by the 2002 Stipulation with the DNR and Chapter 3 of the MMSD Rules. This plan is a tool for the Village Sewer Utility to document activities to help us achieve goals related to overflows and system reliability. The annual report and audit plan helps to assess our practices and institute improvements to our system.

The implementation of the CMOM plan and strategies involved addresses activities that were identified as high priorities in the CMOM Strategic Plan developed with the MMSD and their consultants.

We have expanded the CMOM to more expressly include the Brookfield (Fox River) and Sussex (Regional) Water Pollution Control Centers that also serve sewersheds in Menomonee Falls. Both of these are now requiring CMOMs for their customers.

This review of our CMOM Program will allow us to continue to evaluate pertinent performance measures and update the Program as needed.

### *1.1 REPORT PURPOSE*

The CMOM Program Annual Report provides a summary of CMOM Program activities and is intended to be a communications tool. The report will be available for Village staff and elected officials, MMSD, WDNR, Brookfield WPCC, Sussex WPCC, customers, and the general public.

1. This report will provide an annual summary of actions related to the CMOM Program.
2. This report will provide a commentary to document changes to the CMOM Manual that occurs on an annual basis.
3. To describe actions that are in effect or proposed under the CMOM Program.
4. To show evidence of compliance with the 2002 DNR stipulation to MMSD and the satellite municipalities regarding development and implementation of a CMOM Program.
5. To show evidence of compliance with the CMOM Program to the Brookfield and Sussex WPCCs.

This report consists of the Program Overview section plus a section for the other four areas of the Menomonee Falls CMOM Program as follows.

## ***PROGRAM SUMMARY BY PLAN***

### **Asset Management Plan**

The Asset Management Plan addresses asset needs such as asset knowledge, asset planning, asset refurbishment and replacement, asset development, asset operation and maintenance, asset condition monitoring, asset financing and financial reporting.

### **Management Plan**

The Management Plan contains the goals and objectives, organizational structure to manage the CMOM Program, legal authority to control I/I, design criteria, benchmarking methods, performance measures and reporting methods for CMOM compliance reviews.

### **Overflow Response Plan**

The Overflow Response Plan contains the procedures for being aware of, responding to and reporting and reporting of overflows. The response includes review and analysis to develop corrective actions, where necessary, to prevent future overflows.

### **Communication Plan**

The Communication Plan contains the Village's plan for communicating its CMOM Program to stakeholders, including internal, regulatory and public stakeholders, as well as receiving feedback from stakeholders.

### **Audit Plan**

The Audit Report contains the audit and changes needed for the entire CMOM Program from the year 2014 major audit.

## **1.2 SIGNIFICANT ACTIVITIES**

Revising the CMOM plan and integrating that into the operation.

We began the process to correct deficiencies in laterals in the MMSD service area in 2015 from funds in the MMSD Private Property Inflow/Infiltration program. These activities will be covered in more detail later in the report.

We are using and tweaking a program of identifying, videotaping, and cataloging mainline sewer and laterals that appear to have infiltration and inflow issues.

We are continuing an extensive worker safety and trench training process. This has resulted in an update of safety related information in the CMOM Program. The current trench safety and confined space entry section has been replaced with the updated and more extensive safety policies from our newly updated safety program manual.

We are changing the complete sanitary sewer system cleaning cycle from once every three years to once every seven years. The addition of more sewers every year with the reduction of sewer staffing makes the original target impossible to achieve. The best that we achieved annually in the past five years was just over 20%. In the past seven years, we did achieve 102% cleaning. Therefore, a seven year cycle is achievable. This should not cause a system issue as we have not had backups due to the lack of sewer cleaning in the past 10 years.

## Section 2: MANAGEMENT PLAN

### 2.1 PERFORMANCE MEASURES

The performance measures were originally defined in the CMOM Program as submitted in June 2009.

#### 2.1.1 CHANGES TO THE DEFINED PERFORMANCE MEASURES

There are no new changes in the performance measures in this report.

#### 2.1.2 EVALUATION OF 2015 PERFORMANCE BASED ON THE DEFINED MEASURES

We are at or near most of the goals. We did have a single sanitary sewer overflow in 2015 of 18,000 gallons at a lift station. We followed this up with a localized investigation and found a solution.

### 2.2 MANAGEMENT PLAN REVISIONS

There were no significant changes made to the Village's objectives, strategies, tactics and performance measures in 2015. This is the sixth full year with the CMOM Program.

In 2015, in response to requests from Sussex and Brookfield due to EPA/DNR consent decrees, the Village of Menomonee Falls revised part of its Plumbing Code. These revisions are to mitigate the release of chlorides from water softening into the environment. The revisions included requirements for demand initiated regeneration types equipped with a meter or sensor and that softened water lines are not connected to outside hose bibbs.

In 2015, we instituted some changes to the CMOM Manual as we continue to fully implement the recommendations with some of the newer procedures. For instance, our safety program training has already resulted in a revised safety manual. This replaced the former safety program outline in the original CMOM plan.

The changes made so far include again updating the Municipal phone contact list to reflect changes in staff.

## Section 3: ASSET MANAGEMENT PLAN

### 3.1 IMMEDIATE OBJECTIVES

1. Continue to establish and document the level of protection, design, and performance standards for new conveyance assets constructed in the Village.
2. Minimize the cost of conveyance asset ownership while maintaining necessary stewardship of assets and achieving defined protection levels.
3. Continue our productive and supportive relationship with our Village Board of Trustees which is experiencing a significant turnover.

### 3.2 NEAR-TERM AND LONG –TERM OBJECTIVES

1. We plan capital improvements or rehabilitation projects into the future. The Village has instituted a longer range (10 years) capital projects plan strategy to better plan the future that we update annually.
2. We finished replacing a one-barrel inverted siphon under the Menomonee River that was constructed in the 1920s. The new 3-barreled inverted siphon is now in use.
3. We have upgraded our SCADA system in 2015 to replace outmoded PLCs that have limited data output and improve data reporting. We replaced the PC that runs the system.
4. Engineering Staff continues to update the GIS to reflect changes or revisions in the sanitary sewer system such as errors found, new mains, lift stations and other appurtenances as well as other pertinent Village infrastructure data.
5. Field crews have been trained and are using laptops which connect with the GIS system in real time. Inspections are being recorded directly into the laptop via forms that record and are used to generate work orders. We have improved somewhat but are still resolving connectivity issues in certain parts of the Village.
6. Please see the following section for investigations into the infrastructure both public and private to try to continue to eliminate basement backups and SSOs. This will help to protect our assets (as well as those of residents).

## Section 4: OVERFLOW RESPONSE PLAN

The ORP presents a strategy to mobilize labor, materials, tools and equipment to correct any condition, which may cause or contribute to an unpermitted discharge. The plan considers a wide range of potential system failures that could create an overflow to surface waters, land or buildings.

#### **4.1 CONSTRUCTED OVERFLOW POINTS**

The Village of Menomonee Falls has two constructed overflow points or diversion manholes. The first was built in 2002. It is located at Forest Drive and Grand Avenue near the Menomonee River. The second was constructed in June 2010 and is located at McArthur Drive near the Menomonee River. These were constructed as part of our Automated Emergency Operations System (AEOS).

Upstream of these manholes are sanitary lift stations that take flows from overloaded local sewers and pump to the diversion manholes. Both of these diversion manholes have an actuated valve that is controlled by floats in Village of Menomonee Falls interceptors.

Normal emergency operation is to direct flow into the interceptor. If flows rise above a pre-determined depth that would cause basement backups, the valve closes and directs the flow to the River, resulting in a SSO. All pumping and diversions are linked to the Village SCADA system and flows measured.

#### **4.2 CONTACT LISTS**

The Village's municipal phone list for an emergency situation has been updated. Please see Attachment 3 for the updated lists.

#### **4.3 EMERGENCY RESPONSE PREPAREDNESS**

The extreme rains and flooding on July 22, 2010 provided a stiff test for the Village and its preparedness for emergencies. There was one emergency situation in 2015.

We have also constructed a forcemain riser at our Silver Spring Lift Station. This lift station, which is in the Sussex sewer service area, can have flow diverted from the wet well via an emergency submersible pump to this riser and discharged into the forcemain again. This is especially important in the event of multiple pumps failure or maintenance.

#### **4.4 FAILURE ANALYSIS**

We had an SSO in April 2015 at one of our lift stations of 18,000 gallons. While the rain was localized and intense, it should not have caused this type of a problem. The staff reviewed the issue and decided to investigate the tributary system. We concentrated manhole inspection and CCTV investigation in sewers tributary to the lift station. We found that 14 sanitary manholes were leaking significantly. These have been grouted and the leaks stopped. As a result, the total average daily cycles of the lift station pumps have been cut by over half indicating a successful effort.

The backups from 2010 were mapped into our GIS system and showed clusters of basement backups. One of the clusters was in areas tributary to El Rio Drive and Dolphin Drive. These were investigated in 2014 and recommendations delivered by our consultant in 2015. We prepared a bid and awarded a contract in September 2015. As a result, we will rehabilitate up to 60 laterals in 2015-16 as a solution.

Another area that we plan to investigate in 2016 is the neighborhoods around Norman Drive and McArthur Drive. The sewer in Norman Drive was relayed as part of our system planning from the 1997 system study. We still see a pattern of street and yard flooding that in addition

to the extreme rainfall seems to have overwhelmed sump pumps and may have contributed to surcharged pipes and basement backups.

## Section 5: COMMUNICATION PLAN

The CMOM program communication plan (CP) articulates the process for reporting to various stakeholders the implementation activities and performance of the Village of Menomonee Fall's CMOM program. The plan will include performance measures for communication strategy implementation.

Discussed below are the activities completed for the communications plan.

1. Preparation of the annual CMOM report (our sixth one due).
2. Preparation and completion of the DNR electronic Compliance Maintenance Annual Report (eCMAR), of which a submitted copy is provided.
3. Discussion with the Utility & Public Works committee of the Village Board regarding CMOM activities at the same time the annual DNR eCMAR report and resolution was presented for approval on June 20, 2015.

We posted information about our PPII policy as well as links to Village PPII guidelines and plan on the website.

We will post links to the CMOM plan and report on our Village website.

We plan to hold another training session soon for sewer staff on the CMOM to review and update their knowledge of the CMOM plan and revisions to it.

## Section 6: AUDIT PLAN

The Audit Plan consists of three parts:

1. Annual updating which is part of the Annual Report.
2. The CMOM Program Audit which is accomplished through the Program Audit Report, and is required on a five-year cycle with the first submitted to MMSD in June 2015
3. Program change procedures which will be implemented following the Program Audit.

### *6.1 Annual Updating*

The Village's job position titles and municipal phone list for an emergency situation has been updated. Please see Attachment 2 & 3 for the updated lists.

### *6.2 CMOM Program Audit*

Next one is due June 2020.

### *6.3 Program Change Procedures*

These have been implemented from the 2015 CMOM Program Audit report results.

## Attachment 1. CMOM Performance Measures

CMOM Program Performance Measures			Year				
Program Element Preventive Maintenance	Performance Criteria / Standards Practices	Benefit	2012 Status/ Value	2013 Status/ Value	2014 Status/ Value	2014 Status/ Value	2015 Status/ Value
Cyclic Sewer Cleaning	Length performed annually	Establishes municipality's dedication to system maintenance through setting annual goals.	212,529	229,406	200,074	101,071	238,793
CCTV Inspection	Length performed annually		43,449	76,670	90,329	54,169	9,750
Manhole Inspection	Number inspected		1,041	1,112	793	1,203	1,120
Pump Station Inspections	Frequency performed		Ea. Weekly	Ea. Weekly	Ea. Weekly	Ea. Weekly	Ea. Weekly
<b>I/I Reduction</b>							
SSES	Description of activities performed	Provides integration with current Chapter 2 requirements for I/I control plan updates	Spot Repair	Spot Repairs (6)	Spot Repairs (6)	Spot Repairs (10)	Spot Repair (0)
Rainwater Compliance Inspection	Description of activities performed		N/A	N/A	N/A	N/A	N/A
Disconnect Clearwater Sources	Number disconnected		0	3	10	15	9
Number of Manholes Repaired	Number repaired		48	44	159	190	92
Length of Sewer Repaired or Replaced	Length repaired		4,524	6,111	4,436	2,800	2,741
System Map	Data verified, QA QC implemented, all facilities mapped and inventoried		Ensures accurate inventory of sewer collection assets and is fundamental to subsequent asset management activities	Yes	Yes	Yes	Yes
Skills and Safety Training	Certification skills training identified, tracked, provided, and updated for applicable personnel	Ensures and documents sewer worker safety training activities	Yes	Yes	Yes	Yes	Yes
Capacity Evaluation	Evaluation completed in priority basins as necessary for development of 2020 Facilities Plan alternatives analysis and level of service evaluations	Identifies potential impact on MMSD system if municipality attempts to reduce I/I or construct relief	Yes	Yes	Yes	Yes	Yes

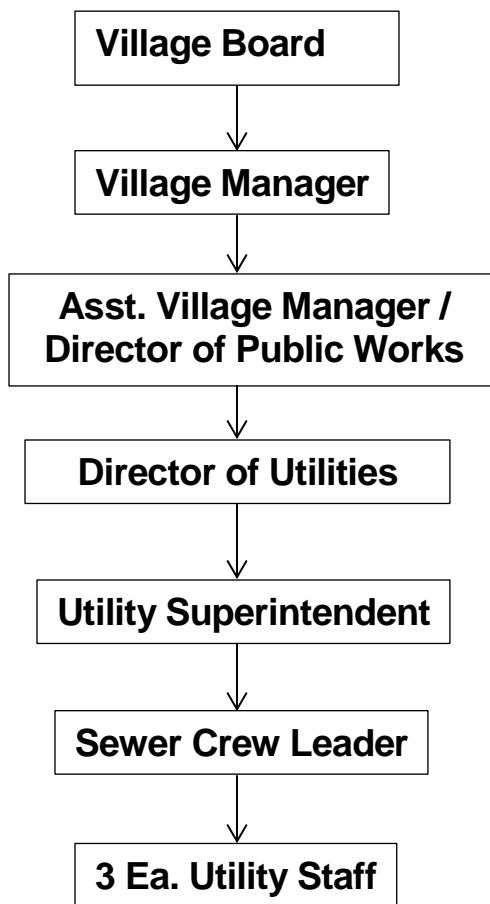
		capacity to eliminate overflows.					
Information Management System	Periodically updated and set-up according to MMSD Standards	Makes data collection more consistent and retrieval more cost-effective.	Yes	Yes	Yes	Yes	Yes
<b>Documents</b>							
Annual sewer financial reports	Documents produced annually	Establishes linkage between financial needs and funding	Yes	Yes	Yes	Yes	Yes
Annual CMOM Status Report	Documents produced annually	Would eventually satisfy state requirements for CMOM Program summary	Yes	Yes	Yes	Yes	Yes
Organizational Chart	Document produced and updated as necessary	Provides documentation of roles and responsibilities for CMOM activities	Yes	Yes	Yes	Yes	Yes
Design and Inspection Standards	Confirm MMSD and State of Wisconsin standards in Place	Provides clearer communication to designers and contractors on sewer construction projects	Yes	Yes	Yes	Yes	Yes
System Evaluation and Capacity Assurance	Document produced if required	Establishes that municipality has evaluated potential linkage between system flows, system capacity, and overflows	Yes	Yes	Yes	Yes	Yes
<b>Standard Operating Procedures</b>							
CCTV and manhole inspection	Document produced and updated as necessary, according to approved standard	Provides for clear training of new staff and communicates to public that standards exist and are followed for these activities	Yes	Yes	Yes	Yes	Yes
Cleaning	Document produced and updated as necessary		Yes	Yes	Yes	Yes	Yes
Inspection	Document produced and updated as necessary		Yes	Yes	Yes	Yes	Yes
Overflow Response Plan (ORP)	Document produced and updated as necessary	Provides for consistent training of new staff, communicates to public that an	Yes	Yes	Yes	Yes	Yes

		updated plan exists and is followed when responding to system overflows					
Capital Improvement Plan	Major rehabilitation identified on 10-year planning horizon.	Provides for better financial decision-making as it looks more than one or two years into the future	Yes	Yes	Yes	Yes	Yes
Condition Assessment	Inspection results reviewed, defects identified and prioritized, repair/rehabilitation projects identified and incorporated into Capital Improvements Plan	Ensures that inspection findings are assigned a priority and scheduled for correction	Yes and in progress	Yes and in progress	Yes and in progress	Yes and ongoing	Yes and ongoing
Legal Authority	Appropriate ordinances identified and adopted	Clearly communicates the responsibilities of property owners with respect to eliminating sources of clear water from the sewer system	Yes	Yes	Yes	Yes	Yes
<b>System Performance</b>							
Number of dry weather SSOs	Annual number of dry weather SSO events	Establish additional practices to prevent SSOs, maintain or improve system performance, and avoid preventable failures.	0	0	0	0	0
Number of wet weather SSOs	Annual number of wet weather SSO events	Establish additional practices to prevent SSOs, maintain or improve system performance, and avoid preventable failures.	0	0	0	0	1
Volume of wet weather SSOs	Annual volume of wet weather SSOs	Establish additional practices to prevent SSOs, maintain or improve system performance,	0 MG	0 MG	0 MG	0 MG	0.018 MG

		and avoid preventable failures.					
Number of building backups caused by Village	Annual review of building backup data, to determine those attributable to Village	Establish additional practices to prevent SSOs.	58	0	1	0	0

Attachment 2.

### **Organizational Structure Sewer Utility**



## Attachment 3. Updated Municipal Phone List

### **Emergency Response Plan**

### **Emergency Phone numbers**

**System Name:** Village of Menomonee Falls Utilities

**Town/City/Village:** Menomonee Falls

**System Contact:** Randy Hager

**System Telephone:** 262-532-4807

**System Fax:** 262-532-4859

**Email:** [rhager@menomonee-falls.org](mailto:rhager@menomonee-falls.org)

**Evening/Weekend Telephone:** Police Department Dispatch 262-532-1700

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**Notification/Contact Information (Local)**

Organization	Contact Name/Title	Contact # Day	Contact # Night
Fire Department	Station 3	262-532-8823	262-532-8823
Police Department	Police Dispatcher	262-532-1700	262-532-1700
Waukesha County Public Health Center	Public Health Center	262-896-8430	
Community Memorial Hospital	24 Hour Emergency Services	262-251-1010	262-251-1000
Waukesha County Emergency Management	William Stolte or Kathy Schwei	262-548-7580	Waukesha Sheriff 262-548-7117
Local Hazmat Team	Fire Station 3	262-532-8823	262-532-8823
Utility Superintendent	Randy Hager	262-532-4807	262-424-0111 (Cell)

**Neighboring Wastewater System Operators**

Germantown	Tim Zimmerman	262-253-7765	Police Dept. 262-253-7780
Sussex	Dennis Wolf	262-820-3129	262-224-7518
Brookfield	Ron Gillenardo	262-782-0199	Police Dept. 262-993-4082
MMSD	Veolia Water Milwaukee, LLC	414-482-2040	414-482-2040

**Downstream Drinking Water System Operators**

Cudahy Water Works	Frank Miller <a href="mailto:millerf@CI.CUDAHY.WI.US">millerf@CI.CUDAHY.WI.US</a>	414-769-2234 or 414-769-2235	
Menomonee Falls Water Utility	Randal L. Hager, Superintendent	262-532-4800 or 414-424-0111	Police Dispatcher 262-532-1700
Milwaukee Water Works	Carrie Lewis <a href="mailto:cewis@mpw.net">cewis@mpw.net</a>	414-277-6384 or 414-587-0583	24 Hr Emergency 414-286-8282
North Shore Water Commission	Eric Kiefer, <a href="mailto:Info@northshorewc.com">Info@northshorewc.com</a>	414-963-0160	
Oak Creek Water Works	Patrick Francis <a href="mailto:pfrancis@water.oak-creek.wi.us">pfrancis@water.oak-creek.wi.us</a>	414-570-8210	414-768-7060
South Milwaukee Water	Doug Fischer <a href="mailto:wisnews@ci.south-milwaukee.wi.us">wisnews@ci.south-milwaukee.wi.us</a>	414-768-8070	24 Hr Emergency 414-286-8282

**Service/Repair Notification List**

Electrician	Tom Minor, Water Dept. Electrician	262-532-4800	
	Hilgendorf Electric	262-251-7120	262-251-1447 or Cell 262-844-5457
Electric Utility Company		1-800-662-4797	
Gas Utility Company		1-800-261-5325	
Telephone Utility Company		1-800-727-2273	
Diggers Hotline		1-800-242-8511	
Equipment Operator	Water Utility	262-532-4808 (Dimoff)	Police Dispatcher 262-532-1700

**Pump Specialists**

Fairbanks Morse	Fairbanks Morse	913-748-4277	
	L. W. Allen	1-800-362-7266	
	USEMCO	608-372-5911	
Smith & Loveless	Smith & Loveless	1-800-922-9048	
	Energenecs	262-377-6360	
Barnes	Energenecs	262-377-6360	
Flygt	Flygt Inc Pewaukee	262-544-1922	
KSB	Roeder, Dalessandro, Mason & Assoc.	262-781-3152	

**Equipment Rental**

Generators	Lincoln Contractors Inc.	414-541-1327	
Submersible Pumps	Flygt Inc. Pewaukee	1-800-236-9750	

**Equipment Repair****Generators**

Engine Services, Inc,		414-353-7340	
Cummins Great Lakes Inc.		1-800-236-9750	

**Radio/Telemetry Repair Service**

Energenecs (Kamp Synergy)	Warren Carter	414-491-9517	414-491-9517
Ruekert-Mielke	Dave Beyer	262-542-5733	

**Sewage Haulers**

AAA Environmental		414-761-9421	
Kons Septic		262-251-1704	

## Emergency Manager/Supervisor Phone List

<b>Managers</b>	<b>Extension</b> (262)-532-	<b>Cell Phone</b>
Mark Fitzgerald – Village Manager	4241	
Mike Morse – Village Attorney	4251	
Adam Koenings – Assistant Village Attorney	4254	
Anna Ruzinski – Protective Services Director	8701	
Arlyn Johnson – Public Works	4701	262-424-0137
Jeff Nettlesheim – Utilities	4848	262-424-0123
Matt Carran – Community Development	4274	
Tom Hoffman – Engineering	4415	262-424-9197
Scott Steinert – Information Services	4355	262-424-0090
Jason Kaczmarek – Financial Services	4235	
Janice Moyer – Clerk Services	4210	
Karol Kennedy – Library	8931	
Louis Thon – Buildings and Grounds	4710	262-424-0105
<b>Superintendents</b>		
Jim Schneider – Streets and Parks	4755	262-424-0115
Randy Hager – Utilities	4807	262-424-0111
<b>Supervisors</b>		
Joan Hintze – Clerk Services	4211	
Carol Knope – Police Business Office	8760	
J.J. Berger – Library	8932	
Kiffle Scott – Library	8910	
Pam Kosanke – Library	8909	
<b>Fire Command Staff</b>		
Assistant Fire Chief James Mollet	8801	262-424-0101
Deputy Chief Don Umhoefer – Operations	8803	262-424-0087
Battalion Chief Jim Taylor – Training Division	8820	
Battalion Chief Kevin Rokenbrodt	8820	
Battalion Chief Aaron Harvey	8820	
Cpt. Mark Franzowiak – Station # 1	8821	
Lt. Ross Lautenbach – Station # 2	8822	
Vacant - Station # 3	8823	
Lt. Dan Madsen – Station #4	8824	
<b>Police Command Staff</b>		
Assistant Police Chief Mark Waters	8702	
Cpt. Terry Hansen – Protective Services	8703	262-424-0063
Lt. Kevin Von Bank – Special Investigations	8705	
Lt. Jeffrey Knop – Patrol (AM)	8707	
Lt. Mike Brasch – Patrol (PM)	8706	
Lt. Eugene Neyhart – Services Bureau	8710	
Sgt. Matt Lewek – Services Unit	8740	
Sgt. Mike Douglas – Patrol (Day Shift)	8713	
Sgt. John Thomae – Patrol (Day Shift)	8719	
Sgt. Steven Sanders – Patrol (Early Shift)	8716	
Sgt. Stephen McKinnon – Patrol (Early Shift)	8711	
Sgt. Chad Tuszkiewicz – Patrol (Late Shift)	8712	
Sgt. Steven Rudie - Patrol (Late Shift)	8714	
Sgt. Andrew Birler – Patrol Support Unit	8770	