

MS4 Annual Report

(Due by March 31, 2017)

Please use this template to assist in compiling information for the annual report. Use of this template is optional. Please refer to the permit language for the information minimally required to be submitted in the reporting year. If you have any questions, please contact Bryan Hartsook at (262) 574-2129 or by email at Bryan.Hartsook@wisconsin.gov. Please submit a signed copy of the annual report and any attachments to my attention at the Waukesha Service Center: 141 NW Barstow St., Rm 180, Waukesha, WI 53188

** ELECTRONIC SUBMITTALS ARE PREFERRED**

Municipality:		Reporting Year: 2016	
Name of Permit Group (if applicable): Menomonee River Watershed-Based MS4 Permit	WPDES Permit No. WI-S065404-1	Facility ID No. (FIN):	
Contact Information:			
Name: Tim Detzer	Title: Senior Environmental Engineer		
Mailing Address: 633 W. Wisconsin Ave	City: Milwaukee	State: WI	Postal Code 53203
E-mail Address: timothy.detzer@milwaukeecountywi.gov	Telephone No: 414-278-2988		
Section I. Summarize program activities implemented during the reporting year to maintain compliance with the six minimum control measures identified in the permit. Please include the management practice, individual or department responsible, measurable goals, and activities planned for next year. Amendments to the planned activities and/or changes to measurable goals should also be identified. <i>Add rows or attach additional sheets as needed</i>			
A. PUBLIC INVOLVEMENT, EDUCATION, AND OUTREACH (report any individual efforts completed as applicable under Part II. A and B of the permit outside of Respect Our Waters Campaign)			
<u>BMP Description:</u>			
Presentations			
10/27/2016 Using Native and Naturalized Landscape for Designing Effective Site Stormwater Systems Co-presenter, Sean Hayes, Milwaukee County Managing Engineer, General Mitchell International Airport UWM School of Continuing Education			
Menomonee River Public Education Committee			
In 2016, Milwaukee County made a \$1,600.00 contribution to support a regional public education program spearheaded by the Menomonee River Group Public Education Committee. These funds were used to develop and implement a multi-media public education program, the Respect our Waters campaign.			
WLWCA Great Lakes Committee			
The Wisconsin Land and Water Conservation Association recently created the Great Lakes Committee. This new committee will focus on non-point source pollution issues in counties whose surface waters drain to Lake Superior and Lake Michigan. Milwaukee County is a participating member in the association and Stevan Keith, Milwaukee County's Principal and Environmental Engineer serves as the Committee Chairman of the newly formed Great Lakes Committee.			
Stormwater Facility Maintenance Project			
In 2016, Milwaukee County completed the Stormwater Facility Maintenance project. Stormwater Solutions Engineering and Applied Ecological Services, under contract with Milwaukee County, performed one year of maintenance activities on County-owned stormwater BMPs. Maintenance activities were performed on 15 BMPs at 5 sites included pervious pavement, rain gardens, bioinfiltration swales/basins, stormwater ponds, subsurface infiltration, and sedimentation chambers. The intent was to determine maintenance costs for various BMPs and make design parameter recommendations based on the maintenance experiences. The project included a final report that analyzed the costs, efforts, and activities associated with performing maintenance on green infrastructure in Milwaukee County.			

Measurable Goal(s):

Please see above BMP description.

Responsible Dept./Person:

Department of Administrative Services, Facilities Management Division, Architecture, Engineering & Environmental Services

Progress Made Towards Achieving Goal(s):

Please see above BMP description.

Planned Activities for Next Reporting Year:

Milwaukee County intends to continue to support the Respect our Waters Campaign, which may be extended through an Urban Nonpoint Source Grant

B. ILLICIT DISCHARGE DETECTION AND ELIMINATION

B.1 List visual and chemical screening parameters:

Visual: flow, turbidity, color, odor, scum

Chemical: chlorine, copper, phenols, potassium, ammonia

B.2 Total number of major outfalls in MS4:

10

B.3 Total number of priority outfalls in MS4:

10

B.4 Number of major outfalls screened:

see below

2016: 5 major outfalls were screened

2015: 7 of the 10 major outfalls had flow and 5 of these 7 had positive results (16252, 16258, and 17208 for chlorine, 17227 for potassium, and 8224 for chlorine and ammonia).

2012: 4 of the 10 major outfalls had flow and 2 of these 4 had a positive result (8224 and 17208 both had a positive result for ammonia).

B.5 Number of priority outfalls screened:

see below

2016: 2 priority outfalls were screened

2015: 2 out of 10 priority outfalls had flow. One sample tested positive for chlorine (18169).

2013: outfalls 18169 and 18301 tested positive for chlorine.

B.6 Number of major outfalls flowing and sampled:

5

B.7 Number of priority outfalls flowing and sampled:

2

B.8 Number and Outfall ID of major outfalls requiring further sewershed investigation

1 (Outfall ID 17227)

B.8.a. Investigation completed?

no

B.8.b. Source of illicit discharge:

unidentified

B.8.c. If source not determined, identify expected dates and procedure for follow up investigation:

see below

County Basin 3 (Outfall ID 17227) tested slightly above the indicator level for potassium (10 mg/l) when sampled in November 2016 with a result of 13.5 mg/l. In December 2016, six locations upstream of the outfall were sampled for potassium. Five of these six samples were above the indicator level. Further sampling is planned in the first half of 2017.

B.9 Number and Outfall ID of priority outfalls requiring further sewershed investigation

1 (Outfall ID 18169)

B.9.a. Investigation completed?

no

B.9.b. Source of illicit discharge:

see below

Outfall ID 18169 tested positive for chlorine. The test result was below the LOQ but above the LOD. The source is unidentified, though it has been traced back to a specific building. The source appears to be trace amounts of chlorine from potable water.

B.9.c. If source not determined, identify expected dates and procedure for follow up investigation:

see below

The outfall has been sampled multiple times and each time has had trace amounts of chlorine either below or near the LOQ. The flow is coming from Mount Mary College. It was initially thought that the flow was coming from a fountain on the Mount Mary campus, though that was dismissed with a sample taken after the fountain was drained. Milwaukee County has met with Rebecca Cook of Mount Mary on two different occasions to help identify the source. The flow has been traced to a particular building towards the southeast quadrant of the Mount Mary campus. Mount Mary has pledged to continue investigation, though all indications are that the flow and trace amounts of chlorine are from a potable water source at Mount Mary.

C. CONSTRUCTION SITE POLLUTANT CONTROL

C.1 Target Number of Inspections (measurable goal, can be represented as percentage of permits issued):

NA

Milwaukee County does not issue construction site erosion control permits, but defers to municipalities within Milwaukee County to write and enforce ordinances. Milwaukee County conforms to local municipal erosion control ordinances on all applicable construction sites.

C.2 Number of Permit Applications Received / Number of Permits Issued:

NA

C.3 Individual(s) Responsible for Plan Review, Inspection, and Enforcement Procedures:

C.4 Number of Inspections Completed:

NA

C.5 Number of Enforcement Actions and Description:

NA

C.6 Changes in Inspection and /or Enforcement Procedures:

NA

C.7 Date of ordinance update adoption:

NA

C.8 Provide website link to updated ordinance:

NA

D. POST-CONSTRUCTION STORM WATER MANAGEMENT

D.1 Number of Storm Water Management Plans Reviewed:

3

Milwaukee County reviews stormwater management plans for developments with connections to County stormwater structures within County Trunk Highways. These plans are also reviewed by the local municipality. There were three plans reviewed in 2016.

D.2 List inspection and maintenance performed on private facilities enacted by Long-Term Maintenance Agreement:

None

D.3 Date of ordinance update adoption:

NA

Milwaukee County defers to local municipalities within the County to write and enforce post-construction storm water management ordinances.

D.4 Provide website link to updated ordinance:

NA

E. POLLUTION PREVENTION

E.1 Estimate quantity of Street Sweepings and Catch Basin Cleanings Collected:

762 cubic yards

E.2 Municipal Yard Inspection Dates (attach copies of completed inspection reports):

See Attachment #3

E.3 Leaf collection dates (or approximate frequency), equipment and method employed:

see below

Milwaukee County does not collect leaves or residential yard waste. Some plant material from County parks and other facilities are collected and reused. Woody materials are mulched and grass clippings and leaves are left in place except on golf courses wherer they are moved to a different location. Some leaves may also be mulched or collected for composting.

E.4 Number of inspections or maintenance items performed on municipally owned stormwater structural practices? Identify BMP type, ID from MS4 map, and inspection dates and/or maintenance performed. Attach copies of inspection and maintenance forms.

80 inspections

See Attachment #5

E.5 Average tons of salt used per event during 2015/2016 winter season:

Road miles treated:

345

Average application rate (lbs/road mile): **100 lbs/lane mile**

Prewetting salt? **yes**

Trucks calibrated? **yes**

Gallons of anti-icing brine applied? **8595**

Source of brine/brinke making equipment: **Salt Brine Extreme**

F. STORM WATER QUALITY MANAGEMENT

F.1. Have there been any changes in implementation, maintenance, mapping or modeling of storm water management practices in the past year? If yes, please complete the remainder of Section F.

Yes

F.2 Pollutant Loading Analysis:

Date of last model run:	2010	"No Controls" Load (tons/yr):	1,218,826.20	"With Controls" Load (tons/yr):	
Model Version Used:	SLAMM 9.4.0	Average Unit Area Load (lbs/acre/yr):		TSS Reduction %	35.8

F.3 Storm Water Management Plan:

If TSS percent reduction is less than 20%, has a strategy been developed under a municipal-wide storm water management planning effort to acheive compliance?

Projected Timeframe to Achieve 20% TSS Reduction (if applicable):

F.4 Structural stormwater BMPs Implemented in Reporting Year:

- Boerner Botanical Gardens Pervious Pavement**
- David Schultz Rain Garden**
- Lake Park Pervious Pavement**
- Lake Park Regenerative Stormwater Conveyance (under construction)**
- Menomonee River Parkway: bioinfiltration basins and swales (construction completed in 2016)**
- Milwaukee River Parkway: three bioinfiltration basins (construction completed in 2016)**
- Wehr Nature Center Pervious Pavement**

F.5 BMP Maintenance Activities in Reporting Year:

See Attachment #5 for maintenance items identified during BMP inspections.

G. WATERSHED-BASED PROJECT STATUSG.1 Selection of joint or individual project?

Milwaukee County has selected to complete a group project with the cities of Greenfield, Milwaukee, Wauwatosa and West Allis to construct five rain gardens along the Menomonee River Parkway.

G.2 Name of project

Menomonee River BMPs

G.3 Project description and timeframe for completion

The Menomonee River Parkway Rain Gardens project was completed in 2016. The goal of the project was to install five rain gardens that would receive runoff from the parkway road. During construction it was discovered that subsurface soils for one of the rain gardens was unsuitable and that rain garden was not built. The prospects of adding other raingardens or amending existing ones to increase TSS removals was examined. Unfortunately, there were no options considered to be viable to incorporate into the Parkway re-construction contract. The project has been completed.

Section II. Identify any known or perceived water quality improvements or degradation in the receiving water to which the MS4 system discharges. Where degradation is identified, identify why and what actions are being taken to improve the water quality of the receiving water. Please describe the stream reach or lake effected and the basin / outfall ID contributing to the improvement or degradation.

Milwaukee County anticipates that projects carried out within the permit period will have positive water quality impacts. See BMPs implemented in the project year above. There were no known instances of water quality degradation in 2016.

Section III. Fiscal Analysis

<i>Program Element</i>	<i>Annual Expenditure</i>	<i>2017 Budget</i>	<i>Source of Funds</i>
Public Involvement, Education and Outreach			
IDDE			
Construction Site Pollutant Control			
Post-Construction Storm Water Management			
Pollution Prevention			
Street Sweeping			
Catch Basin Cleaning			
Leaf Collection			
BMP Inspection and Maintenance			
Storm Water Quality Management			
Total	\$950,803.48**	\$83,782*	

***This fiscal analysis reflects the permit obligation costs associated with the Environmental Services Unit of Milwaukee County's Architecture, Engineering and Environmental Services Division, the group tasked with administration of the MS4 permit. Additional costs of permit compliance not included in this analysis are located within other departmental and/or project budgets. For example each construction project completed by Milwaukee County would have a construction site pollution control component as part of the specific project budget. Also, stormwater related projects completed by other departments such as the installation of pervious pavement at the zoo are not in this analyses unless those projects have oversight by the Environmental Services Unit.**

****The Annual Expenditure column reflects actual costs for the Environmental Services Unit in 2016 including capital costs of projects that have large stormwater budgets or are solely stormwater related. Milwaukee County does not track the various components of the analyses (e.g. Education, Public Involvement, IDDE, etc.) in Milwaukee County's accounting system. The total sum of all categories is contained in the "Storm Water Quality Management" category.**

Section IV. Certification Statement

I hereby certify that I am an authorized representative of the municipality covered under the MS4 permit for which this annual report is being submitted and that the information contained in this document and all attachments were gathered and prepared under my direction or supervision. Based on my inquiry of the person or persons under my direction or supervision involved in the preparation of this document, to the best of my knowledge, the information is true, accurate, and complete. I further certify that the municipality's governing body or delegated representatives have reviewed and apprised of the contents of this annual report. I understand that Wisconsin law provides severe penalties for submitting false information.

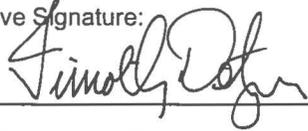
Authorized Representative Printed Name:

Title:

Tim Detzer

Senior Environmental Engineer

Authorized Representative Signature:



Date Signed:

3/31/17

List of Attachments

1. Illicit Discharge Detection and Elimination Program
 - a. IDDE Screening Tool Methodology and Results (J. Sudar Memo 3/3/2015)
 - b. IDDE 2016 Sampling Results (table)
 - c. IDDE 2016 Sampling Results (lab reports)
 - d. IDDE Indicator Parameters Action Levels
 - e. IDDE Sampling Exceedance Follow-up Procedure
2. Storm Sewer Map Update
3. SWPPP Inspection Reports
4. Street Sweeping / Catch Basin Cleaning (table)
5. Stormwater Management Facility Inspections (table)
 - a. Stormwater Management Facility Inspections (table)
 - b. Stormwater Management Maintenance Items (table)

Attachment 1

Illicit Discharge Detection and Elimination Program

DEPARTMENT OF ADMINISTRATIVE SERVICES



Milwaukee County

DATE: 3/3/2015

TO: Steve Keith, Environmental Services

FROM: Jack Sudar, Environmental Services

SUBJECT: Illicit Discharge Potential of Milwaukee County Outfalls in Menomonee River Watershed

All Milwaukee County owned outfalls in the Menomonee River watershed were analyzed for the illicit discharge potential (IDP) of human waste using the criteria that was developed by the Menomonee River Watershed Permittees. Using the suggested criteria there were 5 factors considered for each of the 302 Milwaukee County-owned outfalls in the Menomonee River watershed. These 5 factors were:

- Proximity of Sanitary and Stormwater Pipes
- Age of Development
- Parcels per Square Mile
- Material / Condition of Pipe (NAASCO ratings)
- Past Discharge Complaints / Flowing Outfalls During Dry Weather

The Proximity of Sanitary and Stormwater Pipes for each SEWRPC subbasin varied significantly between the 56 different subbasins that have Milwaukee County-owned outfalls in the Menomonee River watershed. Sanitary sewer maps from the cities of Greenfield, Milwaukee, Wauwatosa, and West Allis were obtained in order to account for all of the sanitary sewer crossings. Subbasins in the top 25th percentile received a rating of 3, subbasins in the 25th to 75th percentile received a rating of 2, and subbasins in the lowest 25th percentile received a rating of 1. Many of the subbasins with the highest rankings were heavily influenced by the trenching of sanitary and storm sewer pipes, primarily around Milwaukee County-owned highways.

The construction dates of the storm sewers for the Age of Development factor was able to be pinpointed within a range of a few years for each Milwaukee County property. Due to this, the criteria for storm sewer age was based on construction dates of the storm sewers. Areas known to be older

than 50 years were given a rating of a 3, areas that were primarily aged between 40 to 50 years were given a rating of a 2, and areas that were primarily newer than 40 years old were given a priority rating of a 1. This criteria slightly deviated from the suggested criteria for the age of storm sewers. The suggested criteria was based on a percentage of the sewers in an area that fell either above or below 50 years in age, rather than the known construction ages of the sewers.

The Parcels per Square Mile factor was rather straight forward, as the top 25th percentile received a rating of 3, the 25th to 75th percentile received a rating of 2, and the lowest 25th percentile received a rating of 1. The primary trend seemed to be that the subbasins with the most densely populated residential areas received the highest ranking of 3.

The Material and NASSCO ratings for Milwaukee County outfalls was unknown, so each outfall was given a rating of 2.

For the Past Discharge Complaints factor, there were 10 outfalls identified as having complaints of dry weather flow. These 10 outfalls received a ranking of a 3, while the remaining outfalls received a ranking of 2.

Attached is the spreadsheet that was used for the IDP review. Out of the 302 County owned outfalls in the Menomonee River Watershed there were 5 that received the highest score of 2.6, all of which had received past complaints. There were 77 outfalls that received the next highest score of 2.4. There were 5 additional outfalls which had received complaints, but did not receive the highest score. These five outfalls received scores of either 2.2 or 2.4. Out of the 11 "Major" outfalls that have been investigated in the past, 8 of them lie within the Menomonee River Watershed.

It is suggested that Milwaukee County further evaluate these 18 outfalls (8 Major outfalls, 5 outfalls that received complaints but did not score highly, and the 5 highest-rated outfalls using the IDP criteria) within the Menomonee River watershed using the criteria detailed in WPDES Permit No. WI-S050156-1.

IDDE 2016 Sampling Results

County ID	Year	Major or Priority?	Outfall	Date	Time	Last Rain Fall	Amount	Flow	Turbidity	Color	Odor	Scum	pH	Chlorine (mg/l)	Copper (mg/l)	Phenois (mg/l)	Detergents (mg/l)	Ammonia (mg/l)	Notes	Clark Dietz ID
8224	2016	Major	Zoo (Main Discharge)	11/9/2016	9:45 AM	11/2/2016	0.12 in	Moderate	Low	None	None	None		0.415	ND	ND	4.3*	0.11**	*Sample was analyzed for potassium not detergents. **Above LOD but below LOQ	
16252	2016	Major	Doctors Park	11/9/2016	1:00 PM	11/2/2016	0.12 in	Light	Low	None	None	None		ND	ND	ND	5.3*	0.12**	*Sample was analyzed for potassium not detergents. **Above LOD but below LOQ	
16258	2016	Major	Timmerman Airport	11/9/2016	11:45 AM	11/2/2016	0.12 in	Moderate	Low	None	None	None		ND	ND	ND	3.4*	ND	*Sample was analyzed for potassium not detergents	
17208	2016	Major	Brown Deer - Teutonia at South Branch Creek	11/9/2016	12:20 PM	11/2/2016	0.12 in	Light	Low	None	None	None		ND	ND	ND	7.3*	0.12**	*Sample was analyzed for potassium not detergents. **Above LOD but below LOQ	
17227	2016	Major	County Grounds Pond #3 Outfall	11/9/2016	10:00 AM	11/2/2016	0.12 in	Light	Low	None	None	None		ND	ND	ND	13.5*	0.16**	*Sample was analyzed for potassium not detergents. **Above LOD but below LOQ	
18169	2016	Priority	Menomonee River Parkway (Near Burleigh)	11/9/2016	10:45 AM	11/2/2016	0.12 in	Light	Low	None	None	None		0.039**	ND	ND	4.0*	0.18**	*Sample was analyzed for potassium not detergents. **Above LOD but below LOQ	FMRMN62
18301	2016	Priority	Menomonee River Parkway (Near 81st)	11/9/2016	10:30 AM	11/2/2016	0.12 in	Light	Low	None	None	None		ND	ND	ND	3.3*	ND	*Sample was analyzed for potassium not detergents	FMRMN34

Indicates that the sample result is an indicator of a potential illicit discharge.

Indicates that the sample result is above the LOD but below the LOQ for an indicator of a potential illicit discharge.

Explanation of Sample Results

Ammonia: In previous years the LOD and LOQ for ammonia were 0.20 mg/l and 0.64 mg/l. In 2016 the LOD and LOQ for ammonia were 0.10 mg/l and 0.64 mg/l. 0.10 mg/l is the indicator level for a potential illicit discharge for ammonia. All positive ammonia results fall below the LOD and LOQ from previous years. In 2016 all positive ammonia results were above the LOD though still below the LOQ. These low levels came from large drainage areas and could be from wildlife.

Potassium: The potassium at County Basin 3 is slightly above the indicator level and was also above it last year. This may warrant some further investigation.

Chlorine: The chlorine at the zoo is to be expected with some overflow drains with potable water in the animal exhibits. The chlorine at Mount Mary is below the LOQ though has consistently been there. It is believed to be from a potable water source and is being investigated by Mount Mary.

Samples to be Sampled in 2016

Priority 2015: Only positive sample in 2015 was 18169 (chlorine), and only other one with flow was 18301.

Priority 2013: In 2013 both outfalls 18169 and 18301 had positive samples (chlorine)

Major 2015: In 2015 only 7 of the 10 major outfalls had flow. 5 of these 7 had a positive results. 16252, 16258, and 17208 for chlorine, 17227 for potassium, and 8224 for chlorine and ammonia

Major 2013: In 2012 only 4 of the 10 major outfalls had flow. 2 of these 4 had a positive result. 8224 and 17208 both had a positive result for ammonia.

Sample IDs

Priority Sample: 18169, 18301

Major Sample: 8224, 16252, 16258, 17208, 17227



SFA Labs

Milwaukee County Dept of Administration
Attn: Jack Sudar
633 W. Wisconsin Ave, Ste 1003
Milwaukee, WI 53203

Date Received: 12/12/2016
Date Reported: 12/20/16 15:07
Client Project: Water
Client Project ID: Water
PO# 60132
Project #: Water

Certificate of Analysis

This analytical test report shall not be reproduced, except in full, without written permission from Eurofins S-F Analytical Laboratories. All quality control samples and checks were within acceptance limits unless otherwise indicated. Test results pertain only to those items tested. All samples were in good condition when received by the laboratory unless otherwise noted. All LOD/LOQs are adjusted to reflect dilutions.

Table with 10 columns: Analyte, Result, Units, LOD, LOQ, Dilution Factor, Analyzed, Analyst, Method, Notes. Row 1: 1612165-01, Potassium, 14.0 mg/L, 0.7, 2.2, 1, 12/16/16, L8KH, EPA 200.7 1994.

Table with 10 columns: Analyte, Result, Units, LOD, LOQ, Dilution Factor, Analyzed, Analyst, Method, Notes. Row 2: 1612165-02, Potassium, 77.5 mg/L, 1.4, 4.5, 2, 12/16/16, L8KH, EPA 200.7 1994.

Table with 10 columns: Analyte, Result, Units, LOD, LOQ, Dilution Factor, Analyzed, Analyst, Method, Notes. Row 3: 1612165-03, Potassium, 219 mg/L, 3.5, 11.2, 5, 12/16/16, L8KH, EPA 200.7 1994.

Table with 10 columns: Analyte, Result, Units, LOD, LOQ, Dilution Factor, Analyzed, Analyst, Method, Notes. Row 4: 1612165-04, Potassium, 6.5 mg/L, 0.7, 2.2, 1, 12/16/16, L8KH, EPA 200.7 1994.

Table with 10 columns: Analyte, Result, Units, LOD, LOQ, Dilution Factor, Analyzed, Analyst, Method, Notes. Row 5: 1612165-05, Potassium, 219 mg/L, 3.5, 11.2, 5, 12/16/16, L8KH, EPA 200.7 1994.

Edward L. Kelley

Edward Kelley, Environmental Group Leader



SFA Labs

Milwaukee County Dept of Administration 633 W. Wisconsin Ave, Ste 1003 Milwaukee, WI 53203	Project: Water Project Number: Water Project Manager: Jack Sudar	Reported: 12/20/16 15:07
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Analyte	Result	Units	LOD	LOQ	Dilution Factor	Analyzed	Analyst	Method	Notes
1612165-05 5									
Potassium	24.2	mg/L	0.7	2.2	1	12/16/16	L8KH	EPA 200.7 1994	

Analyte	Result	Units	LOD	LOQ	Dilution Factor	Analyzed	Analyst	Method	Notes
1612165-06 6									
	Preparation: SW-846 3015A 2007								
Potassium	99.9	mg/L	3.5	11.2	5	12/16/16	L8KH	EPA 200.7 1994	

Milwaukee County Dept of Administration
 Attn: Jack Sudar
 633 W. Wisconsin Ave, Ste 1003
 Milwaukee, WI 53203

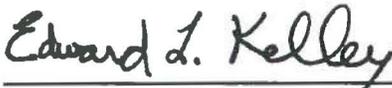
Date Received: 11/09/2016
 Date Reported: 11/23/16 16:10
 Client Project: Water
 Client Project ID: Water
 PO# 60132
 Project #: Water

Certificate of Analysis

This analytical test report shall not be reproduced, except in full, without written permission from Eurofins S-F Analytical Laboratories. All quality control samples and checks were within acceptance limits unless otherwise indicated. Test results pertain only to those items tested. All samples were in good condition when received by the laboratory unless otherwise noted. All LOD/LOQs are adjusted to reflect dilutions.

Analyte	Result	Units	LOD	LOQ	Dilution Factor	Analyzed	Analyst	Method	Notes
1611161-01			Date Collected:		11/09/2016				
8224			Preparation: SW-846 3015A 2007		Preparation Date: 11/15/2016		Prepared By: L8KH		
Copper	<0.01	mg/L	0.01	0.03	1	11/15/16	L8KH	EPA 200.7 1994	
			Preparation: SW-846 3015A 2007		Preparation Date: 11/15/2016		Prepared By: L8KH		
Potassium	4.3	mg/L	0.1	0.3	1	11/17/16	L8KH	EPA 200.7 1994	
					Preparation Date: 11/13/2016		Prepared By: P84Z		
Ammonia as N	0.11	mg/L	0.10	0.32	1	11/15/16	P84Z	EPA 350.1 Rev2.0 Mod 1993	WW-03, J
Chlorine - Total Residual (Lab)	0.415	mg/L	0.031	0.099	1	11/09/16	NJ1Z	SM4500CI-G 2000	

Analyte	Result	Units	LOD	LOQ	Dilution Factor	Analyzed	Analyst	Method	Notes
1611161-02			Date Collected:		11/09/2016				
16252			Preparation: SW-846 3015A 2007		Preparation Date: 11/15/2016		Prepared By: L8KH		
Copper	<0.01	mg/L	0.01	0.03	1	11/15/16	L8KH	EPA 200.7 1994	
			Preparation: SW-846 3015A 2007		Preparation Date: 11/15/2016		Prepared By: L8KH		
Potassium	5.3	mg/L	0.1	0.3	1	11/17/16	L8KH	EPA 200.7 1994	
					Preparation Date: 11/18/2016		Prepared By: P84Z		
Ammonia as N	0.12	mg/L	0.10	0.32	1	11/22/16	P84Z	EPA 350.1 Rev2.0 Mod 1993	J
Chlorine - Total Residual (Lab)	<0.031	mg/L	0.031	0.099	1	11/09/16	NJ1Z	SM4500CI-G 2000	



Edward Kelley, Environmental Group Leader

Milwaukee County Dept of Administration 633 W. Wisconsin Ave, Ste 1003 Milwaukee, WI 53203	Project: Water Project Number: Water Project Manager: Jack Sudar	Reported: 11/23/16 16:10
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Analyte	Result	Units	LOD	LOQ	Dilution Factor	Analyzed	Analyst	Method	Notes
			Date Collected:		11/09/2016				
1611161-03									
16258									
Preparation: SW-846 3015A 2007			Preparation Date: 11/15/2016			Prepared By: L8KH			
Copper	<0.01	mg/L	0.01	0.03	1	11/15/16	L8KH	EPA 200.7 1994	
Preparation: SW-846 3015A 2007			Preparation Date: 11/15/2016			Prepared By: L8KH			
Potassium	3.4	mg/L	0.1	0.3	1	11/17/16	L8KH	EPA 200.7 1994	
			Preparation Date: 11/13/2016			Prepared By: P84Z			
Ammonia as N	<0.10	mg/L	0.10	0.32	1	11/15/16	P84Z	EPA 350.1 Rev2.0 Mod 1993	WW-03
Chlorine - Total Residual (Lab)	<0.031	mg/L	0.031	0.099	1	11/09/16	NJ1Z	SM4500CI-G 2000	

Analyte	Result	Units	LOD	LOQ	Dilution Factor	Analyzed	Analyst	Method	Notes
			Date Collected:		11/09/2016				
1611161-04									
17208									
Preparation: SW-846 3015A 2007			Preparation Date: 11/15/2016			Prepared By: L8KH			
Copper	<0.01	mg/L	0.01	0.03	1	11/15/16	L8KH	EPA 200.7 1994	
Preparation: SW-846 3015A 2007			Preparation Date: 11/15/2016			Prepared By: L8KH			
Potassium	7.3	mg/L	0.1	0.3	1	11/17/16	L8KH	EPA 200.7 1994	
			Preparation Date: 11/13/2016			Prepared By: P84Z			
Ammonia as N	0.12	mg/L	0.10	0.32	1	11/15/16	P84Z	EPA 350.1 Rev2.0 Mod 1993	WW-03, J
Chlorine - Total Residual (Lab)	<0.031	mg/L	0.031	0.099	1	11/09/16	NJ1Z	SM4500CI-G 2000	

Analyte	Result	Units	LOD	LOQ	Dilution Factor	Analyzed	Analyst	Method	Notes
			Date Collected:		11/09/2016				
1611161-05									
17227									
Preparation: SW-846 3015A 2007			Preparation Date: 11/15/2016			Prepared By: L8KH			
Copper	<0.01	mg/L	0.01	0.03	1	11/15/16	L8KH	EPA 200.7 1994	
Preparation: SW-846 3015A 2007			Preparation Date: 11/15/2016			Prepared By: L8KH			
Potassium	13.5	mg/L	0.1	0.3	1	11/17/16	L8KH	EPA 200.7 1994	
			Preparation Date: 11/13/2016			Prepared By: P84Z			
Ammonia as N	0.16	mg/L	0.10	0.32	1	11/15/16	P84Z	EPA 350.1 Rev2.0 Mod 1993	WW-03, J

Milwaukee County Dept of Administration 633 W. Wisconsin Ave, Ste 1003 Milwaukee, WI 53203	Project: Water Project Number: Water Project Manager: Jack Sudar	Reported: 11/23/16 16:10
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Analyte	Result	Units	LOD	LOQ	Dilution Factor	Analyzed	Analyst	Method	Notes
1611161-05									
17227									
Date Collected:					11/09/2016				

Chlorine - Total Residual (Lab)	<0.031	mg/L	0.031	0.099	1	11/09/16	NJ1Z	SM4500CI-G 2000	
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Analyte	Result	Units	LOD	LOQ	Dilution Factor	Analyzed	Analyst	Method	Notes
1611161-06									
18169									
Date Collected:					11/09/2016				

Preparation: SW-846 3015A 2007									
Preparation Date: 11/15/2016							Prepared By: L8KH		
Copper	<0.01	mg/L	0.01	0.03	1	11/15/16	L8KH	EPA 200.7 1994	
Preparation: SW-846 3015A 2007									
Preparation Date: 11/15/2016							Prepared By: L8KH		
Potassium	4.0	mg/L	0.1	0.3	1	11/17/16	L8KH	EPA 200.7 1994	
Preparation Date: 11/13/2016							Prepared By: P84Z		
Ammonia as N	0.18	mg/L	0.10	0.32	1	11/15/16	P84Z	EPA 350.1 Rev2.0 Mod 1993	WW-03, J
Chlorine - Total Residual (Lab)	0.039	mg/L	0.031	0.099	1	11/09/16	NJ1Z	SM4500CI-G 2000	J

Analyte	Result	Units	LOD	LOQ	Dilution Factor	Analyzed	Analyst	Method	Notes
1611161-07									
18301									
Date Collected:					11/09/2016				

Preparation: SW-846 3015A 2007									
Preparation Date: 11/15/2016							Prepared By: L8KH		
Copper	<0.01	mg/L	0.01	0.03	1	11/15/16	L8KH	EPA 200.7 1994	
Preparation: SW-846 3015A 2007									
Preparation Date: 11/15/2016							Prepared By: L8KH		
Potassium	3.3	mg/L	0.1	0.3	1	11/17/16	L8KH	EPA 200.7 1994	
Preparation Date: 11/13/2016							Prepared By: P84Z		
Ammonia as N	<0.10	mg/L	0.10	0.32	1	11/15/16	P84Z	EPA 350.1 Rev2.0 Mod 1993	WW-03
Chlorine - Total Residual (Lab)	<0.031	mg/L	0.031	0.099	1	11/09/16	NJ1Z	SM4500CI-G 2000	

Milwaukee County Dept of Administration
633 W. Wisconsin Ave, Ste 1003
Milwaukee, WI 53203

Project: Water
Project Number: Water
Project Manager: Jack Sudar

Reported:
11/23/16 16:10

J This result is greater than our LOD (Limit of Detection) and less than our LOQ (Limit of Quantitation).
WW-03 A low standard recovery occurred during the analysis of this sample and may indicate a low bias on the sample recovery.
J This result is greater than our LOD (Limit of Detection) and less than our LOQ (Limit of Quantitation).
WW-03 A low standard recovery occurred during the analysis of this sample and may indicate a low bias on the sample recovery.
J This result is greater than our LOD (Limit of Detection) and less than our LOQ (Limit of Quantitation).
WW-03 A low standard recovery occurred during the analysis of this sample and may indicate a low bias on the sample recovery.
J This result is greater than our LOD (Limit of Detection) and less than our LOQ (Limit of Quantitation).
WW-03 A low standard recovery occurred during the analysis of this sample and may indicate a low bias on the sample recovery.
J This result is greater than our LOD (Limit of Detection) and less than our LOQ (Limit of Quantitation).
WW-03 A low standard recovery occurred during the analysis of this sample and may indicate a low bias on the sample recovery.

Note: Sub-contract results attached.

NORTHERN LAKE SERVICE, INC.
 Analytical Laboratory and Environmental Services
 400 North Lake Avenue - Crandon, WI 54520
 Ph: (715)-478-2777 Fax: (715)-478-3060

ANALYTICAL REPORT

WDNR Laboratory ID No. 721026460
 WDATCP Laboratory Certification No. 105-330
 EPA Laboratory ID No. WI00034

Printed: 11/23/16 Page 1 of 1

Client: Eurofins S-F Analytical Laboratories Inc
 Attn: Edward Kelley
 2345 S. 170th Street
 New Berlin, WI 53151

NLS Project: 270924

NLS Customer: 32274

Fax: 262 754 5310 Phone: 262 754 5300
 PO # 1611295-1001917

Project: 1611161

1611161-01 NLS ID: 958710

Matrix: WW

Collected: 11/09/16 09:45 Received: 11/11/16

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Phenols (distillation)	ND	mg/L	1	0.065	0.21	11/23/16	5530 D-2005	721026460

1611161-02 NLS ID: 958711

Matrix: WW

Collected: 11/09/16 13:00 Received: 11/11/16

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Phenols (distillation)	ND	mg/L	1	0.065	0.21	11/23/16	5530 D-2005	721026460

1611161-03 NLS ID: 958712

Matrix: WW

Collected: 11/09/16 11:45 Received: 11/11/16

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Phenols (distillation)	ND	mg/L	1	0.065	0.21	11/23/16	5530 D-2005	721026460

1611161-04 NLS ID: 958717

Matrix: WW

Collected: 11/09/16 12:20 Received: 11/11/16

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Phenols (distillation)	ND	mg/L	1	0.065	0.21	11/23/16	5530 D-2005	721026460

1611161-05 NLS ID: 958718

Matrix: WW

Collected: 11/09/16 10:00 Received: 11/11/16

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Phenols (distillation)	ND	mg/L	1	0.065	0.21	11/23/16	5530 D-2005	721026460

1611161-06 NLS ID: 958719

Matrix: WW

Collected: 11/09/16 10:45 Received: 11/11/16

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Phenols (distillation)	ND	mg/L	1	0.065	0.21	11/23/16	5530 D-2005	721026460

1611161-07 NLS ID: 958720

Matrix: WW

Collected: 11/09/16 10:30 Received: 11/11/16

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Phenols (distillation)	ND	mg/L	1	0.065	0.21	11/23/16	5530 D-2005	721026460

Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation". LOD and/or LOQ tagged with an asterisk(*) are considered Reporting Limits. All LOD/LOQs adjusted to reflect dilution and/or solids content.

ND = Not Detected (< LOD) LOD = Limit of Detection LOQ = Limit of Quantitation NA = Not Applicable
 DWB = Dry Weight Basis %DWB = (mg/kg DWB) / 10000 1000 ug/L = 1 mg/L
 MCL = Maximum Contaminant Levels for Drinking Water Samples. Shaded results indicate >MCL.

Reviewed by:



Authorized by:
 R. T. Krueger
 President

Milwaukee County IDDE: Indicator Parameters Action Levels

Parameter	Action Level	Illicit Sources	Non-Illicit Sources
Ammonia	0.1 mg/l	Sanitary sewage and industrial wastewater	Pets, wildlife and potentially WPDES permitted discharges
Detergents	0.5 mg/l	Industrial cleansers, commercial wash water and sanitary sewage	Residential car washing
pH	Less than 6 or greater than 9	Industrial wastewater and concrete truck wash-out	Groundwater and WPDES permitted discharges
Total Chlorine	Detection or positive test unless associated with a WPDES permitted discharge at background water supply levels	Industrial wastewater, swimming pools and sanitary sewage	WPDES permitted discharge
Total Copper	0.1 mg/l	Copper-based product use and manufacturing	WPDES permitted discharge
Phenol	Detection of positive test	Chemical, textile, paint, resin, tire, plastic, electronics and pharmaceutical manufacturing	None
Fluoride	Detection above background groundwater or water supply levels	Commercial and industrial wastewaters with a water supply component	Groundwater and WPDES permitted discharges
Potassium	10 mg/l	Sanitary sewage and industrial wastewater	Groundwater and WPDES permitted discharges
E. Coli	10,000 MPN/100 mL	Sanitary sewage	Wildlife and pets
Human Bacteriodes	Detection or positive test	Sanitary sewage	None

Milwaukee County's MS4 permit (2012-2017) requires sampling for ammonia, copper, phenol, detergents, and either chlorine or fluoride. Milwaukee County was given permission to sample potassium instead of detergents (this was an email on lotus notes). All Major outfalls need to be sampled once every 5 years (once per permit cycle) unless there is an indication of an illicit discharge. All Priority outfalls need to be sampled once per year. If after two years a Priority outfall does not have an indication of an illicit discharge, that priority outfall can be reduced to sampling once every 5 years.

Yellow indicates that this parameter is required to be sampled

Red indicates that one of these parameters is required to be sampled

Blue indicates that this parameter was allowed to replace another required parameter

Green indicates that this is a required parameter, though another parameter was allowed to replace it

MILWAUKEE COUNTY
Architecture, Engineering, and Environmental Services Procedures

Illicit Discharge Detection and Elimination Sampling Exceedance Follow-up Procedure

Procedure Number:	ENV 200	Creation Date:	January 12, 2016
Prepared by:	Jack Sudar	Revision Date:	January 12, 2016
Procedure Description:	This procedure outlines the follow-up actions to take if there is an indicator from sampling data of a potential illicit discharge in the stormsewer system.		
Procedure Responsibility:	Environmental Engineer or Equivalent		
Procedure Purpose:	It is necessary to follow-up with a sampling exceedance per Milwaukee County's MS4 permit that requires all Major and Priority outfalls be sampled as part of the IDDE program goals of identifying and eliminating illicit discharges. The purpose of following up with a sampling exceedance is to determine the source of an illicit discharge and remove the illicit connection.		

Attachments	
Attachment A	Menomonee River Watershed-Based MS4 Permit: Part III Section A
Attachment B	Milwaukee County Staff to Contact in the Event of a Potential Illicit Discharge
Attachment C	Indicator Parameter Action Levels
Attachment D	Illicit Discharge Detection and Elimination DNR Guidance Document

Definitions	
<ul style="list-style-type: none"> • Illicit Discharge – An illicit discharge is defined as any discharge to the municipal separate storm sewer system that is not composed entirely of storm water, except for discharges allowed under an NPDES permit or waters used for firefighting operations. • IDDE Program– An Illicit Discharge Detection and Elimination Program. The purpose of an IDDE program is to detect and remove illicit connections and discharges to the municipal separate storm sewer system. 	

Background	
<p>Milwaukee County's MS4 permit (WI-S050156-1, from 2012-2017) requires that all Major and Priority outfalls be sampled for ammonia, copper, phenol, detergents and either chlorine or fluoride (<i>Attachment A</i>). Milwaukee County has been given permission to sample potassium in lieu of detergents, and has historically elected to sample chloride instead of fluoride.</p> <p>This sampling is required as part of the IDDE program that is outlined in the MS4 permit. Milwaukee County has over 29,000 stormwater structures that were limited down to 302 eligible stormwater outfalls within the Menomonee River watershed as part of the IDDE analysis outlined by the permit holders. These 302 stormsewer outfalls were further limited down to 20 Major and Priority outfalls through the systematic analysis of the stormsewer system by factoring in the proximity of sanitary and stormwater pipes, age of development, parcels per square mile, condition of pipes, and past discharge complaints.</p> <p>These 20 Major and Priority outfalls are to be sampled per the requirements of the MS4 permit. All Major outfalls need to be sampled once every 5 years (once per permit cycle) unless there is an indication of an illicit discharge. All Priority outfalls need to be sampled once per year. If after two years a Priority outfall</p>	

does not have an indication of an illicit discharge, that Priority outfall can then be reduced to sampling once every 5 years (once per permit cycle).

Procedures

Initial Follow-up Actions

If there is an indicator from the sampling data of a potential illicit discharge, some of the initial step include:

- Look upstream of the outfall. Open manholes upstream in an attempt to identify a source of flow. If a source of flow is discovered, follow it upstream as far as practical to identify the origin.
- Contact the Milwaukee County owner department that is responsible for the outfall and Milwaukee County Environmental Services staff in order to gather more information (*Attachment B*).
- View areal maps to see if there is a potential source (e.g. manufacturing facilities, residential neighborhoods, industrial cleaners, water fountains, etc.).
- Gather storm sewer and sanitary sewer maps of the surrounding area.
- Which of the initially sampled parameters has an exceedance? Figure out what the initial parameter exceedance could be an indicator of, and then factor that into the investigation (*Attachment C*). For example:
 - A copper exceedance could be an example of manufacturing or industrial waste, so check to see if there are any of these types of facilities within the area.

Additional Follow-up Actions

After performing the initial investigation some additional actions to take include:

- If a suspected source is discovered, contact the property owner. Ask if they may know of a potential cause. Ask for their sewer maps and to meet with someone familiar with their sanitary and stormsewer utilities.
- If a suspected source is discovered, and it is flowing from another municipality's pipe or storm structure, inform the municipality of your findings. The responsible municipality should be liable for further investigation of the potential illicit discharge.
- If a suspected source is discovered, smoke or dye testing may be performed to verify the source.
- If there are multiple sources of flow upstream, sampling each of these sources for the elevated parameter can help to determine the origin of the illicit discharge.
- If a source cannot be identified, some additional sampling parameters to follow up with could include detergents, fluoride, pH, human bacteriodes, and E. coli. (*Attachments D*).

Final Follow-up Actions

If a source is identified through the initial and additional investigations then the final actions should include:

- Upon confirmation of a source of an illicit discharge the DNR should be notified within 24 hours.
- Upon discovery of a potential illicit discharge, Milwaukee County should notify the DNR within 6 months if no source is able to be found.
- The responsible party of the illicit discharge should remove their connection into the stormsewer system. If the owner is not corporative with rectifying the illicit connection, the DNR should be notified and asked to help correct the situation.
- Upon removal of an illicit connection, sampling of the outfall can be performed to verify that the removal of the illicit connection has been achieved.
- The DNR will be notified of the findings of the IDDE program in our annual stormwater report.

Attachment A – Menomonee River Watershed- Based MS4 Permit: Part III Section A

Menomonee River Watershed-Based MS4 Permit

WPDES Permit No. WI-S050156-1
Page 11 of 30

Part III. INDIVIDUAL CONDITIONS

The following permit conditions apply to each municipality in the Menomonee River Watershed Permittees:

A. ILLICIT DISCHARGE DETECTION AND ELIMINATION: Each municipality shall continue to implement a program to detect and remove illicit connections and discharges to the municipal separate storm sewer system. Each municipality's implementation of its program to detect and remove illicit connections and discharges may incorporate cooperative efforts with other MS4 regulated permittees or efforts by other groups or organizations if the shared responsibility is approved by the Department. The program shall include measurable goals and include all of the following:

1. An ordinance or other regulatory mechanism to prevent and eliminate illicit discharges and connections to the municipal separate storm sewer system. At a minimum, the ordinance or other regulatory mechanism shall:
 - a. Prohibit the discharge, spilling or dumping of non-storm water substances or material into waters of the state or the storm sewer system.
 - b. Identify non-storm water discharges or flows that are not considered illicit discharges. Non-storm water discharges that are not considered illicit discharges including water line flushing, landscape irrigation, diverted stream flows, uncontaminated groundwater infiltration, uncontaminated pumped groundwater, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, lawn watering, individual residential car washing, flows from riparian habitats and wetlands, firefighting and discharges authorized under a WPDES permit unless identified by the permittee as significant source of pollutants to waters of the state.
 - c. Establish inspection and enforcement authority.

Note: Chapter NR 815, Wis. Adm. Code, regulates injection wells including storm water injection wells. Construction or use of a well to dispose of storm water directly into groundwater is prohibited under s. NR 815.11(5), Wis. Adm. Code.
2. Field screening during dry weather periods (typically 72 hours after any measurable rainfall) of the following municipal separate storm sewer system outfalls:
 - a. Effective immediately at the start of permit coverage – All major outfalls which showed no indication of illicit discharges during the previous permit term. In any single year at least one fifth of such major outfalls shall be screened, on a rolling basis such that at the end of the permit term all major outfalls which showed no indication of illicit discharges during the previous permit term have been screened.
 - b. Effective immediately at the start of permit coverage – All major outfalls which showed evidence of illicit discharges during the last two samplings under the preceding permit term shall be evaluated annually, at a minimum one time per year.
 - c. Within 6 months of receiving approval by the Department for the analysis procedure described in Part II-Section E – Other outfalls, regardless of size, identified for illicit discharge screening under Part II-Section E, shall be evaluated on an ongoing basis, at a minimum one time per year or at an increased frequency as deemed appropriate by the municipality.

3. At a minimum, field screening shall be documented and include:
- a. Visual Observation - A narrative description of visual observations including color, odor, turbidity, oil sheen or surface scum, flow rate and any other relevant observations regarding the potential presence of non-storm water discharges or illegal dumping. (include narrative in annual report)
 - b. Field Analysis - If flow is observed, field analysis shall be conducted to determine the presence of illicit non-storm water discharges or illegal dumping. The field analysis shall include sampling total copper, total phenol, detergent, ammonia, and either fluoride or total chlorine unless written concurrence is obtained from the Department allowing use of alternative indicator parameters to more effectively detect illicit discharges such as with potassium or bacteria.
- Note: The Department has written a guidance document to assist municipalities with development of field screening programs to determine the presence of illicit discharges from MS4 outfalls. The guidance can be found on the Department's website at: http://dnr.wi.gov/topic/stormwater/documents/MS4_IDDE_Guidance_3-2012.pdf
- i. Field screening points shall, where possible, be located downstream of any source of suspected illegal or illicit activity.
 - ii. Field screening points shall be located where practicable at the farthest manhole or other accessible location downstream in the system. Safety of personnel and accessibility of the location shall be considered in making this determination.
 - iii. Consideration shall be given to hydrological conditions, total drainage area of the site, population density of the site, traffic density, age of the structures or building in the area, history of the area and land use types.
4. For those outfalls on an annual cycle, when evidence of illicit discharges is not found in two consecutive years, the outfall can be placed on the list for sampling once every five years. At a minimum, field screening shall be documented and include the visual observations and field analyses described under Part III-Section A-3.
5. Following approval of the analysis procedure described above in Part II-Section E, each municipality shall adapt the procedure to its local conditions. Each municipality shall screen those outfalls identified by the adapted analysis procedure using the procedures described in Part III-Section A-2-a and b.

For those outfalls for which bacterial testing indicates human fecal contamination the municipality, in consultation with the Department, shall initiate a systematic examination of the catchment area tributary to the outfall in an effort to determine and eliminate the source of the illicit discharge.

Note: The purpose of Part II-Section E is to identify sanitary cross connections or inflow and infiltration from aging sanitary sewer systems into the MS4. While fecal contamination from nonhuman sources in storm water runoff does pose a threat to water quality and human health, it is not considered an illicit discharge. However, the municipality may want to screen for fecal coliform to address concerns with contamination from nonhuman sources.

6. Procedures for responding to known or suspected illicit discharges. At a minimum, procedures shall be established for:
- a. Immediately investigating portions of the municipal separate storm sewer system that, based on the results of field screening or other information, indicate a reasonable potential for containing illicit discharges or other sources of non-storm water discharges.
 - b. Responding to spills that discharge into and/or from the municipal separate storm sewer system including tracking the source of the spill if unknown.
 - c. Preventing and containing spills that may discharge into or are already within the municipal separate storm sewer system.
 - d. Immediately notifying the Department in accordance with ch. NR 706, Wis. Adm. Code, in the event that the permittee identifies a spill or release of a hazardous substance, which results in the discharge of pollutants into waters of the state. The Department shall be notified via the 24-hour toll free spill hotline at 1-800-943-0003. The permittee shall cooperate with Department in efforts to investigate and prevent such discharges from polluting waters of the state.
 - e. Identified illicit discharges or connections shall be eliminated to the maximum extent practicable. If neither the source nor the non-stormwater discharge has been identified or observed within 6 months of beginning the investigation, then the municipality must maintain written documentation of the actions undertaken for review by the Department. A minimum of 3 separate investigations to observe and sample flow at the identified outfall must be made within the 6 month period. Outfalls with indeterminate sources and non-stormwater discharges shall continue to be screened annually.
- Once an illicit discharge is identified, the investigating municipality must contact the Department within 24 hours.
- f. To the maximum extent practicable, eliminating or minimizing leakage from sanitary conveyance systems into the municipal separate storm sewer system.
 - g. Providing the Department with advance notice of the time and location of dye testing within a MS4. (Because the dye may get reported to the Department as an illicit discharge, the Department requires prior notification of dye testing.)
 - h. In the case of an illicit discharge that originates from the municipality's permitted area and that discharges directly to a storm sewer system or property under the jurisdiction of another municipality, the first municipality shall notify the affected municipality within one working day.
 - i. The name, title, and phone number of the individual(s) responsible for responding to reports of illicit discharges and spills shall be included in the illicit discharge response procedure and submitted to the Department in accordance with Part V.B.3.
7. Once the source of an illicit discharge is detected and remediated, and confirmed by screening, no further field screening at the affected outfall(s) will be required during the permit term.

B. CONSTRUCTION SITE POLLUTANT CONTROL: The permittee shall continue to implement and enforce a program that establishes measurable goals and reduces the discharge of sediment and

**Attachment B – Milwaukee County Staff to Contact in the Event of a
Potential Illicit Discharge**

Name	Phone Number	Title
Stevan Keith	414-278-4355	Environmental Services Unit Leader
Tim Detzer	414-278-2988	Senior Environmental Engineer
Jack Sudar	414-278-4870	Environmental Engineer
Mark Sifuentes	414-278-5238	Civil Engineer

Attachment C – Indicator Parameter Action Levels

Parameter	Action Level	Illicit Sources	Non-Illicit Sources
Ammonia	0.1 mg/l	Sanitary sewage and industrial wastewater	Pets, wildlife and potentially WPDES permitted discharges
Detergents	0.5 mg/l	industrial cleansers, commercial wash water and sanitary sewage	Residential car washing
pH	Less than 6 or greater than 9	Industrial wastewater and concrete truck wash-out	Groundwater and WPDES permitted discharges
Total Chlorine	Detection or positive test unless associated with a WPDES permitted discharge at background water supply levels	Industrial wastewater, swimming pools and sanitary sewage	WPDES permitted discharged
Total Copper	0.1 mg/l	Copper-based product use and manufacturing	WPDES permitted discharged
Phenol	Detection of positive test	Chemical, textile, paint, resin, tire, plastic, electronics and pharmaceutical manufacturing	None
Fluoride	Detection above background groundwater or water supply levels	Commercial and industrial wastewaters with a water supply component	Groundwater and WPDES permitted discharges
Potassium	10 mg/l	Sanitary sewage and industrial wastewater	Groundwater and WPDES permitted discharges
E. Coli	10,000 MPN/100 mL	Sanitary sewage	Wildlife and pets
Human Bacteriodes	Detection or positive test	Sanitary sewage	None

Milwaukee County's MS4 permit (2012-2017) requires sampling for ammonia, copper, phenol, detergents, and either chlorine or fluoride. Milwaukee County was given permission to sample potassium instead of detergents (this was an email on lotus notes). All Major outfalls need to be sampled once every 5 years (once per permit cycle) unless there is an indication of an illicit discharge. All Priority outfalls need to be sampled once per year. If after two years a Priority outfall does not have an indication of an illicit discharge, that priority outfall can be reduced to sampling once every 5 years.

Yellow indicates that this parameter is required to be sampled

Red indicates that one of these parameters is required to be sampled

Blue indicates that this parameter was allowed to replace another required parameter

Green indicates that this is a required parameter, though another parameter was allowed to replace it

Attachment D – Illicit Discharge Detection and Elimination DNR Guidance Document

CORRESPONDENCE/MEMORANDUM

State of Wisconsin

DATE: March 15, 2012
TO: SW Program Staff
FROM: Pam Biersach – Bureau Director
Bureau of Watershed Management 
SUBJECT: Program Guidance #3800-2012-01

Illicit Discharge Detection and Elimination

March 2012
3800-2012-01

This document is intended solely as guidance, and does not contain any mandatory requirements except where requirements found in statute or administrative rule are referenced. This guidance does not establish or affect legal rights or obligations, and is not finally determinative of any of the issues addressed. This guidance does not create any rights enforceable by any party in litigation with the State of Wisconsin or the Department of Natural Resources. Any regulatory decisions made by the Department of Natural Resources in any matter addressed by this guidance will be made by applying the governing statutes and administrative rules to the relevant facts.

A. Statement of Problem Being Addressed

Limited information is available to assist municipalities with the development of an effective program to determine the presence of illicit discharges from storm sewer system outfalls.

B. Background

State and federal storm water discharge regulations require permitted municipal separate storm sewer systems (MS4s) to develop, implement and enforce a program to detect and remove illicit connections and discharges to the MS4. In Wisconsin, this requirement is established in s. NR 216.07(3), Wis. Adm. Code. The program must include routine dry weather field screening at storm sewer system outfalls and procedures for locating the source of known or suspected illicit discharges. If flow is observed, a combination of sensory observations and indicator parameter sampling must be used to determine the presence of illicit discharges and assist in the tracking, location and elimination of sources.

C. Discussion

Section NR 216.07(3)(i), Wis. Adm. Code, requires that field screening is conducted at all major outfalls and any additional outfalls designated by the municipality or Department. Field screening must include the following when flow is observed:

- Narrative descriptions of color, odor, turbidity, oil sheen, surface scum, flow rate and other relevant observations.
- Sampling for pH, total chlorine, total copper, total phenol and detergents unless Department



approval has been obtained for alternative parameters such as ammonia, potassium or bacteria.

The combination of sensory and indicator parameters is intended to provide insight regarding the presence and potential sources of illicit discharges. However, ch. NR 216, Wis. Adm. Code does not identify specific discharge limits, action levels or other criteria that should be used to determine if an illicit discharge is either present or absent. In addition, ch. NR 216, Wis. Adm. Code does not address the following:

- Selection of outfalls for on-going field screening after the initial major outfall field screening has been completed.
- Frequency and timing of outfall field screening activities.
- Outfalls with baseflow consisting of groundwater and other non-illicit discharges.
- Submerged, enclosed, or otherwise inaccessible outfalls.
- Outfalls from pumped storm water systems.
- Outfalls from swale conveyance systems and storm water treatment practices.
- Proper documentation and evaluation of outfall field screening activities.

The purpose of this guidance document is to provide supplemental information that can be used by MS4 owners and operators to maximize the efficiency and effectiveness of illicit discharge detection and elimination programs.

D. Guidance

Outfall Selection

Currently, MS4 permits include a requirement that field screening is initially conducted at all major outfalls¹. However, a more targeted approach to illicit discharge detection and elimination (IDDF) is recommended. Outfalls should be prioritized based on illicit discharge potential in the contributing drainage area rather than solely on pipe or drainage area size. Outfalls selected for on-going field screening based on illicit discharge potential are considered "priority outfalls". Contributing drainage area characteristics or land uses that should be considered when selecting priority outfalls include:

- History of known or suspected illicit discharges reported within the last five years
- Sections of storm sewer and/or sanitary sewer infrastructure that have exceeded or are approaching their design/useful life.
- Contributing drainage areas with 80 or more percent imperviousness.

¹ "Major outfall" means a municipal separate storm sewer system outfall that meets one of the following criteria:

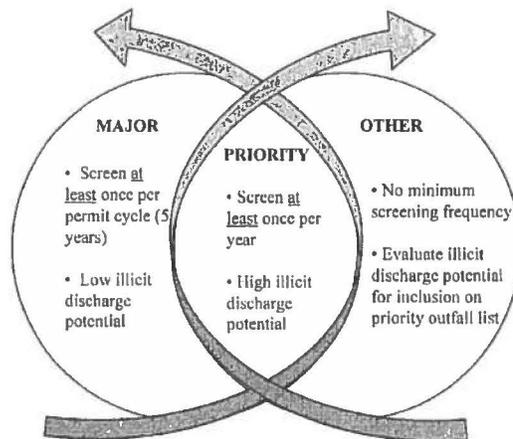
- (a) A single pipe with an inside diameter of 36 inches or more, or from an equivalent conveyance which is associated with a drainage area of more than 50 acres.
- (b) A single pipe with an inside diameter of 12 inches or more, or from an equivalent conveyance which receives storm water runoff from lands zoned for industrial activity with 2 or more acres of industrial activity.

- Business or industrial parks with frequent changes in property ownership or operations.
- Schools or other institutional facilities.
- Commercial or industrial operations that generate wastewater or wash water including food processing, metal plating or machining shops, auto and scrap recyclers, commercial car washes and chemical manufactures or users.

Frequency

The recommended approach to outfall field screening frequency is depicted in Figure 1. All priority outfalls should be screened at least once per year. In some cases, it may be appropriate to conduct more than one field screening per year at a particular priority outfall depending on initial screening results or illicit discharge potential. All other major outfalls not identified as priority outfalls should be screened at least once during each MS4 permit cycle (i.e., 5 years). The priority outfall list should be reviewed and modified if necessary during an annual program evaluation.

Figure 1 - Outfall Field Screening Frequency



Timing

Outfall field screening must be conducted during dry weather periods to minimize potential interference from non-illicit sources including runoff and groundwater. In general, field screening should not be conducted within 48 hours after a precipitation event that produces runoff. However, it may be necessary to wait longer than 48 hours after precipitation events depending on contributing drainage area characteristics, the presence of extended discharges from stormwater facilities or the size of the event. Field screening during periods of high groundwater, such as the early spring, should be avoided. However, spring or fall screening may be necessary if outfall access is significantly obstructed by vegetation.

Sensory Parameters

Obvious illicit discharges can potentially be identified by color, odor or other physical characteristics such as sheen or foam. However, proper interpretation of sensory observations can be complicated by the fact that some sources are naturally occurring (e.g., iron bacteria) or non-illicit (e.g., dye testing).

Chapter 11 of the Center for Watershed Protection's guidance manual for illicit discharge detection and elimination includes photos of common physical indicators for illicit and non-illicit sources. The entire manual can be downloaded from the USEPA website at http://www.epa.gov/npdes/pubs/ldde_manualwithappendices.pdf

Indicator Parameters

Indicator parameter sampling is necessary to confirm sensory observations or distinguish illicit from non-illicit discharges. The following parameters are recommended for all observed discharges: **Ammonia, Detergents, pH and Total Chlorine**. Based on MS4 or outfall specific conditions, the following additional parameters should be considered:

- **Total Copper** in areas where industrial facilities that use or manufacture copper-based products are present.
- **Phenol** in areas where industrial facilities that utilize phenol in processes or products are present.
- **Potassium** when discharges of industrial wastewater or sanitary sewage are suspected.
- **Fluoride** when discharges with a drinking water supply component are suspected.
- **E. coli or Bacteriodes** when discharges of sanitary sewage are suspected.

The recommended parameters for all observed discharges are a deviation from the parameter lists identified in ch. NR 216, Wis. Adm Code and MS4 permits. Permitted MS4s should submit modified parameter list proposals to the Department for approval prior to implementation.

Test Methods

In order to provide relatively rapid results, indicator parameters should be analyzed using field test kits. However, field test kits should be used by staff with appropriate training and experience. Laboratory analysis is necessary for some parameters (e.g., E. coli, Bacteriodes) and recommended in cases where enforcement action may be necessary to eliminate illicit discharges or connections.

Action Levels

Recommended action levels for indicator parameters are found in Table 1. Sample results above these levels suggest the presence of an illicit discharge is likely. However, illicit discharges or connections should not be automatically ruled out in cases where parameters are detected below the recommended action levels. In some instances, illicit discharges can be masked by non-illicit sources depending on the time of the year, recent precipitation events, or other conditions, especially at outfalls with large

contributing drainage areas. With this in mind, the recommended action levels should be considered as starting points for decision making. Ultimately, identifying outliers to expected or past levels may be more important when determining if further investigation should be initiated. To determine when an outlier has been detected, each MS4 should maintain a database (or equivalent record) of indicator parameter test results for individual outfalls or groups of outfalls.

TABLE 1 – Indicator Parameters Action Levels

Parameter	Action Level	Illicit Sources	Non-Illicit Sources
Ammonia	0.1 mg/l	Sanitary sewage and industrial wastewater	Pets, wildlife and potentially WPDES permitted discharges
Detergents	0.5 mg/l	Industrial cleansers, commercial wash water and sanitary sewage	Residential car washing
pH	Less than 6 or greater than 9	Industrial wastewater and concrete truck wash-out	Groundwater and WPDES permitted discharges
Total Chlorine	Detection or positive test unless associated with a WPDES permitted discharge at background water supply levels	Industrial wastewater, swimming pools and sanitary sewage	WPDES permitted discharges
Total Copper	0.1 mg/l	Copper-based product use and manufacturing	WPDES permitted discharges
Phenol	Detection or positive test	Chemical, textile, paint, resin, tire, plastic, electronics and pharmaceutical manufacturing	None
Fluoride	Detection above background groundwater or water supply levels	Commercial and industrial wastewaters with a water supply component	Groundwater and WPDES permitted discharges
Potassium	10 mg/l	Sanitary sewage and industrial wastewater	Groundwater and WPDES permitted discharges
E. coli	10,000 MPN/100 mL	Sanitary sewage	Wildlife and pets
Human Bacteriodes	Detection or positive test	Sanitary sewage	None

Additional considerations for some of the indicator parameters are as follows:

- Field test methods for **detergents** are generally considered qualitative (i.e., positive or negative) tests. Some detergent test methods produce bubbles or a gel like substance that can be misinterpreted as a positive test for detergents. In addition, specific detergent test methods, such as the MBAS method, may not be capable of detecting all classes of detergents. Another potential

issue with detergent testing is distinguishing non-illicit discharges associated with residential car washing from illicit discharges.

- **Chlorine** residuals are typically short lived in the environment. Detection of chlorine at an outfall generally indicates a source that is relatively close to the outfall. However, chlorine detected at an outfall can be from an illicit or non-illicit source if chlorinated municipal drinking water supply is a component of the discharge (see "Non-Illicit Sources").
- Leaching of **copper** from plumbing systems can be a source of copper even in areas where copper-based product use or manufacturing does not occur.
- Municipal drinking water supply systems that add **fluoride** typically maintain levels between 1 and 1.5 mg/l.
- **E. coli** is a commonly used sanitary sewage indicator. However, dry weather flow outfall monitoring in Wisconsin and other states indicates that E. coli levels are highly variable and can be produced by naturally occurring, non-illicit sources in the environment such as raccoons in storm sewers. Elevated dry weather E. coli levels in conjunction with detection of other indicator parameters (e.g., detergents, total chlorine) may be more indicative of the presence of sanitary sewage.
- The ratio of human **Bacteriodes** to total Bacteriodes may be particularly useful in determining sanitary sewage sources. However, the availability of Bacteriodes testing may be limited.

Non-Illicit Sources

Indicator parameters can be detected from non-illicit sources such as groundwater inflows, non-contact cooling water discharges or other WPDES permitted discharges from commercial and industrial facilities:

- **Groundwater:** Flow rates associated with groundwater inflows can vary seasonally due to fluctuations in groundwater elevations. Groundwater inflows are typically highest in the early spring and lowest in the late summer. In some areas, groundwater inflows will also include natural levels of fluoride. Baseline conditions for outfalls with groundwater inflows can be established by documenting seasonal flow rates and/or fluoride levels over time. If baseline conditions have been established for an outfall, sampling for other indicator parameters can be avoided if flow rates and/or fluoride levels are consistent with the established baseline values.
- **Permitted Facilities:** In some areas, WPDES permitted industrial facilities are allowed to discharge wastewater to MS4s as long as discharge limits are met. These discharges can produce continuous or nearly continuous flows at outfalls. WPDES permitted discharges are considered non-illicit but can include one or more of the indicator parameters at detectable levels. In many cases, municipal drinking water supply is a component of WPDES permitted discharges and it may be difficult to distinguish non-illicit from illicit sources in these areas. However, establishing baseline flow rates and parameter levels for outfalls with WPDES permitted discharges is recommended. If necessary, the Department can assist in the identification and characterization of WPDES permitted discharge, including discharge limits.

The Department maintains a listing of current WPDES permit holders online:

- WPDES Wastewater Permittees
<http://dnr.wi.gov/org/water/wm/ww/permlists.htm>
- WPDES Industrial Storm Water Permittees
<http://dnr.wi.gov/runoff/stormwater/industrial/>

Submerged & Enclosed Outfalls

It may be difficult or impossible to conduct outfall field screening activities at outfalls that are fully or partially submerged by receiving waters or located within enclosed waterways. For these cases, field screening activities should be conducted at appropriate upstream manholes. On-site illicit connection inspections should be considered for any high risk facilities that can potentially discharge to the MS4 between the outfall and field screening manholes. Another option to consider is televising the storm sewer segments located between field screening manholes and the outfall.

Physically Interconnected Systems

One MS4 that discharges directly to a second MS4 is considered physically interconnected. The point of interconnection is considered an outfall from the upstream or discharging MS4. Although field screening activities should be conducted by the upstream MS4 at the point of interconnection, it may be appropriate for interconnected MS4s to coordinate and potentially consolidate field screening activities.

Pump Stations

For pumped storm water systems, field screening activities should be conducted at appropriate manholes located upstream from the pump station or intake. If the first upstream manhole from the pump station is submerged, the pump should be operated if possible to remove accumulated water from the storm sewer system prior to conducting field screening activities.

Swales Conveyance Systems

For swale conveyance systems, it may be appropriate to conduct a visual or "windshield" survey within the swale area in conjunction with or as an alternative to field screening at the outfall. Locations where piped systems discharge to swales should be targeted during windshield surveys.

Storm Water Practices

Wet detention basins and other storm water treatment practices can potentially mask the presence of illicit discharges from the storm sewer system. Field screening activities should be conducted at inlets to storm water treatment practices rather than from the outlet. However, the size and location of practices can be considered when determining if field screening at inlets is necessary.

Documentation and Program Evaluation

Written or electronic documentation of all outfall screening activities should be kept. At minimum, the documentation should identify the following items for each outfall:

- Outfall location & description
- Inspector name
- Date of inspection
- Date & amount of last rainfall
- Weather conditions
- Narrative description of all sensory observations and flow rate estimates
- Test results for all indicator parameter sampling
- Narrative description of potential or confirmed illicit discharge sources and actions taken to track and eliminate sources.
- Additional comments or observations

As suggested in the "Action Level" section, it is important to develop and maintain a field screening database (or equivalent) to track changes and establish trends over time. Each permitted MS4 should conduct an annual evaluation of the field screening data and priority outfall list. Program modifications should be made as needed based on the annual evaluation.

APPROVED:

Mary Anne Lونداس 3/19/2012
Section Chief Date

APPROVED:

Jan R. Randetti 3/19/2012
Staff Attorney Date

DISCUSSED OR APPROVED:

PMT Approved on 3/15/2012
Date

Attachment 2
Storm Sewer Map Update

Detzer, Tim

From: Detzer, Tim
Sent: Friday, March 31, 2017 2:18 PM
To: Bryan Hartsook (Bryan.Hartsook@Wisconsin.gov)
Subject: FW: storm
Attachments: Milwaukee County Storm 3.31.17.gdb.zip

Hello Bryan,

Attached is the required update to Milwaukee County's storm sewer map.

Please let me know if you have any questions our troubles with the attachment.

Sincerely,

Timothy R. Detzer, PE
Senior Environmental Engineer
Milwaukee County DAS-FM-AE&ES
633 W. Wisconsin Ave, Suite 1003
Milwaukee, WI 53203
Direct (414) 278-2988
Cell (414) 550-0852
timothy.detzer@milwaukeecountywi.gov

From: Sudar, Jack
Sent: Friday, March 31, 2017 2:16 PM
To: Detzer, Tim <Timothy.Detzer@milwaukeecountywi.gov>
Subject: storm

Tim,

Attached is an updated version of all our storm layers.

Jack S. Sudar, EIT | Environmental Engineer
Milwaukee County Department of Administrative Services – Facilities Management
633 W. Wisconsin Avenue, Suite 1003, Milwaukee, WI 53203
Phone: (414) 278-4870 | Mobile: (414) 238-1251

Attachment 3
SWPPP Inspection Reports

2016 Stormwater Report

E.2 Municipal Yard Inspection Dates (attach copies of completed inspection reports):

Annual Inspection Dates

Timmerman Airport	11/16/2016
North Shop	11/16/2016
Zoo	11/18/2016
Fleet Management	11/22/2016
McKinley Marina	11/16/2016

Semi Annual Inspection Dates

Timmerman Airport	5/20/2016	11/16/2016
North Shop	5/20/2016	11/16/2016
Zoo	5/20/2016	11/18/2016
Fleet Management	5/20/2016	11/22/2016
McKinley Marina	5/20/2016	11/16/2016

Quarterly Inspection Dates

Timmerman Airport	3/23/2016	6/23/2016	8/19/2016	11/23/2016
North Shop	3/23/2016	6/23/2016	8/3/2016	11/23/2016
Zoo	3/23/2016	8/19/2016	12/20/2016	
Fleet Management	3/23/2016	8/19/2016	12/20/2016	
McKinley Marina	3/23/2016	6/23/2016	8/3/2016	11/23/2016

Annual Facility Site Compliance Inspection Report (AFSCI)
 For Storm Water Discharge Associated With Industrial Activity Under
 Wisconsin Pollutant Discharge Elimination System (WPDES) Permit
 Form 3400-176 (R 6/05) Page 1 of 4

Notice: This form is authorized by s. NR 216.29(2), Wis. Adm. Code. Submittal of a completed form to the Department is mandatory for industrial facilities covered under a tier 1 storm water general permit. Facilities covered under a tier 1 permit are not required to submit AFSCI reports after submittal of the second AFSCI report, unless so directed by the department. However, these inspections and quarterly visual inspections shall still be conducted and results shall be kept on site for department inspection. Facilities covered under a tier 2 storm water general, industry-specific general or individual permit shall keep the results of their AFSCI and quarterly visual inspections on site for department inspection. Failure to comply with these regulations may result in fines up to \$25,000 per day pursuant to s. 283.91, Wis. Stats. Personally identifiable information on this form may be used for other water quality program purposes.

Facility Information

Facility Name <i>Timmerman Airport</i>				
Street Address <i>9305 W Appleton Ave</i>		City <i>Milwaukee</i>	State <i>WI</i>	ZIP Code <i>53225</i>
County <i>Milwaukee</i>		Facility Contact Person <i>Greg Failey</i>		
Signature				

This form must be signed by an official representative of the permitted facility, in accordance with s. 216.29(8), Wis. Adm. Code.

IF THIS FORM IS NOT SIGNED, OR IS FOUND TO BE INCOMPLETE, IT WILL BE RETURNED

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature of Authorized Representative 		Date Signed <i>11/16/16</i>		
Type or Print Name <i>Jack Sudar</i>		Position Title <i>Environmental Engineer</i>		
Company Name <i>Milwaukee County</i>		Telephone Number <i>414 278 4870</i>		
Mailing Address <i>633 W. Wisconsin Ave</i>		City <i>Milwaukee</i>	State <i>WI</i>	ZIP Code <i>53203</i>

The first level of storm water monitoring consists of a comprehensive annual facility site compliance inspection (AFSCI) to determine if your facility is operating in compliance with your Storm Water Pollution Prevention Plan (SWPPP). You should use the results of this inspection to determine the extent to which your SWPPP needs to be updated to prevent pollution from new source areas, as well as to correct any inadequacies that the plan may have in handling existing source areas. This first level of monitoring is addressed in Section III of this Annual Report.

The second level of storm water monitoring consists of quarterly visual observations of storm water leaving the site during runoff events caused by snow-melt or rainfall. This is a practical, low cost tool for identifying obvious contamination of storm water discharges, and can also help identify which practices are ineffective. The goal of quarterly inspections is to obtain results from a set of four inspections that are distributed as evenly as possible throughout the year and which depict runoff quality during each of the four seasons. This second level of monitoring is addressed in Section IV of this Annual Report.

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Annual Facility Site Compliance Inspection Report (AFSCI)
Form 3400-176 (R 6/05)

Annual Facility Site Compliance Inspection

The Annual Facility Site Compliance Inspection shall be adequate to verify that; your Storm Water Pollution Prevention Plan (SWPPP) remains current, potential pollution sources at your facility are identified, the facility site map and drainage map remain accurate, and Best Management Practices prescribed in your SWPPP are being implemented, properly operated, and adequately maintained.

Name of Person Conducting Inspection Jack Sudar, Tim Detzer, Greg Failey	Inspection Date 11/16/16
Employer Milwaukee County	Telephone Number 414-278-4870

Your inspection should start with a review of your written SWPPP kept at your facility. The SWPPP should be amended if, through these inspections, you find that the provisions in your SWPPP are ineffective in controlling contaminated storm water from being discharged from your facility.

Has your SWPPP been updated to include current Non-Storm Water Discharge Evaluation results?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Has your SWPPP been amended for any new construction that would effect the site map or drainage conditions at the facility?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Has your SWPPP been amended for any changes in facility operations that could be identified as new source areas for contamination of storm water?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Are there any materials at the facility that are handled, stored, or disposed in a manner to allow exposure to storm water that are not currently addressed in your SWPPP?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
Are there any maintenance or material handling activities conducted outdoors that have not been addressed in your SWPPP?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
Are outside areas kept in a neat and orderly condition?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Are regular housekeeping inspections made?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Do you see spots, pools, puddles, or other traces of oils, grease, or other chemicals on the ground?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
Are particulates on the ground from industrial operations or processes being controlled?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Do you see leaking equipment, pipes or containers?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
Do drips, spills, or leaks occur when materials are being transferred from one source to another?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
Are drips or leaks from equipment or machinery being controlled?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Are cleanup procedures used for spilled solids?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Are absorbent materials (floor dry, kitty litter, etc.) regularly used in certain areas to absorb spills?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Can you find discoloration, residue, or corrosion on the roof or around vents or pipes that ventilate or drain work areas?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
Are Best Management Practices implemented to reduce or eliminate contamination of storm water from source areas at the facility?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Are Best Management Practices adequately maintained?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Are there significant changes that will have to be made to your SWPPP to correct any inadequacies that the plan may have to effectively control a discharge of contaminated storm water from your facility?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A

Comments:

* A new SPCC plan has been written for the site and is currently being finalized

* A new SWPPP is planned to be written for the site due to the old age of the original (1998).

Annual Facility Site Compliance Inspection Report (AFSCI)

For Storm Water Discharge Associated With Industrial Activity Under
 Wisconsin Pollutant Discharge Elimination System (WPDES) Permit

Form 3400-176 (R 6/05)

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Facility Information

Facility Name North Shop			
Street Address 6270 N. Hopkins	City Milwaukee	State WI	ZIP Code 53209
County Milwaukee	Facility Contact Person Derwin Pottinger		

Signature

This form must be signed by an official representative of the permitted facility, in accordance with s. 216.29(8), Wis. Adm. Code.

IF THIS FORM IS NOT SIGNED, OR IS FOUND TO BE INCOMPLETE, IT WILL BE RETURNED

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature of Authorized Representative 		Date Signed 11/16/16	
Type or Print Name Jack Sudar	Position Title Environmental Engineer		
Company Name Milwaukee County	Telephone Number 414-278-4870		
Mailing Address 633 W. Wisconsin Ave	City Milwaukee	State WI	ZIP Code 53203

The first level of storm water monitoring consists of a comprehensive annual facility site compliance inspection (AFSCI) to determine if your facility is operating in compliance with your Storm Water Pollution Prevention Plan (SWPPP). You should use the results of this inspection to determine the extent to which your SWPPP needs to be updated to prevent pollution from new source areas, as well as to correct any inadequacies that the plan may have in handling existing source areas. This first level of monitoring is addressed in Section III of this Annual Report.

The second level of storm water monitoring consists of quarterly visual observations of storm water leaving the site during runoff events caused by snow-melt or rainfall. This is a practical, low cost tool for identifying obvious contamination of storm water discharges, and can also help identify which practices are ineffective. The goal of quarterly inspections is to obtain results from a set of four inspections that are distributed as evenly as possible throughout the year and which depict runoff quality during each of the four seasons. This second level of monitoring is addressed in Section IV of this Annual Report.

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Annual Facility Site Compliance Inspection Report (AFSCI)

Form 3400-176 (R 6/05)

Page 2 of 4

Annual Facility Site Compliance Inspection

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Name of Person Conducting Inspection Jack Sudar, Tim Detzer	Inspection Date 11/16/16
Employer Milwaukee County	Telephone Number 414-278-4870

Your inspection should start with a review of your written SWPPP kept at your facility. The SWPPP should be amended if, through these inspections, you find that the provisions in your SWPPP are ineffective in controlling contaminated storm water from being discharged from your facility.

Has your SWPPP been updated to include current Non-Storm Water Discharge Evaluation results?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Has your SWPPP been amended for any new construction that would effect the site map or drainage conditions at the facility?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Has your SWPPP been amended for any changes in facility operations that could be identified as new source areas for contamination of storm water?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Are there any materials at the facility that are handled, stored, or disposed in a manner to allow exposure to storm water that are not currently addressed in your SWPPP?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
Are there any maintenance or material handling activities conducted outdoors that have not been addressed in your SWPPP?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
Are outside areas kept in a neat and orderly condition?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
Are regular housekeeping inspections made?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Do you see spots, pools, puddles, or other traces of oils, grease, or other chemicals on the ground?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Are particulates on the ground from industrial operations or processes being controlled?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Do you see leaking equipment, pipes or containers?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
Do drips, spills, or leaks occur when materials are being transferred from one source to another?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
Are drips or leaks from equipment or machinery being controlled?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Are cleanup procedures used for spilled solids?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Are absorbent materials (floor dry, kitty litter, etc.) regularly used in certain areas to absorb spills?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Can you find discoloration, residue, or corrosion on the roof or around vents or pipes that ventilate or drain work areas?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
Are Best Management Practices implemented to reduce or eliminate contamination of storm water from source areas at the facility?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Are Best Management Practices adequately maintained?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Are there significant changes that will have to be made to your SWPPP to correct any inadequacies that the plan may have to effectively control a discharge of contaminated storm water from your facility?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A

Comments:

- * A draft SWPPP was written in October 2016 due to recent construction at the site. This construction included 2 new catch basins with sediment sumps and oil traps.
- * During the inspection there was dirt in OF2 and OF3 yards that should be swept

- * OF3 did not have an erosion control fabric.
- * A CaCl tank between OF3 and OF2 had rusted metal debris which should be swept and removed
- * Catch basins at OF3 and OF2 should be vacuumed out to remove sediment

Annual Facility Site Compliance Inspection Report (AFSCI)
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 Wisconsin Pollutant Discharge Elimination System (WPDES) Permit
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Facility Information

Facility Name Milwaukee County			
Street Address 1001 W. Bluemond	City Milwaukee	State WI	ZIP Code 53203
County Milwaukee	Facility Contact Person John		
Signature			

This form must be signed by an official representative of the permitted facility, in accordance with s. 216.29(8), Wis. Adm. Code.

IF THIS FORM IS NOT SIGNED, OR IS FOUND TO BE INCOMPLETE, IT WILL BE RETURNED

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature of Authorized Representative		Date Signed 11/18/16	
Type or Print Name Jack Sudar	Position Title Environmental Engineer		
Company Name Milwaukee County	Telephone Number 414-278-4870		
Mailing Address 633 W. Wisconsin Ave	City Milwaukee	State WI	ZIP Code 53203

The first level of storm water monitoring consists of a comprehensive annual facility site compliance inspection (AFSCI) to determine if your facility is operating in compliance with your Storm Water Pollution Prevention Plan (SWPPP). You should use the results of this inspection to determine the extent to which your SWPPP needs to be updated to prevent pollution from new source areas, as well as to correct any inadequacies that the plan may have in handling existing source areas. This first level of monitoring is addressed in Section III of this Annual Report.

The second level of storm water monitoring consists of quarterly visual observations of storm water leaving the site during runoff events caused by snow-melt or rainfall. This is a practical, low cost tool for identifying obvious contamination of storm water discharges, and can also help identify which practices are ineffective. The goal of quarterly inspections is to obtain results from a set of four inspections that are distributed as evenly as possible throughout the year and which depict runoff quality during each of the four seasons. This second level of monitoring is addressed in Section IV of this Annual Report.

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Annual Facility Site Compliance Inspection Report (AFSCI)

Form 3400-176 (R 6/05)

Page 2 of 4

Annual Facility Site Compliance Inspection

The Annual Facility Site Compliance Inspection shall be adequate to verify that, your Storm Water Pollution Prevention Plan (SWPPP) remains current, potential pollution sources at your facility are identified, the facility site map and drainage map remain accurate, and Best Management Practices prescribed in your SWPPP are being implemented, properly operated, and adequately maintained.

Name of Person Conducting Inspection <i>Jack Sudar, Tim Dotzer, John Westrich</i>	Inspection Date <i>11/18/16</i>
Employer <i>Milwaukee County</i>	Telephone Number <i>414-278-4870</i>

Your inspection should start with a review of your written SWPPP kept at your facility. The SWPPP should be amended if, through these inspections, you find that the provisions in your SWPPP are ineffective in controlling contaminated storm water from being discharged from your facility

Has your SWPPP been updated to include current Non-Storm Water Discharge Evaluation results?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Has your SWPPP been amended for any new construction that would effect the site map or drainage conditions at the facility? <i>* SEE COMMENTS</i>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Has your SWPPP been amended for any changes in facility operations that could be identified as new source areas for contamination of storm water?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Are there any materials at the facility that are handled, stored, or disposed in a manner to allow exposure to storm water that are not currently addressed in your SWPPP?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
Are there any maintenance or material handling activities conducted outdoors that have not been addressed in your SWPPP?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
Are outside areas kept in a neat and orderly condition?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Are regular housekeeping inspections made?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Do you see spots, pools, puddles, or other traces of oils, grease, or other chemicals on the ground?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
Are particulates on the ground from industrial operations or processes being controlled?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Do you see leaking equipment, pipes or containers?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
Do drips, spills, or leaks occur when materials are being transferred from one source to another?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
Are drips or leaks from equipment or machinery being controlled?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Are cleanup procedures used for spilled solids?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Are absorbent materials (floor dry, kitty litter, etc.) regularly used in certain areas to absorb spills?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Can you find discoloration, residue, or corrosion on the roof or around vents or pipes that ventilate or drain work areas?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Are Best Management Practices implemented to reduce or eliminate contamination of storm water from source areas at the facility?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Are Best Management Practices adequately maintained?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Are there significant changes that will have to be made to your SWPPP to correct any inadequacies that the plan may have to effectively control a discharge of contaminated storm water from your facility?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A

Comments:

- * A new SWPPP is being finalized to account for recent DOT construction and site changes.
- * An erosion control fabric should be placed in the southeast parking lot over the inlet near material storage
- * All Zoo outfalls and storage areas were inspected. The entire facility was inspected this summer by Sigma as part of writing the new SWPPP

Annual Facility Site Compliance Inspection Report (AFSCI)
 For Storm Water Discharge Associated With Industrial Activity Under
 Wisconsin Pollutant Discharge Elimination System (WPDES) Permit
 Form 3400-176 (R 6/05) Page 1 of 4

Notice: This form is authorized by s. NR 216.29(2), Wis. Adm. Code. Submittal of a completed form to the Department is mandatory for industrial facilities covered under a tier 1 storm water general permit. Facilities covered under a tier 1 permit are not required to submit AFSCI reports after submittal of the second AFSCI report, unless so directed by the department. However, these inspections and quarterly visual inspections shall still be conducted and results shall be kept on site for department inspection. Facilities covered under a tier 2 storm water general, industry-specific general or individual permit shall keep the results of their AFSCI and quarterly visual inspections on site for department inspection. Failure to comply with these regulations may result in fines up to \$25,000 per day pursuant to s. 283.91, Wis. Stats. Personally identifiable information on this form may be used for other water quality program purposes.

Facility Information

Facility Name <i>Fleet - Main Shop</i>			
Street Address <i>10340 W. Watertown Plank Rd.</i>		City <i>Wauwatosa</i>	State <i>WI</i>
County <i>Milwaukee</i>		ZIP Code <i>53226</i>	
Facility Contact Person <i>Dan Goeden</i>		Signature	

This form must be signed by an official representative of the permitted facility, in accordance with s. 216.29(8), Wis. Adm. Code.

IF THIS FORM IS NOT SIGNED, OR IS FOUND TO BE INCOMPLETE, IT WILL BE RETURNED

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature of Authorized Representative <i>Jack Sudar</i>		Date Signed <i>11/22/16</i>	
Type or Print Name <i>Jack Sudar</i>		Position Title <i>Environmental Engineer</i>	
Company Name <i>Milwaukee County</i>		Telephone Number <i>414-278-4870</i>	
Mailing Address <i>633 W Wisconsin Ave</i>		City <i>Milwaukee</i>	State <i>WI</i>
		ZIP Code <i>53203</i>	

The first level of storm water monitoring consists of a comprehensive annual facility site compliance inspection (AFSCI) to determine if your facility is operating in compliance with your Storm Water Pollution Prevention Plan (SWPPP). You should use the results of this inspection to determine the extent to which your SWPPP needs to be updated to prevent pollution from new source areas, as well as to correct any inadequacies that the plan may have in handling existing source areas. This first level of monitoring is addressed in Section III of this Annual Report.

The second level of storm water monitoring consists of quarterly visual observations of storm water leaving the site during runoff events caused by snow-melt or rainfall. This is a practical, low cost tool for identifying obvious contamination of storm water discharges, and can also help identify which practices are ineffective. The goal of quarterly inspections is to obtain results from a set of four inspections that are distributed as evenly as possible throughout the year and which depict runoff quality during each of the four seasons. This second level of monitoring is addressed in Section IV of this Annual Report.

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Annual Facility Site Compliance Inspection Report (AFSCI)

Form 3400-176 (R 6/05)

Page 2 of 4

Annual Facility Site Compliance Inspection

The Annual Facility Site Compliance Inspection shall be adequate to verify that; your Storm Water Pollution Prevention Plan (SWPPP) remains current, potential pollution sources at your facility are identified, the facility site map and drainage map remain accurate, and Best Management Practices prescribed in your SWPPP are being implemented, properly operated, and adequately maintained.

Name of Person Conducting Inspection Jack Suda, Tim Detzer, Dan Goeden	Inspection Date 11/22/16
Employer Milwaukee County	Telephone Number 414 278 4870

Your inspection should start with a review of your written SWPPP kept at your facility. The SWPPP should be amended if, through these inspections, you find that the provisions in your SWPPP are ineffective in controlling contaminated storm water from being discharged from your facility.

Has your SWPPP been updated to include current Non-Storm Water Discharge Evaluation results?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Has your SWPPP been amended for any new construction that would effect the site map or drainage conditions at the facility? <i>* New SWPPP written in 2016</i>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Has your SWPPP been amended for any changes in facility operations that could be identified as new source areas for contamination of storm water?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Are there any materials at the facility that are handled, stored, or disposed in a manner to allow exposure to storm water that are not currently addressed in your SWPPP?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
Are there any maintenance or material handling activities conducted outdoors that have not been addressed in your SWPPP?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
Are outside areas kept in a neat and orderly condition?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Are regular housekeeping inspections made?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Do you see spots, pools, puddles, or other traces of oils, grease, or other chemicals on the ground?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
Are particulates on the ground from industrial operations or processes being controlled?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Do you see leaking equipment, pipes or containers?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
Do drips, spills, or leaks occur when materials are being transferred from one source to another?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
Are drips or leaks from equipment or machinery being controlled?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Are cleanup procedures used for spilled solids?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Are absorbent materials (floor dry, kitty litter, etc.) regularly used in certain areas to absorb spills?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Can you find discoloration, residue, or corrosion on the roof or around vents or pipes that ventilate or drain work areas?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
Are Best Management Practices implemented to reduce or eliminate contamination of storm water from source areas at the facility?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Are Best Management Practices adequately maintained?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Are there significant changes that will have to be made to your SWPPP to correct any inadequacies that the plan may have to effectively control a discharge of contaminated storm water from your facility?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A

Comments:

- * Inlet downslope of the brine containment is not graded properly along the curb. There is a low spot that ponds and is accumulating sediment.
- * The old wash pit is being filled with concrete.
- * The site is kept in an orderly and clean condition.
- * oil/water separator being installed for sanitary sewer.

Annual Facility Site Compliance Inspection Report (AFSCI)
 For Storm Water Discharge Associated With Industrial Activity Under
 Wisconsin Pollutant Discharge Elimination System (WPDES) Permit
 Form 3400-176 (R 6/05) Page 1 of 4

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Facility Information

Facility Name <i>McKinley Marina</i>			
Street Address <i>1750 N. Lincoln Memorial Dr</i>	City <i>Milwaukee</i>	State <i>WI</i>	ZIP Code <i>53202</i>
County <i>Milwaukee</i>	Facility Contact Person <i>Eric Lesch</i>		

Signature

This form must be signed by an official representative of the permitted facility, in accordance with s. 216.29(8), Wis. Adm. Code.

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I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature of Authorized Representative <i>Jack Sudar</i>		Date Signed <i>11/16/16</i>	
Type or Print Name <i>Jack Sudar</i>	Position Title <i>Environmental Engineer</i>		
Company Name <i>Milwaukee County</i>	Telephone Number <i>414-278-4870</i>		
Mailing Address <i>633 W Wisconsin Ave</i>	City <i>Milwaukee</i>	State <i>WI</i>	ZIP Code <i>53203</i>

The first level of storm water monitoring consists of a comprehensive annual facility site compliance inspection (AFSCI) to determine if your facility is operating in compliance with your Storm Water Pollution Prevention Plan (SWPPP). You should use the results of this inspection to determine the extent to which your SWPPP needs to be updated to prevent pollution from new source areas, as well as to correct any inadequacies that the plan may have in handling existing source areas. This first level of monitoring is addressed in Section III of this Annual Report.

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Annual Facility Site Compliance Inspection Report (AFSCI)

Form 3400-176 (R 6/05)

Page 2 of 4

Annual Facility Site Compliance Inspection

The Annual Facility Site Compliance Inspection shall be adequate to verify that: your Storm Water Pollution Prevention Plan (SWPPP) remains current, potential pollution sources at your facility are identified, the facility site map and drainage map remain accurate, and Best Management Practices prescribed in your SWPPP are being implemented, properly operated, and adequately maintained.

Name of Person Conducting Inspection Jock Suder, Tim Detzer, Eric Lesch	Inspection Date 11/15/16
Employer Milwaukee County	Telephone Number 414 278 4870

Your inspection should start with a review of your written SWPPP kept at your facility. The SWPPP should be amended if, through these inspections, you find that the provisions in your SWPPP are ineffective in controlling contaminated storm water from being discharged from your facility.

Has your SWPPP been updated to include current Non-Storm Water Discharge Evaluation results?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Has your SWPPP been amended for any new construction that would effect the site map or drainage conditions at the facility?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Has your SWPPP been amended for any changes in facility operations that could be identified as new source areas for contamination of storm water?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Are there any materials at the facility that are handled, stored, or disposed in a manner to allow exposure to storm water that are not currently addressed in your SWPPP?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
Are there any maintenance or material handling activities conducted outdoors that have not been addressed in your SWPPP?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
Are outside areas kept in a neat and orderly condition?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Are regular housekeeping inspections made?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Do you see spots, pools, puddles, or other traces of oils, grease, or other chemicals on the ground?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
Are particulates on the ground from industrial operations or processes being controlled?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Do you see leaking equipment, pipes or containers?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
Do drips, spills, or leaks occur when materials are being transferred from one source to another?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
Are drips or leaks from equipment or machinery being controlled?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Are cleanup procedures used for spilled solids?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Are absorbent materials (floor dry, kitty litter, etc.) regularly used in certain areas to absorb spills?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Can you find discoloration, residue, or corrosion on the roof or around vents or pipes that ventilate or drain work areas?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Are Best Management Practices implemented to reduce or eliminate contamination of storm water from source areas at the facility?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Are Best Management Practices adequately maintained?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Are there significant changes that will have to made to your SWPPP to correct any inadequacies that the plan may have to effectively control a discharge of contaminated storm water from your facility?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A

Comments:

* Site was in good condition. There are plans for a large \$20,000,000 project to upgrade the Marina which would effect the SWPPP, though a timeline for that is unclear.

* A few non-technical revisions will be made to the plan such as contact information and name of contractors.

This form is for your own use and should be kept as part of your Storm Water Pollution Prevention Plan. It does not have to be submitted to the Department unless requested. If false information from quarterly visual inspections is reported to the Department, you could be subject to penalties up to \$10,000 pursuant to s. 283.91(4), Wis. Stats.

Use one form per outfall.

Quarterly Visual Inspections at each storm water discharge outfall on your site can be a valuable assessment tool and are required by the Tier 1 and Tier 2 Industrial Storm Water General Permits. This inspection should be performed when sufficient runoff occurs during daylight hours. Try to make observations within the first 30 minutes after runoff begins discharging from the outfall, or as soon as practical, but no later than 60 minutes. If you find visible pollution, note the probable source and list any possible Best Management Practices that could be used to reduce or eliminate the problem.

Make any necessary changes to your Storm Water Pollution Prevention Plan as needed.

Facility Name Timmerman Airport			
Street Address 9305 W. Appleton Ave		City Milwaukee	State WI
		ZIP Code 53225	
Name of Person Conducting Inspection Jack Sudar		Inspection Date 11/23/16	
Employer Milwaukee County		Telephone Number 414-278-4870	
Outfall Number (make reference to site map) SEE BELOW	Description of Outfall (e.g., ditch, concrete pipe, grassed swale, etc.)		
Time of Rainfall Event	Time of Visual Inspection 10:20 AM	Optional: Amount of Rainfall at the Time of Observation (nearest tenth of an inch)	

Describe your observations. An easy way to conduct this inspection is to use a glass jar to collect a sample of the storm water being discharged from the facility and visually inspect the water. Include any observations of color, odor, turbidity, floating solids, foam, oil sheen or any other visual indicators of storm water pollution and the probable sources of any observed storm water contamination.

Color:	<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Red	<input type="checkbox"/> Yellow	<input type="checkbox"/> Brown	<input type="checkbox"/> Other:
Odor:	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Musty	<input type="checkbox"/> Sewage	<input type="checkbox"/> Rotten Egg	<input type="checkbox"/> Other:
Clarity:	<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Cloudy	<input type="checkbox"/> Opaque	<input type="checkbox"/> Suspended Solids	<input type="checkbox"/> Other:
Floatables:	<input type="checkbox"/> None	<input checked="" type="checkbox"/> Foam	<input type="checkbox"/> Garbage	<input type="checkbox"/> Oily Film	<input type="checkbox"/> Other:
Deposits / Stains:	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Oily	<input type="checkbox"/> Sludge	<input type="checkbox"/> Sediments	<input type="checkbox"/> Other:

} SEE BELOW

Comments:

#1 - Some foam bubbles that looked like soapy water

Hampton OF - Some foam bubbles that looked like soapy water. Upstream man holes were investigated, though no source was discovered. Two timmerman maintenance staff were ask about a potential source, though they did not know of any.

Tank Area - No water ponding at time of inspection

This outfall could not be evaluated during this quarter due to the following reason:

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Use one form per outfall.

Quarterly Visual Inspections at each storm water discharge outfall on your site can be a valuable assessment tool and are required by the Tier 1 and Tier 2 Industrial Storm Water General Permits. This inspection should be performed when sufficient runoff occurs during daylight hours. Try to make observations within the first 30 minutes after runoff begins discharging from the outfall, or as soon as practical, but no later than 60 minutes. If you find visible pollution, note the probable source and list any possible Best Management Practices that could be used to reduce or eliminate the problem.

Make any necessary changes to your Storm Water Pollution Prevention Plan as needed.

Facility Name Thummerman Airport			
Street Address 9305 W. Appleton Ave		City Milwaukee	State WI
		ZIP Code 53225	
Name of Person Conducting Inspection Jack Sudar		Inspection Date 8/19/16	
Employer Milwaukee County		Telephone Number 414-278-4870	
Outfall Number (make reference to site map) SEE BELOW		Description of Outfall (e.g., ditch, concrete pipe, grassed swale, etc.)	
Time of Rainfall Event	Time of Visual Inspection 9:30 AM	Optional: Amount of Rainfall at the Time of Observation (nearest tenth of an inch)	

Describe your observations. An easy way to conduct this inspection is to use a glass jar to collect a sample of the storm water being discharged from the facility and visually inspect the water. Include any observations of color, odor, turbidity, floating solids, foam, oil sheen or any other visual indicators of storm water pollution and the probable sources of any observed storm water contamination.

Color:	<input type="checkbox"/> Clear	<input type="checkbox"/> Red	<input type="checkbox"/> Yellow	<input type="checkbox"/> Brown	<input type="checkbox"/> Other:
Odor:	<input type="checkbox"/> None	<input type="checkbox"/> Musty	<input type="checkbox"/> Sewage	<input type="checkbox"/> Rotten Egg	<input type="checkbox"/> Other:
Clarity:	<input type="checkbox"/> Clear	<input type="checkbox"/> Cloudy	<input type="checkbox"/> Opaque	<input type="checkbox"/> Suspended Solids	<input type="checkbox"/> Other:
Floatables:	<input type="checkbox"/> None	<input type="checkbox"/> Foam	<input type="checkbox"/> Garbage	<input type="checkbox"/> Oily Film	<input type="checkbox"/> Other:
Deposits / Stains:	<input type="checkbox"/> None	<input type="checkbox"/> Oily	<input type="checkbox"/> Sludge	<input type="checkbox"/> Sediments	<input type="checkbox"/> Other:

SEE BELOW

Comments:

#1 - looks good; clear flow
 #2 - looks good, clear flow
 OF - looks good; clear flow
 Tank Area - catch basin valve closed as intended

This outfall could not be evaluated during this quarter due to the following reason:

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Use one form per outfall.

Quarterly Visual Inspections at each storm water discharge outfall on your site can be a valuable assessment tool and are required by the Tier 1 and Tier 2 Industrial Storm Water General Permits. This inspection should be performed when sufficient runoff occurs during daylight hours. Try to make observations within the first 30 minutes after runoff begins discharging from the outfall, or as soon as practical, but no later than 60 minutes. If you find visible pollution, note the probable source and list any possible Best Management Practices that could be used to reduce or eliminate the problem.

Make any necessary changes to your Storm Water Pollution Prevention Plan as needed.

Facility Name Timmerman Airport				
Street Address 9305 W. Appleton Ave		City Milwaukee	State WI	ZIP Code 53225
Name of Person Conducting Inspection Jack Sudar			Inspection Date 6/23/16 6/23/16	
Employer Milwaukee County			Telephone Number 414-278-4870	
Outfall Number (make reference to site map) SEB Below		Description of Outfall (e.g., ditch, concrete pipe, grassed swale, etc.)		
Time of Rainfall Event -	Time of Visual Inspection 10:45	Optional: Amount of Rainfall at the Time of Observation (nearest tenth of an inch)		

Describe your observations. An easy way to conduct this inspection is to use a glass jar to collect a sample of the storm water being discharged from the facility and visually inspect the water. Include any observations of color, odor, turbidity, floating solids, foam, oil sheen or any other visual indicators of storm water pollution and the probable sources of any observed storm water contamination.

Color:	<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Red	<input type="checkbox"/> Yellow	<input type="checkbox"/> Brown	<input type="checkbox"/> Other:
Odor:	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Musty	<input type="checkbox"/> Sewage	<input type="checkbox"/> Rotten Egg	<input type="checkbox"/> Other:
Clarity:	<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Cloudy	<input type="checkbox"/> Opaque	<input type="checkbox"/> Suspended Solids	<input type="checkbox"/> Other:
Floating:	<input type="checkbox"/> None	<input checked="" type="checkbox"/> Foam	<input type="checkbox"/> Garbage	<input type="checkbox"/> Oily Film	<input type="checkbox"/> Other:
Deposits / Stains:	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Oily	<input type="checkbox"/> Sludge	<input type="checkbox"/> Sediments	<input type="checkbox"/> Other:

Comments:
 #1 - looks good; clear flow; some bubbles on surface
 #2 - looks good; clear flow
 OF - clear flow with bubbles on surface

This outfall could not be evaluated during this quarter due to the following reason:

This form is for your own use and should be kept as part of your Storm Water Pollution Prevention Plan. It does not have to be submitted to the Department unless requested. If false information from quarterly visual inspections is reported to the Department, you could be subject to penalties up to \$10,000 pursuant to s. 283.91(4), Wis. Stats.

Use one form per outfall.

Quarterly Visual Inspections at each storm water discharge outfall on your site can be a valuable assessment tool and are required by the Tier 1 and Tier 2 Industrial Storm Water General Permits. This inspection should be performed when sufficient runoff occurs during daylight hours. Try to make observations within the first 30 minutes after runoff begins discharging from the outfall, or as soon as practical, but no later than 60 minutes. If you find visible pollution, note the probable source and list any possible Best Management Practices that could be used to reduce or eliminate the problem.

Make any necessary changes to your Storm Water Pollution Prevention Plan as needed.

Facility Name Timmerman Airport			
Street Address 9305 W. Appleton Ave		City Milwaukee	State WI
		ZIP Code 53225	
Name of Person Conducting Inspection Jack Suder		Inspection Date 3/23/16	
Employer Milwaukee County		Telephone Number 414-278-4870	
Outfall Number (make reference to site map) . SEE BELOW	Description of Outfall (e.g., ditch, concrete pipe, grassed swale, etc.)		
Time of Rainfall Event	Time of Visual Inspection 2:40 PM	Optional: Amount of Rainfall at the Time of Observation (nearest tenth of an inch)	

Describe your observations. An easy way to conduct this inspection is to use a glass jar to collect a sample of the storm water being discharged from the facility and visually inspect the water. Include any observations of color, odor, turbidity, floating solids, foam, oil sheen or any other visual indicators of storm water pollution and the probable sources of any observed storm water contamination.

Color:	<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Red	<input type="checkbox"/> Yellow	<input type="checkbox"/> Brown	<input type="checkbox"/> Other:
Odor:	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Musty	<input type="checkbox"/> Sewage	<input type="checkbox"/> Rotten Egg	<input type="checkbox"/> Other:
Clarity:	<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Cloudy	<input type="checkbox"/> Opaque	<input type="checkbox"/> Suspended Solids	<input type="checkbox"/> Other:
Floatables:	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Foam	<input type="checkbox"/> Garbage	<input type="checkbox"/> Oily Film	<input type="checkbox"/> Other:
Deposits / Stains:	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Oily	<input type="checkbox"/> Sludge	<input type="checkbox"/> Sediments	<input type="checkbox"/> Other:

Comments:

#1 - looks good, clear flow
 #2 - looks good, clear flow
 OF - looks good; clear flow
 CB near ASTs - This hatch/valve was open, though should be closed

This outfall could not be evaluated during this quarter due to the following reason:

This form is for your own use and should be kept as part of your Storm Water Pollution Prevention Plan. It does not have to be submitted to the Department unless requested. If false information from quarterly visual inspections is reported to the Department, you could be subject to penalties up to \$10,000 pursuant to s. 283.91(4), Wis. Stats.

Use one form per outfall.

Quarterly Visual Inspections at each storm water discharge outfall on your site can be a valuable assessment tool and are required by the Tier 1 and Tier 2 Industrial Storm Water General Permits. This inspection should be performed when sufficient runoff occurs during daylight hours. Try to make observations within the first 30 minutes after runoff begins discharging from the outfall, or as soon as practical, but no later than 60 minutes. If you find visible pollution, note the probable source and list any possible Best Management Practices that could be used to reduce or eliminate the problem.

Make any necessary changes to your Storm Water Pollution Prevention Plan as needed.

Facility Name North Shop				
Street Address 6270 N. Hopkins St		City Milwaukee	State WI	ZIP Code 53209
Name of Person Conducting Inspection Jack Sudar			Inspection Date 11/23/16	
Employer Milwaukee County			Telephone Number 414-278-4870	
Outfall Number (make reference to site map) SEE BELOW		Description of Outfall (e.g., ditch, concrete pipe, grassed swale, etc.)		
Time of Rainfall Event	Time of Visual Inspection 9:50 AM	Optional: Amount of Rainfall at the Time of Observation (nearest tenth of an inch)		

Describe your observations. An easy way to conduct this inspection is to use a glass jar to collect a sample of the storm water being discharged from the facility and visually inspect the water. Include any observations of color, odor, turbidity, floating solids, foam, oil sheen or any other visual indicators of storm water pollution and the probable sources of any observed storm water contamination.

Color:	<input type="checkbox"/> Clear	<input type="checkbox"/> Red	<input type="checkbox"/> Yellow	<input type="checkbox"/> Brown	<input type="checkbox"/> Other:
Odor:	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Musty	<input type="checkbox"/> Sewage	<input type="checkbox"/> Rotten Egg	<input type="checkbox"/> Other:
Clarity:	<input type="checkbox"/> Clear	<input checked="" type="checkbox"/> Cloudy	<input type="checkbox"/> Opaque	<input type="checkbox"/> Suspended Solids	<input type="checkbox"/> Other: SEE BELOW
Floating:	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Foam	<input type="checkbox"/> Garbage	<input type="checkbox"/> Oily Film	<input type="checkbox"/> Other:
Deposits / Stains:	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Oily	<input type="checkbox"/> Sludge	<input type="checkbox"/> Sediments	<input type="checkbox"/> Other:

Comments:

- #1 - clear flow
- #2 - slightly cloudy flow
- #3 - cloudy flow. Catch basin should have erosion control fabric installed.

This outfall could not be evaluated during this quarter due to the following reason:

This form is for your own use and should be kept as part of your Storm Water Pollution Prevention Plan. It does not have to be submitted to the Department unless requested. If false information from quarterly visual inspections is reported to the Department, you could be subject to penalties up to \$10,000 pursuant to s. 283.91(4), Wis. Stats.

Use one form per outfall.

Quarterly Visual Inspections at each storm water discharge outfall on your site can be a valuable assessment tool and are required by the Tier 1 and Tier 2 Industrial Storm Water General Permits. This inspection should be performed when sufficient runoff occurs during daylight hours. Try to make observations within the first 30 minutes after runoff begins discharging from the outfall, or as soon as practical, but no later than 60 minutes. If you find visible pollution, note the probable source and list any possible Best Management Practices that could be used to reduce or eliminate the problem.

Make any necessary changes to your Storm Water Pollution Prevention Plan as needed.

Facility Name North Shop			
Street Address 6270 N. Hopkins St	City Milwaukee	State WI	ZIP Code 53209
Name of Person Conducting Inspection Jock Sudar		Inspection Date 8/3/16	
Employer Milwaukee County		Telephone Number 414-278-4870	
Outfall Number (make reference to site map) .SEE BELOW	Description of Outfall (e.g., ditch, concrete pipe, grassed swale, etc.)		
Time of Rainfall Event -	Time of Visual Inspection 2:15	Optional: Amount of Rainfall at the Time of Observation (nearest tenth of an inch)	

Describe your observations. An easy way to conduct this inspection is to use a glass jar to collect a sample of the storm water being discharged from the facility and visually inspect the water. Include any observations of color, odor, turbidity, floating solids, foam, oil sheen or any other visual indicators of storm water pollution and the probable sources of any observed storm water contamination.

Color:	<input type="checkbox"/> Clear	<input type="checkbox"/> Red	<input type="checkbox"/> Yellow	<input type="checkbox"/> Brown	<input type="checkbox"/> Other:
Odor:	<input type="checkbox"/> None	<input type="checkbox"/> Musty	<input type="checkbox"/> Sewage	<input type="checkbox"/> Rotten Egg	<input type="checkbox"/> Other:
Clarity:	<input type="checkbox"/> Clear	<input type="checkbox"/> Cloudy	<input type="checkbox"/> Opaque	<input type="checkbox"/> Suspended Solids	<input type="checkbox"/> Other: } SEE BELOW
Floatables:	<input type="checkbox"/> None	<input type="checkbox"/> Foam	<input type="checkbox"/> Garbage	<input type="checkbox"/> Oily Film	<input type="checkbox"/> Other:
Deposits / Stains:	<input type="checkbox"/> None	<input type="checkbox"/> Oily	<input type="checkbox"/> Sludge	<input type="checkbox"/> Sediments	<input type="checkbox"/> Other:

Comments:

#1 - looks good, clear flow
 #2 - slightly cloudy flow
 #3 - clear flow; some floatables observed in the catch basins.

This outfall could not be evaluated during this quarter due to the following reason:

- New catch basins @ #1 + #2 have sediment sumps.

This form is for your own use and should be kept as part of your Storm Water Pollution Prevention Plan. It does not have to be submitted to the Department unless requested. If false information from quarterly visual inspections is reported to the Department, you could be subject to penalties up to \$10,000 pursuant to s. 283.91(4), Wis. Stats.

Use one form per outfall.

Quarterly Visual Inspections at each storm water discharge outfall on your site can be a valuable assessment tool and are required by the Tier 1 and Tier 2 Industrial Storm Water General Permits. This inspection should be performed when sufficient runoff occurs during daylight hours. Try to make observations within the first 30 minutes after runoff begins discharging from the outfall, or as soon as practical, but no later than 60 minutes. If you find visible pollution, note the probable source and list any possible Best Management Practices that could be used to reduce or eliminate the problem.

Make any necessary changes to your Storm Water Pollution Prevention Plan as needed.

Facility Name North Shop			
Street Address 6270 N. Hopkins St		City Milwaukee	State WI
		ZIP Code 53209	
Name of Person Conducting Inspection Jack Sudar			Inspection Date 6/23/18
Employer Milwaukee County			Telephone Number 414-278-4870
Outfall Number (make reference to site map) SEE BELOW	Description of Outfall (e.g., ditch, concrete pipe, grassed swale, etc.)		
Time of Rainfall Event	Time of Visual Inspection 10:00 AM	Optional: Amount of Rainfall at the Time of Observation (nearest tenth of an inch)	

Describe your observations. An easy way to conduct this inspection is to use a glass jar to collect a sample of the storm water being discharged from the facility and visually inspect the water. Include any observations of color, odor, turbidity, floating solids, foam, oil sheen or any other visual indicators of storm water pollution and the probable sources of any observed storm water contamination.

Color:	<input type="checkbox"/> Clear	<input type="checkbox"/> Red	<input type="checkbox"/> Yellow	<input type="checkbox"/> Brown	<input type="checkbox"/> Other:
Odor:	<input type="checkbox"/> None	<input type="checkbox"/> Musty	<input type="checkbox"/> Sewage	<input type="checkbox"/> Rotten Egg	<input type="checkbox"/> Other:
Clarity:	<input type="checkbox"/> Clear	<input type="checkbox"/> Cloudy	<input type="checkbox"/> Opaque	<input type="checkbox"/> Suspended Solids	<input type="checkbox"/> Other:
Floatables:	<input type="checkbox"/> None	<input type="checkbox"/> Foam	<input type="checkbox"/> Garbage	<input type="checkbox"/> Oily Film	<input type="checkbox"/> Other:
Deposits / Stains:	<input type="checkbox"/> None	<input type="checkbox"/> Oily	<input type="checkbox"/> Sludge	<input type="checkbox"/> Sediments	<input type="checkbox"/> Other:

SEE BELOW

Comments:

#1 - looks good. clear flow

#2 - New catch basin with trap looks good!
opaque flow. 9.5" to bottom from rim.

#3 - New catch basin with trap looks good!
slightly cloudy flow. 10.5" to bottom from rim.

This outfall could not be evaluated during this quarter due to the following reason:

This form is for your own use and should be kept as part of your Storm Water Pollution Prevention Plan. It does not have to be submitted to the Department unless requested. If false information from quarterly visual inspections is reported to the Department, you could be subject to penalties up to \$10,000 pursuant to s. 283.91(4), Wis. Stats.

Use one form per outfall.

Quarterly Visual Inspections at each storm water discharge outfall on your site can be a valuable assessment tool and are required by the Tier 1 and Tier 2 Industrial Storm Water General Permits. This inspection should be performed when sufficient runoff occurs during daylight hours. Try to make observations within the first 30 minutes after runoff begins discharging from the outfall, or as soon as practical, but no later than 60 minutes. If you find visible pollution, note the probable source and list any possible Best Management Practices that could be used to reduce or eliminate the problem.

Make any necessary changes to your Storm Water Pollution Prevention Plan as needed.

Facility Name Milwaukee County Zoo				
Street Address 1001 W. Bluemound Ave		City Milwaukee	State WI	ZIP Code 53226
Name of Person Conducting Inspection Jock Sudar			Inspection Date 8/19/16	
Employer Milwaukee County			Telephone Number 414-278-4870	
Outfall Number (make reference to site map) SEE BELOW		Description of Outfall (e.g., ditch, concrete pipe, grassed swale, etc.)		
Time of Rainfall Event	Time of Visual Inspection 11:15 AM	Optional: Amount of Rainfall at the Time of Observation (nearest tenth of an inch)		

Describe your observations. An easy way to conduct this inspection is to use a glass jar to collect a sample of the storm water being discharged from the facility and visually inspect the water. Include any observations of color, odor, turbidity, floating solids, foam, oil sheen or any other visual indicators of storm water pollution and the probable sources of any observed storm water contamination.

Color:	<input type="checkbox"/> Clear	<input type="checkbox"/> Red	<input type="checkbox"/> Yellow	<input type="checkbox"/> Brown	<input type="checkbox"/> Other:
Odor:	<input type="checkbox"/> None	<input type="checkbox"/> Musty	<input type="checkbox"/> Sewage	<input type="checkbox"/> Rotten Egg	<input type="checkbox"/> Other:
Clarity:	<input type="checkbox"/> Clear	<input type="checkbox"/> Cloudy	<input type="checkbox"/> Opaque	<input type="checkbox"/> Suspended Solids	<input type="checkbox"/> Other:
Floatables:	<input type="checkbox"/> None	<input type="checkbox"/> Foam	<input type="checkbox"/> Garbage	<input type="checkbox"/> Oily Film	<input type="checkbox"/> Other:
Deposits / Stains:	<input type="checkbox"/> None	<input type="checkbox"/> Oily	<input type="checkbox"/> Sludge	<input type="checkbox"/> Sediments	<input type="checkbox"/> Other:

SEE BELOW

Comments:

#1 - cloudy

#2 - slightly cloudy with erosion control fabric.

parking lot - clear flow; most piles are gone though there is a pile of decomposing material

This outfall could not be evaluated during this quarter due to the following reason:

This form is for your own use and should be kept as part of your Storm Water Pollution Prevention Plan. It does not have to be submitted to the Department unless requested. If false information from quarterly visual inspections is reported to the Department, you could be subject to penalties up to \$10,000 pursuant to s. 283.91(4), Wis. Stats.

Use one form per outfall.

Quarterly Visual Inspections at each storm water discharge outfall on your site can be a valuable assessment tool and are required by the Tier 1 and Tier 2 Industrial Storm Water General Permits. This inspection should be performed when sufficient runoff occurs during daylight hours. Try to make observations within the first 30 minutes after runoff begins discharging from the outfall, or as soon as practical, but no later than 60 minutes. If you find visible pollution, note the probable source and list any possible Best Management Practices that could be used to reduce or eliminate the problem.

Make any necessary changes to your Storm Water Pollution Prevention Plan as needed.

Facility Name <u>Milwaukee County Zoo</u>			
Street Address <u>1001 W. Bluemound Ave</u>		City <u>Milwaukee</u>	State <u>WI</u>
Name of Person Conducting Inspection <u>Jack Sudar</u>		Inspection Date <u>3/23/16</u>	
Employer <u>Milwaukee County</u>		Telephone Number <u>414-278-4870</u>	
Outfall Number (make reference to site map) <u>SEE BELOW</u>	Description of Outfall (e.g., ditch, concrete pipe, grassed swale, etc.) <u>—</u>		
Time of Rainfall Event <u>—</u>	Time of Visual Inspection <u>3:45 PM</u>	Optional: Amount of Rainfall at the Time of Observation (nearest tenth of an inch) <u>—</u>	

Describe your observations. An easy way to conduct this inspection is to use a glass jar to collect a sample of the storm water being discharged from the facility and visually inspect the water. Include any observations of color, odor, turbidity, floating solids, foam, oil sheen or any other visual indicators of storm water pollution and the probable sources of any observed storm water contamination.

Color:	<input type="checkbox"/> Clear	<input type="checkbox"/> Red	<input type="checkbox"/> Yellow	<input type="checkbox"/> Brown	<input type="checkbox"/> Other:
Odor:	<input type="checkbox"/> None	<input type="checkbox"/> Musty	<input type="checkbox"/> Sewage	<input type="checkbox"/> Rotten Egg	<input type="checkbox"/> Other:
Clarity:	<input type="checkbox"/> Clear	<input type="checkbox"/> Cloudy	<input type="checkbox"/> Opaque	<input type="checkbox"/> Suspended Solids	<input type="checkbox"/> Other:
Floatables:	<input type="checkbox"/> None	<input type="checkbox"/> Foam	<input type="checkbox"/> Garbage	<input type="checkbox"/> Oily Film	<input type="checkbox"/> Other:
Deposits / Stains:	<input type="checkbox"/> None	<input type="checkbox"/> Oily	<input type="checkbox"/> Sludge	<input type="checkbox"/> Sediments	<input type="checkbox"/> Other:

} SEE BELOW

Comments:

#1 - mostly clear flow, though slightly cloudy.
#2 - clear flow with erosion control fabric parking lot - clear flow, though there were many piles of stored woodchips, plant debris, ect.

This outfall could not be evaluated during this quarter due to the following reason:

This form is for your own use and should be kept as part of your Storm Water Pollution Prevention Plan. It does not have to be submitted to the Department unless requested. If false information from quarterly visual inspections is reported to the Department, you could be subject to penalties up to \$10,000 pursuant to s. 283.91(4), Wis. Stats.

Use one form per outfall.

Quarterly Visual Inspections at each storm water discharge outfall on your site can be a valuable assessment tool and are required by the Tier 1 and Tier 2 Industrial Storm Water General Permits. This inspection should be performed when sufficient runoff occurs during daylight hours. Try to make observations within the first 30 minutes after runoff begins discharging from the outfall, or as soon as practical, but no later than 60 minutes. If you find visible pollution, note the probable source and list any possible Best Management Practices that could be used to reduce or eliminate the problem.

Make any necessary changes to your Storm Water Pollution Prevention Plan as needed.

Facility Name <u>Fleet Maintenance - Main Shop</u>			
Street Address <u>10340 W. Watertown Plk Rd</u>		City <u>Milwaukee</u>	State <u>WI</u>
		ZIP Code <u>53226</u>	
Name of Person Conducting Inspection <u>Jack Sudar + Michael Brill</u>		Inspection Date <u>12/20/16</u>	
Employer <u>Milwaukee County</u>		Telephone Number <u>414-278-4870</u>	
Outfall Number (make reference to site map) <u>SEE BELOW</u>	Description of Outfall (e.g., ditch, concrete pipe, grassed swale, etc.)		
Time of Rainfall Event <u>Snow Melt</u>	Time of Visual Inspection <u>1:30 PM</u>	Optional: Amount of Rainfall at the Time of Observation (nearest tenth of an inch)	

Describe your observations. An easy way to conduct this inspection is to use a glass jar to collect a sample of the storm water being discharged from the facility and visually inspect the water. Include any observations of color, odor, turbidity, floating solids, foam, oil sheen or any other visual indicators of storm water pollution and the probable sources of any observed storm water contamination.

Color:	<input type="checkbox"/> Clear	<input type="checkbox"/> Red	<input type="checkbox"/> Yellow	<input type="checkbox"/> Brown	<input type="checkbox"/> Other:
Odor:	<input type="checkbox"/> None	<input type="checkbox"/> Musty	<input type="checkbox"/> Sewage	<input type="checkbox"/> Rotten Egg	<input type="checkbox"/> Other:
Clarity:	<input type="checkbox"/> Clear	<input type="checkbox"/> Cloudy	<input type="checkbox"/> Opaque	<input type="checkbox"/> Suspended Solids	<input type="checkbox"/> Other:
Floatables:	<input type="checkbox"/> None	<input type="checkbox"/> Foam	<input type="checkbox"/> Garbage	<input type="checkbox"/> Oily Film	<input type="checkbox"/> Other:
Deposits / Stains:	<input type="checkbox"/> None	<input type="checkbox"/> Oily	<input type="checkbox"/> Sludge	<input type="checkbox"/> Sediments	<input type="checkbox"/> Other:

} SEE BELOW

Comments:

#1 - Small amount of clear flow

#2 - No flow

#3 - Small amount of clear flow

#4 - Small amount of clear flow

This outfall could not be evaluated during this quarter due to the following reason:

This form is for your own use and should be kept as part of your Storm Water Pollution Prevention Plan. It does not have to be submitted to the Department unless requested. If false information from quarterly visual inspections is reported to the Department, you could be subject to penalties up to \$10,000 pursuant to s. 283.91(4), Wis. Stats.

Use one form per outfall.

Quarterly Visual Inspections at each storm water discharge outfall on your site can be a valuable assessment tool and are required by the Tier 1 and Tier 2 Industrial Storm Water General Permits. This inspection should be performed when sufficient runoff occurs during daylight hours. Try to make observations within the first 30 minutes after runoff begins discharging from the outfall, or as soon as practical, but no later than 60 minutes. If you find visible pollution, note the probable source and list any possible Best Management Practices that could be used to reduce or eliminate the problem.

Make any necessary changes to your Storm Water Pollution Prevention Plan as needed.

Facility Name Fleet Maintenance - Main Shop			
Street Address 10340 W. Watertown Plank Rd		City Milwaukee	State WI
		ZIP Code 53226	
Name of Person Conducting Inspection Jack Sudar		Inspection Date 3/23/16	
Employer Milwaukee County		Telephone Number 414-278-4870	
Outfall Number (make reference to site map) SEE BELOW	Description of Outfall (e.g., ditch, concrete pipe, grassed swale, etc.) —		
Time of Rainfall Event —	Time of Visual Inspection 3:15 PM	Optional: Amount of Rainfall at the Time of Observation (nearest tenth of an inch) —	

Describe your observations. An easy way to conduct this inspection is to use a glass jar to collect a sample of the storm water being discharged from the facility and visually inspect the water. Include any observations of color, odor, turbidity, floating solids, foam, oil sheen or any other visual indicators of storm water pollution and the probable sources of any observed storm water contamination.

Color:	<input type="checkbox"/> Clear	<input type="checkbox"/> Red	<input type="checkbox"/> Yellow	<input type="checkbox"/> Brown	<input type="checkbox"/> Other:
Odor:	<input type="checkbox"/> None	<input type="checkbox"/> Musty	<input type="checkbox"/> Sewage	<input type="checkbox"/> Rotten Egg	<input type="checkbox"/> Other:
Clarity:	<input type="checkbox"/> Clear	<input type="checkbox"/> Cloudy	<input type="checkbox"/> Opaque	<input type="checkbox"/> Suspended Solids	<input type="checkbox"/> Other:
Floatables:	<input type="checkbox"/> None	<input type="checkbox"/> Foam	<input type="checkbox"/> Garbage	<input type="checkbox"/> Oily Film	<input type="checkbox"/> Other:
Deposits / Stains:	<input type="checkbox"/> None	<input type="checkbox"/> Oily	<input type="checkbox"/> Sludge	<input type="checkbox"/> Sediments	<input type="checkbox"/> Other:

} SEE BELOW

Comments:

#1 - clear flow; erosion control fabric upstream on inlets.
#2 - clear flow
#3 - clear flow

* DOT construction is not complete

This outfall could not be evaluated during this quarter due to the following reason:

This form is for your own use and should be kept as part of your Storm Water Pollution Prevention Plan. It does not have to be submitted to the Department unless requested. If false information from quarterly visual inspections is reported to the Department, you could be subject to penalties up to \$10,000 pursuant to s. 283.91(4), Wis. Stats.

Use one form per outfall.

Quarterly Visual Inspections at each storm water discharge outfall on your site can be a valuable assessment tool and are required by the Tier 1 and Tier 2 Industrial Storm Water General Permits. This inspection should be performed when sufficient runoff occurs during daylight hours. Try to make observations within the first 30 minutes after runoff begins discharging from the outfall, or as soon as practical, but no later than 60 minutes. If you find visible pollution, note the probable source and list any possible Best Management Practices that could be used to reduce or eliminate the problem.

Make any necessary changes to your Storm Water Pollution Prevention Plan as needed.

Facility Name <i>McKinley Marina</i>			
Street Address <i>1750 W. Lincoln Memorial Dr.</i>		City <i>Milwaukee</i>	State <i>WI</i>
		ZIP Code <i>53202</i>	
Name of Person Conducting Inspection <i>Jack Sudgr</i>		Inspection Date <i>1/23/16</i>	
Employer <i>Milwaukee County</i>		Telephone Number <i>414-278-4870</i>	
Outfall Number (make reference to site map) <i>SEE BELOW</i>	Description of Outfall (e.g., ditch, concrete pipe, grassed swale, etc.)		
Time of Rainfall Event <i>←</i>	Time of Visual Inspection <i>9:15 AM</i>	Optional: Amount of Rainfall at the Time of Observation (nearest tenth of an inch)	

Describe your observations. An easy way to conduct this inspection is to use a glass jar to collect a sample of the storm water being discharged from the facility and visually inspect the water. Include any observations of color, odor, turbidity, floating solids, foam, oil sheen or any other visual indicators of storm water pollution and the probable sources of any observed storm water contamination.

Color:	<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Red	<input type="checkbox"/> Yellow	<input type="checkbox"/> Brown	<input type="checkbox"/> Other:
Odor:	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Musty	<input type="checkbox"/> Sewage	<input type="checkbox"/> Rotten Egg	<input type="checkbox"/> Other:
Clarity:	<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Cloudy	<input type="checkbox"/> Opaque	<input type="checkbox"/> Suspended Solids	<input type="checkbox"/> Other:
Floatables:	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Foam	<input type="checkbox"/> Garbage	<input type="checkbox"/> Oily Film	<input type="checkbox"/> Other:
Deposits / Stains:	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Oily	<input type="checkbox"/> Sludge	<input type="checkbox"/> Sediments	<input type="checkbox"/> Other:

SEE BELOW

Comments:

*1-4 North: clear flow
5-9 Central: clear flow
10-13 South: clear flow*

This outfall could not be evaluated during this quarter due to the following reason:

This form is for your own use and should be kept as part of your Storm Water Pollution Prevention Plan. It does not have to be submitted to the Department unless requested. If false information from quarterly visual inspections is reported to the Department, you could be subject to penalties up to \$10,000 pursuant to s. 283.91(4), Wis. Stats.

Use one form per outfall.

Quarterly Visual Inspections at each storm water discharge outfall on your site can be a valuable assessment tool and are required by the Tier 1 and Tier 2 Industrial Storm Water General Permits. This inspection should be performed when sufficient runoff occurs during daylight hours. Try to make observations within the first 30 minutes after runoff begins discharging from the outfall, or as soon as practical, but no later than 60 minutes. If you find visible pollution, note the probable source and list any possible Best Management Practices that could be used to reduce or eliminate the problem.

Make any necessary changes to your Storm Water Pollution Prevention Plan as needed.

Facility Name McKinley Marina			
Street Address 1750 W. Lincoln Memorial Dr.		City Milwaukee	State WI
Name of Person Conducting Inspection Jack Suder		Inspection Date 8/3/16	
Employer Milwaukee County		Telephone Number 414-278-4870	
Outfall Number (make reference to site map) SEE BELOW	Description of Outfall (e.g., ditch, concrete pipe, grassed swale, etc.)		
Time of Rainfall Event —	Time of Visual Inspection 1:30	Optional: Amount of Rainfall at the Time of Observation (nearest tenth of an inch)	

Describe your observations. An easy way to conduct this inspection is to use a glass jar to collect a sample of the storm water being discharged from the facility and visually inspect the water. Include any observations of color, odor, turbidity, floating solids, foam, oil sheen or any other visual indicators of storm water pollution and the probable sources of any observed storm water contamination.

Color:	<input type="checkbox"/> Clear	<input type="checkbox"/> Red	<input type="checkbox"/> Yellow	<input type="checkbox"/> Brown	<input type="checkbox"/> Other:
Odor:	<input type="checkbox"/> None	<input type="checkbox"/> Musty	<input type="checkbox"/> Sewage	<input type="checkbox"/> Rotten Egg	<input type="checkbox"/> Other:
Clarity:	<input type="checkbox"/> Clear	<input type="checkbox"/> Cloudy	<input type="checkbox"/> Opaque	<input type="checkbox"/> Suspended Solids	<input type="checkbox"/> Other: SEE BELOW
Floatables:	<input type="checkbox"/> None	<input type="checkbox"/> Foam	<input type="checkbox"/> Garbage	<input type="checkbox"/> Oily Film	<input type="checkbox"/> Other:
Deposits / Stains:	<input type="checkbox"/> None	<input type="checkbox"/> Oily	<input type="checkbox"/> Sludge	<input type="checkbox"/> Sediments	<input type="checkbox"/> Other:

Comments:

1-4 North: clear flow; no issues
5-9 Central: clear flow; no issues
10-13 South: clear flow; no issues

This outfall could not be evaluated during this quarter due to the following reason:

This form is for your own use and should be kept as part of your Storm Water Pollution Prevention Plan. It does not have to be submitted to the Department unless requested. If false information from quarterly visual inspections is reported to the Department, you could be subject to penalties up to \$10,000 pursuant to s. 283.91(4), Wis. Stats.

Use one form per outfall.

Quarterly Visual Inspections at each storm water discharge outfall on your site can be a valuable assessment tool and are required by the Tier 1 and Tier 2 Industrial Storm Water General Permits. This inspection should be performed when sufficient runoff occurs during daylight hours. Try to make observations within the first 30 minutes after runoff begins discharging from the outfall, or as soon as practical, but no later than 60 minutes. If you find visible pollution, note the probable source and list any possible Best Management Practices that could be used to reduce or eliminate the problem.

Make any necessary changes to your Storm Water Pollution Prevention Plan as needed.

Facility Name <i>McKinley Marina</i>			
Street Address <i>1750 W. Lincoln Mem. Dr.</i>		City <i>Milwaukee</i>	State <i>WI</i>
		ZIP Code <i>53202</i>	
Name of Person Conducting Inspection <i>Jack Sudar</i>		Inspection Date <i>6/23/16</i>	
Employer <i>Milwaukee County</i>		Telephone Number <i>414-278-4870</i>	
Outfall Number (make reference to site map) <i>. SEE BELOW</i>	Description of Outfall (e.g., ditch, concrete pipe, grassed swale, etc.) <i>_____</i>		
Time of Rainfall Event <i>_____</i>	Time of Visual Inspection <i>9:00 AM</i>	Optional: Amount of Rainfall at the Time of Observation (nearest tenth of an inch) <i>_____</i>	

Describe your observations. An easy way to conduct this inspection is to use a glass jar to collect a sample of the storm water being discharged from the facility and visually inspect the water. Include any observations of color, odor, turbidity, floating solids, foam, oil sheen or any other visual indicators of storm water pollution and the probable sources of any observed storm water contamination.

Color:	<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Red	<input type="checkbox"/> Yellow	<input type="checkbox"/> Brown	<input type="checkbox"/> Other:
Odor:	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Musty	<input type="checkbox"/> Sewage	<input type="checkbox"/> Rotten Egg	<input type="checkbox"/> Other:
Clarity:	<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Cloudy	<input type="checkbox"/> Opaque	<input type="checkbox"/> Suspended Solids	<input type="checkbox"/> Other:
Floatables:	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Foam	<input type="checkbox"/> Garbage	<input type="checkbox"/> Oily Film	<input type="checkbox"/> Other:
Deposits / Stains:	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Oily	<input type="checkbox"/> Sludge	<input type="checkbox"/> Sediments	<input type="checkbox"/> Other:

Comments:
*1-4 North: }
 5-9 Central: } looks good; clear flow
 10-13 South: }*

This outfall could not be evaluated during this quarter due to the following reason:

This form is for your own use and should be kept as part of your Storm Water Pollution Prevention Plan. It does not have to be submitted to the Department unless requested. If false information from quarterly visual inspections is reported to the Department, you could be subject to penalties up to \$10,000 pursuant to s. 283.91(4), Wis. Stats.

Use one form per outfall.

Quarterly Visual Inspections at each storm water discharge outfall on your site can be a valuable assessment tool and are required by the Tier 1 and Tier 2 Industrial Storm Water General Permits. This inspection should be performed when sufficient runoff occurs during daylight hours. Try to make observations within the first 30 minutes after runoff begins discharging from the outfall, or as soon as practical, but no later than 60 minutes. If you find visible pollution, note the probable source and list any possible Best Management Practices that could be used to reduce or eliminate the problem.

Make any necessary changes to your Storm Water Pollution Prevention Plan as needed.

Facility Name <i>McKinley Naring</i>			
Street Address <i>1750 W. Lincoln Memorial Dr.</i>		City <i>Milwaukee</i>	State <i>WI</i>
		ZIP Code <i>53202</i>	
Name of Person Conducting Inspection <i>Jack Sudar</i>		Inspection Date <i>3/23/16</i>	
Employer <i>Milwaukee County</i>		Telephone Number <i>414-278-4870</i>	
Outfall Number (make reference to site map) <i>SEE BELOW</i>	Description of Outfall (e.g., ditch, concrete pipe, grassed swale, etc.)		
Time of Rainfall Event <i>—</i>	Time of Visual Inspection <i>1:30 PM</i>	Optional: Amount of Rainfall at the Time of Observation (nearest tenth of an inch) <i>—</i>	

Describe your observations. An easy way to conduct this inspection is to use a glass jar to collect a sample of the storm water being discharged from the facility and visually inspect the water. Include any observations of color, odor, turbidity, floating solids, foam, oil sheen or any other visual indicators of storm water pollution and the probable sources of any observed storm water contamination.

Color:	<input type="checkbox"/> Clear	<input type="checkbox"/> Red	<input type="checkbox"/> Yellow	<input type="checkbox"/> Brown	<input type="checkbox"/> Other:
Odor:	<input type="checkbox"/> None	<input type="checkbox"/> Musty	<input type="checkbox"/> Sewage	<input type="checkbox"/> Rotten Egg	<input type="checkbox"/> Other:
Clarity:	<input type="checkbox"/> Clear	<input type="checkbox"/> Cloudy	<input type="checkbox"/> Opaque	<input type="checkbox"/> Suspended Solids	<input type="checkbox"/> Other:
Floatables:	<input type="checkbox"/> None	<input type="checkbox"/> Foam	<input type="checkbox"/> Garbage	<input type="checkbox"/> Oily Film	<input type="checkbox"/> Other:
Deposits / Stains:	<input type="checkbox"/> None	<input type="checkbox"/> Oily	<input type="checkbox"/> Sludge	<input type="checkbox"/> Sediments	<input type="checkbox"/> Other:

} SEE BELOW

Comments:

1-4 North: clear flow; no issues

5-9 Central: clear flow; no issues

10-13 South: clear flow; no issues

This outfall could not be evaluated during this quarter due to the following reason:

**Milwaukee County
Semi-annual Non-Storm Water Discharge Evaluation**

Site: Timmerman Airport

Inspection Date: 11/16/16

Inspection Personnel: Jack Suda, Tim Detzer, Grey Failey

Visual inspections of the storm inlets and outfalls for non-stormwater discharges must be made during dry weather. For each outfall, the procedure is as follows:

- Check outfalls for flow.
- If there is flow, describe the flow (color, odor, sheen, rate, etc.)
- If there is flow, go upstream and check storm inlets.
- Document observations below.

	Flow observed		Description of flow and/or comments
	Yes	No	
Outfall 1	X		OF1 Parking convergence: clear groundwater flow
Outfall 2	X		OF2 saturated grass near OF: groundwater flow assumed
Outfall 3	X		OF3 saturated grass near OF: groundwater flow assumed
Outfall 4	X		Outfall had clear groundwater flow

Report any issues to Manager or County Environmental Engineer.

Submit completed inspection documentation to Manager and County Environmental Engineer.

Milwaukee County Semi-annual Non-Storm Water Discharge Evaluation

Site: Timmerman Airport
 Inspection Date: 5/20/16
 Inspection Personnel: Jack Sndv

Visual inspections of the storm inlets and outfalls for non-stormwater discharges must be made during dry weather. For each outfall, the procedure is as follows:

- Check outfalls for flow.
- If there is flow, describe the flow (color, odor, sheen, rate, etc.)
- If there is flow, go upstream and check storm inlets.
- Document observations below.

	Flow observed		Description of flow and/or comments
	Yes	No	
Outfall 1		X	NE entrance has no flow
Outfall 2	X		Clear flow from underdrains
Outfall 3		X	No flow near AST
Outfall 4	X		Timmerman Outfall has clear flow and fish

*Report any issues to Manager or County Environmental Engineer.
 Submit completed inspection documentation to Manager and County Environmental Engineer.*

Milwaukee County
Semi-annual Non-Storm Water Discharge Evaluation

Site: North Shop
 Inspection Date: 11/16/16
 Inspection Personnel: Jack Sudar, Tim Detzer

Visual inspections of the storm inlets and outfalls for non-stormwater discharges must be made during dry weather. For each outfall, the procedure is as follows:

- Check outfalls for flow.
- If there is flow, describe the flow (color, odor, sheen, rate, etc.)
- If there is flow, go upstream and check storm inlets.
- Document observations below.

	Flow observed		Description of flow and/or comments
	Yes	No	
Outfall 1		X	No Flow
Outfall 2		X	No Flow
Outfall 3		X	No Flow
Outfall 4			

*Report any issues to Manager or County Environmental Engineer.
 Submit completed inspection documentation to Manager and County Environmental Engineer.*

Milwaukee County
Semi-annual Non-Storm Water Discharge Evaluation

Site: North Shop
 Inspection Date: 5/20/16
 Inspection Personnel: Jack Sudar

Visual inspections of the storm inlets and outfalls for non-stormwater discharges must be made during dry weather. For each outfall, the procedure is as follows:

- Check outfalls for flow.
- If there is flow, describe the flow (color, odor, sheen, rate, etc.)
- If there is flow, go upstream and check storm inlets.
- Document observations below.

	Flow observed		Description of flow and/or comments
	Yes	No	
Outfall 1		X	#1 - No flow
Outfall 2		X	# - No flow, though ground was wet
Outfall 3		X	#3 - No flow
Outfall 4			

*Report any issues to Manager or County Environmental Engineer.
 Submit completed inspection documentation to Manager and County Environmental Engineer.*

The site is under construction.
 New manholes with sumps are being installed and OF#2 appears to no longer flow to OF#3

Milwaukee County Semi-annual Non-Storm Water Discharge Evaluation

Site: Milwaukee County Zoo

Inspection Date: 11/18/16

Inspection Personnel: Jack Suda, Tim Detzer, John Westrich

Visual inspections of the storm inlets and outfalls for non-stormwater discharges must be made during dry weather. For each outfall, the procedure is as follows:

- Check outfalls for flow.
- If there is flow, describe the flow (color, odor, sheen, rate, etc.)
- If there is flow, go upstream and check storm inlets.
- Document observations below.

	Flow observed		Description of flow and/or comments
	Yes	No	
Outfall 1	X		
Outfall 2		X	No Flow
Outfall 3			
Outfall 4			

Report any issues to Manager or County Environmental Engineer.

Submit completed inspection documentation to Manager and County Environmental Engineer.

Milwaukee County Semi-annual Non-Storm Water Discharge Evaluation

Site: Milwaukee County Zoo
 Inspection Date: 5/20/16
 Inspection Personnel: Jack Suder

Visual inspections of the storm inlets and outfalls for non-stormwater discharges must be made during dry weather. For each outfall, the procedure is as follows:

- Check outfalls for flow.
- If there is flow, describe the flow (color, odor, sheen, rate, etc.)
- If there is flow, go upstream and check storm inlets.
- Document observations below.

	Flow observed		Description of flow and/or comments
	Yes	No	
Outfall 1	X		moderate clear flow. Musty smell.
Outfall 2		X	No flow
Outfall 3			
Outfall 4			

Report any issues to Manager or County Environmental Engineer.
 Submit completed inspection documentation to Manager and County Environmental Engineer.

* DOT construction underway near OF#2

Milwaukee County
Semi-annual Non-Storm Water Discharge Evaluation

Site: Fleet-Main Shop
 Inspection Date: 11/22/16
 Inspection Personnel: Jack Sudar, Tim Detzer, Dan Goeden

Visual inspections of the storm inlets and outfalls for non-stormwater discharges must be made during dry weather. For each outfall, the procedure is as follows:

- Check outfalls for flow.
- If there is flow, describe the flow (color, odor, sheen, rate, etc.)
- If there is flow, go upstream and check storm inlets.
- Document observations below.

	Flow observed		Description of flow and/or comments
	Yes	No	
Outfall 1	X		Small amount of clear flow; likely from groundwater
Outfall 2		X	Not inspected due to construction.
Outfall 3		X	No flow
Outfall 4		X	No flow

*Report any issues to Manager or County Environmental Engineer.
 Submit completed inspection documentation to Manager and County Environmental Engineer.*

Milwaukee County Semi-annual Non-Storm Water Discharge Evaluation

Site: Main Shop
 Inspection Date: 5/20/16
 Inspection Personnel: Jack Sudar

Visual inspections of the storm inlets and outfalls for non-stormwater discharges must be made during dry weather. For each outfall, the procedure is as follows:

- Check outfalls for flow.
- If there is flow, describe the flow (color, odor, sheen, rate, etc.)
- If there is flow, go upstream and check storm inlets.
- Document observations below.

	Flow observed		Description of flow and/or comments
	Yes	No	
Outfall 1	X		clear flow
Outfall 2	X		Small amount of clear flow
Outfall 3	X		Small amount of clear flow
Outfall 4			

*Report any issues to Manager or County Environmental Engineer.
 Submit completed inspection documentation to Manager and County Environmental Engineer.*

* Site still under construction.
 - many new stormwater inlets installed upstream of OF#1

Milwaukee County
Semi-annual Non-Storm Water Discharge Evaluation

Site: McKinley Marina
 Inspection Date: 11/15/16
 Inspection Personnel: Jack Sudar, Tim Detzer

Visual inspections of the storm inlets and outfalls for non-stormwater discharges must be made during dry weather. For each outfall, the procedure is as follows:

- Check outfalls for flow.
- If there is flow, describe the flow (color, odor, sheen, rate, etc.)
- If there is flow, go upstream and check storm inlets.
- Document observations below.

	Flow observed		Description of flow and/or comments
	Yes	No	
Outfall 1		X	North: 1, 2, 3, 4 all no flow
Outfall 2		X	Central: 5, 6, 7, 8, 9 all no flow
Outfall 3	X		South: 10, 11, 12 all had clear flow though no flow in upstream structures. Flow is likely due to high groundwater.
Outfall 4			

*Report any issues to Manager or County Environmental Engineer.
 Submit completed inspection documentation to Manager and County Environmental Engineer.*

Milwaukee County
Semi-annual Non-Storm Water Discharge Evaluation

Site: McKinley Marina
 Inspection Date: 5/20/16
 Inspection Personnel: Jack Sudar

Visual inspections of the storm inlets and outfalls for non-stormwater discharges must be made during dry weather. For each outfall, the procedure is as follows:

- Check outfalls for flow.
- If there is flow, describe the flow (color, odor, sheen, rate, etc.)
- If there is flow, go upstream and check storm inlets.
- Document observations below.

	Flow observed		Description of flow and/or comments
	Yes	No	
Outfall 1		X	North
Outfall 2		X	Central
Outfall 3		X	South
Outfall 4			

*Report any issues to Manager or County Environmental Engineer.
 Submit completed inspection documentation to Manager and County Environmental Engineer.*

looks good!

Attachment 4

Street Sweeping / Catch Basin Cleaning

Milwaukee County Street Sweeping

County Highway	Sweeping Frequency*	Collected (Cubic yards)	CBs Cleaned	Collected (Cubic yards)
Silver Spring Dr	1	6	0	0
Hampton Ave	2	8	0	0
Beloit Road	1	3	0	0
S. 92nd St	1	2	0	0
Oklahoma Ave	1	3	0	0
Layton Ave	2	7	2	1
S. 76 St	1	3	0	0
Rawson Ave	1	2	0	0
Mill Road	8		4	24
Good Hope Rd	8		4	30
Teutonia Ave	5		4	20
43rd St	5		4	20
Port Washington Rd	4		3	20
107th St	4		0	20
College Ave**	5	13	6	
Layton Ave**	4	10	6	
Rawson Ave**	6	2	15	
South 13th**	2	3	0	
Zoo	78	558	not tracked	
Zoo SW Outlet Structure			3	5
Root River Parkway				
Facilities Mgmt	0	0	9	2
Total		620		142

*One unit is equal a distinct sweeping event not necessarily the entire roadway.

** Amounts collected include both sweepings and material removed from catch basins.

Milwaukee County Salt Usage

	County Hwy	Zoo	Facilities*	Timmerman	McKinley	MCTS	
Salt	4206	275.5	45	5**	2**	30**	tons
Liquid Calcium	1400						gallons
Dry Calcium	1.875						tons
Salt Brine	8595					30***	gallons
Potassium Acetate				1.5**			tons

*Includes County facilities at County Grounds and Courthouse Complex

**Estimated

*** applied on private property with Sidewalk sprayer

Attachment 5

Stormwater Management Facility Inspections

Fall 2016 Storm Water Management Facility Inspections

Facility	Inspection Type	Location Notes	Major Outfall?	Date Inspected	Sediment Depth Taken	OWNER	Contact	Serious Problems Reported to Owner?	Comments
South Shore StormTreat	Sedimentation Chamber	South of boat launch	No	11/29/2016	X	Parks	Gene Andrzejak		Sand and stones piled up next to trench drain should be relocated. The trench drain should be cleaned out.
Bradford Beach Outfalls	Rain Garden & Infiltration	East of Lincoln Memorial Dr	No	9/28/2016	X	Parks	Gene Andrzejak		Mostly in good shape. Volunteer spill channel developing in basin 6. Erosion at outfall #7 is significant and could damage the southern berm.
Bradford Beach Parking lot Bioswale	Rain Garden & Infiltration	West of Lincoln Memorial Dr	No	9/28/2016	X	Parks	Gene Andrzejak		There were invasive plants and a large amount of trash that should be removed.
Bradford Beach Parking lot sed Chamber	Rain Garden & Infiltration	East of parking lot near Outfall 0	No	9/28/2016	17"	Parks	Gene Andrzejak		Sediment and floatables should be removed
Lake Park Rain Gardens	Rain Garden & Infiltration	Three raingardens in Lake Park	No	9/28/2016	X	Parks	Gene Andrzejak		Raingarden #3 has some invasive weeds. Pervious Pavement and RSC being installed by the lighthouse.
County Grounds Pond 1	Pond	Near Daycare	Yes	11/8/2016	X	Facilities	Tom Travia		The pond and structures are mostly in good shape though there are a few weeds present.
County Grounds Basin 2 - Pond 1-3	Pond	Wisconsin Ave ponds	Yes	11/8/2016	X	Facilities	Tom Travia		Structures in good condition. Major construction happening to the northwest of the pond though erosion control measures are in place.
County Grounds Pond 3	Pond	Near Underwood Parkway	Yes	11/8/2016	X	Facilities	Tom Travia		Invasive plants are increasing rapidly and should be removed. Lots of trash on the west side of the pond.
County Grounds Pond 10	Pond	Behind Children's Court	No	11/8/2016	X	Facilities / Non-County	Tom Travia? / Guy Muscari		Two erosion issues on south side of the pond owned by MCRP. Many bare spots on north side owned by Milwaukee County. Many invasive species.
Greenfield Park	Pond	South of golf course	No	10/3/2016	X	Parks	Gene Andrzejak		Multiple pipe inlets appear cracked or broken which is leading to some erosion issues.
Menomonee Parkway	Wetland	North of Burleigh near Meno. River	No	10/3/2016	X	Parks	Gene Andrzejak		Native plants are doing well. An invasive species removal contractor is under contract until 10/17.
Brown Deer Park	Pond	North of the golf course	No	9/28/2016	X	Parks	Gene Andrzejak		The pond appears to be in good condition though there are many muskrat holes. Phragmites are growing and should be removed. The outlet structure is cracked and should be considered for replacement.
McGovern Park	Pond	Middle of the park	No	9/28/2016	X	Parks	Gene Andrzejak		Some trash but mostly in good shape
McGovern Park	Bio Retention	Northeast of the north parking lot	No	9/28/2016	X	Parks	Gene Andrzejak		
McGovern Park	Sedimentation Chamber	North of the southeast parking lot	No	9/28/2016	21"	Parks	Gene Andrzejak		Floatables and sediment should be vacuumed out.
Washington Park	Pond	1859 N. 40th Street, Milwaukee	No	11/3/2016	X	Parks	Gene Andrzejak		New natives plants and trees being planted on the west side. The structures appeared in good condition.
McKinley Raingarden	Rain Garden & Infiltration	Northeast corner of the parking lot	No	9/28/2016	X	Parks	Gene Andrzejak		Diverse plant community was growing well.
McKinley Subsurface	Sedimentation Chamber	Northeast of lot near stone beach	No	9/28/2016	1"	Parks	Gene Andrzejak		Very little sediment though some floatables.
Zoo Pervious Pavement	Pervious Pavement	Various Locations	No	11/22/2016	X	Zoo	John Westrich		Multiple location should be vacuum swept and have joint material replaced.
Sports Complex Parking Lot	Pervious Pavement	6000 W Ryan Rd, Franklin	No	11/29/2016	X	Parks	Gene Andrzejak		Weeds should be killed and flap gate on underdrain should be replaced.
College Ave	Pond (Dry Pond)	College ave south east of airport	No	11/29/2016	X	Highway	Greg Hiesel		Looks good though there is some weeds and trash.
College Ave @ Loomis	Pond	College and Loomis	No	11/29/2016	X	Highway	Greg Hiesel		Natives appear to be doing well. Structures in good condition. Some weeds should be removed.
HOC Sheriff Training	Pond	South of the inmate housing	No	11/29/2016	X	HOC	Shawn Sullivan		Invasive species beginning to establish and many muskrats living in the pond.
County Rd F (107th)	Pervious Pavement	Shoulder of the Road	No	9/28/2016	X	Highway	Greg Hiesel		PaveDrain blocks are spalling, clogging, and settling. Weeds have begun to grow out some of the pavers and trash is in the ditches.
Mitchell Park Domes	Bioretention	Packers Field / NE Parking Lot	No	11/3/2016	X	Parks	Gene Andrzejak		The NE Parking lot rain gardens has trash, weeds, and sediment that should be removed.
Mitchell Park Domes	Pervious Pavement	Domes	No	11/3/2016	X	Parks	Gene Andrzejak		In good shape with minimal clogging.
Mitchell Park Domes	Cistern	At Green House	No	11/3/2016	X	Parks	Gene Andrzejak		Some trash in the overflow basin,, though structurally in good shape.
76th St and Drexel SW Pond	Pond	West Allis	No	11/29.16	X	Highway	Greg Hiesel		Structures in good condition though some invasives are beginning to establish.
Doctors Park Sed Sump	Sedimentation Chamber	Fox Point	Yes	9/28/2016	18.5"	Parks	Gene Andrzejak		Floatables and sediment should be removed.
Dineen Park Pervious Pavement	Pervious Pavement	Milwaukee	No	10/3/2016	X	Parks	Gene Andrzejak		Both pavers are beginning to clog and should be vacuum swept. The paver installation is significant clogged and has weeds growing between the pavers.
Dineen Park Rain Garden	Rain Garden & Infiltration	Milwaukee	No	10/3/2016	X	Parks	Gene Andrzejak		Rain garden looks good. Educational sign nearby needs protective screen replaced.
Grant Park Rain Garden	Rain Garden & Infiltration	South Milwaukee	No	11/29/2016	X	Parks	Gene Andrzejak		Weeds and trash in RG1 should be removed. Nearby phragmites should be removed.
Rawson & Highway 100	Pervious Pavement	Franklin	No	11/29/2016	X	Highway	Greg Hiesel		Some plants growing out of the pavers should be killed.
Layton Bus Stops	Pervious Pavement	Greenfield	No	11/22/2016	X	Highway	Greg Hiesel		Pavers are settling and clogging in some locations.
Pulaski Park	Rain Garden & Infiltration	Cudahy	No	11/22/2016	X	Parks	Gene Andrzejak		Weeds should be removed and the rain barrel should be replaced.
Bender Dry Ponds	Pond (Dry Pond)	Oak Creek	No	11/29/2016	X	Parks	Gene Andrzejak		Failing outlet structure and pipe have caused erosion and should be repaired. There are also many invasives that should be removed.
County Grounds Pervious	Pervious Pavement	Behavioral Health & CATC	No	11/22/2016	X	Facilities	John Westrich & Tom Travia		CATC pavement is beginning to clog and should be vacuum swept.
Weir & Botanical Gardens Pervious	Pervious Pavement	Weir & Botanical Gardens	No	11/29/2016	X	Parks	X		Wehr Nature Center has installed more pervious pavement and plans to add more. The patio area is beginning to clog.
Moody Park Rain Gardens	Rain Garden & Infiltration	Community Building	No	10/3/2016	X	Parks	Gene Andrzejak		The downspouts need to be reinstalled. Weeds should be removed and more native plants need to be planted.
Milwaukee River Parkway	Rain Garden & Infiltration	Kletzsch Park	No	10/3/2016	X	Parks	Gene Andrzejak		Newly constructed with native plants and native seeds.
David Schultz Rain Garden	Rain Garden & Infiltration	Southwest of Water Park	No	8/15/2016	X	Parks	Gene Andrzejak		Weeds and trees should be removed.

Spring 2016 Storm Water Management Facility Inspections

Facility	Inspection Type	Location Notes	Major Outfall?	Date Inspected	Sediment Depth Taken	OWNER	Contact	Serious Problems Reported to Owner?	Comments
South Shore StormTreat	Sedimentation Chamber	South of boat launch	No	6/21/2016	X	Parks	Gene Andrzejak		Trench drain is filled with sand. There is a large pile of sand and stone near the trench drain that should be relocated.
Bradford Beach Outfalls	Rain Garden & Infiltration	East of Lincoln Memorial Dr	No	6/21/2016	X	Parks	Gene Andrzejak		Invasive plants and trash should be removed from some of the basins. Erosion at outfall #7 is significant and could damage the southern berm.
Bradford Beach Parking lot Bioswale	Rain Garden & Infiltration	West of Lincoln Memorial Dr	No	6/21/2016	X	Parks	Gene Andrzejak		There were invasive plants growing and trash throughout the rain garden,
Bradford Beach Parking lot sed Chamber	Rain Garden & Infiltration	East of parking lot near Outfall 0	No	6/21/2016	15"	Parks	Gene Andrzejak		Sediment and floatables in the structure should be vacuumed out.
Bradford Beach Outfall 7 (Lake Park RGs)	Rain Garden & Infiltration	Three raingardens in Lake Park	No	6/21/2016	X	Parks	Gene Andrzejak		Outfall #7 has severe erosion from Lake Michigan that is close to removing the berm of the infiltration basin. Raingarden #3 has some invasive weeds.
County Grounds Pond 1	Pond	Near Daycare	Yes	6/7/2016	X	Facilities	John Westrich & Tom Travia		The pond and structures are mostly in good shape though there are a few weeds present.
County Grounds Basin 2 - Pond 1-3	Pond	Wisconsin Ave ponds	Yes	6/7/2016	X	Facilities	John Westrich & Tom Travia		Pond in mostly good shape. Phragmites appear to have been eradicated, though they should be monitored.
County Grounds Pond 3	Pond	Near Underwood Parkway	Yes	6/7/2016	X	Facilities	John Westrich & Tom Travia		Multiple invasive species beginning to establish and should be eradicated. Trash on the west side should be removed.
County Grounds Pond 10	Pond	Behind Children's Court	No	6/7/2016	X	Facilities / Non-County	Tom Travia? / Guy Muscari		Two erosion issues on south side of the pond owned by MCRP. Many bare spots on north side owned by Milwaukee County. Many invasive species.
Greenfield Park	Pond	South of golf course	No	6/22/2016	X	Parks	Gene Andrzejak		Multiple pipe inlets appear cracked or broken which is leading to some erosion issues.
Menomonee Parkway	Wetland	North of Burlingame near Meno. River	No	6/21/2016	X	Parks	Gene Andrzejak		The wetland appears to be in good condition. Native trees were planted and invasives are being controlled under a 2-year maintenance contract.
Brown Deer Park	Pond	North of the golf course	No	6/7/2016	X	Parks	Gene Andrzejak		The pond appears to be in good condition. There are many muskrat holes around the ponds shoreline.
McGovern Park	Pond	Middle of the park	No	6/3/2016	X	Parks	Gene Andrzejak		The "outlook area" should have the stone blocks put back, trash should be picked up, and Parks should consider replacing the cracking outlet structure.
McGovern Park	Bio Retention	Northeast of the north parking lot	No	6/3/2016	X	Parks	Gene Andrzejak		Looks good.
McGovern Park	Sedimentation Chamber	North of the southeast parking lot	No	6/3/2016		Parks	Gene Andrzejak		Sediment and floatables in chamber should be vacuumed out.
Washington Park	Pond	1859 N. 40th Street, Milwaukee	No	6/3/2016	X	Parks	Gene Andrzejak		In good shape.
McKinley Raingarden	Rain Garden & Infiltration	Northeast corner of the parking lot	No	6/21/2016	X	Parks	Gene Andrzejak		Looks good. Native plants that were planted last year appear to be doing well.
McKinley Subsurface	Sedimentation Chamber	Northeast of lot near stone beach	No	6/21/2016	1"	Parks	Gene Andrzejak		Looks good. There was a small amount of sediment and floatables.
Zoo Pervious Pavement	Pervious Pavement	Various Locations	No	5/20/2016	X	Zoo	Karl Hackbarth		Pavement needs to be vacuum swept and have joint material replaced in many spots.
Sports Complex Parking Lot	Pervious Pavement	6000 W Ryan Rd, Franklin	No	6/28/2016	X	Parks	Gene Andrzejak		Some plants were growing on the southern edge
College Ave	Pond (Dry Pond)	College ave south east of airport	No	6/22/2016	X	Highway	Greg Hiesel		Looks good, some invasive plants are beginning to establish.
College Ave @ Loomis	Pond	College and Loomis	No	6/22/2016	X	Highway	Greg Hiesel		Invasive species beginning to establish.
HOC Sheriff Training	Pond	South of the inmate housing	No	6/28/2016	X	HOC	Shawn Sullivan		Invasive species beginning to establish.
County Rd F (107th)	Pervious Pavement	Shoulder of the Road	No	6/3/2016	X	Highway	Greg Hiesel		Concrete pavers are clogged and settling. Many concrete blocks are spalling.
Mitchell Park Domes	Bioretention	Packers Field / NE Parking Lot	No	6/28/2016	X	Parks	Gene Andrzejak		Weeds, trash, and sediment should be removed from the parking lot rain garden.
Mitchell Park Domes	Pervious Pavement	Domes	No	6/28/2016	X	Parks	Gene Andrzejak		Looked good. Fountains were active during the inspection.
Mitchell Park Domes	Cistern	At Green House	No	6/28/2016	X	Parks	Gene Andrzejak		Structures looked good though there were some weeds at the outfall.
76th St and Drexel SW Pond	Pond	West Allis	No	6/22/2016	X	Highway	Greg Hiesel		Structures in good condition though some invasives are beginning to establish.
Doctors Park Sed Sump	Sedimentation Chamber	Fox Point	Yes	6/3/2016	18.5"	Parks	Gene Andrzejak		There is sediment and trash that should be vacuumed out.
Dineen Park Pervious Pavement	Pervious Pavement	Milwaukee	No	6/3/2016	X	Parks	Gene Andrzejak		Both pavers are beginning to clog and should be vacuum swept. The paver installation is significant clogged and has weeds growing between the pavers.
Dineen Park Rain Garden	Rain Garden & Infiltration	Milwaukee	No	6/3/2016	X	Parks	Gene Andrzejak		Looks good.
Grant Park Rain Garden	Rain Garden & Infiltration	South Milwaukee	No	6/28/2016	X	Parks	Gene Andrzejak		Rain garden 1 has many weeds that should be removed.
Rawson & Highway 100	Pervious Pavement	Franklin	No	6/22/2016	X	Highway	Greg Hiesel		Pavers are in good shape though some weed growth has begun on the east end.
Layton Bus Stops	Pervious Pavement	Greenfield	No	6/22/2016	X	Highway	Greg Hiesel		Pavers are settling and there are plants growing out of two of three installations.
Pulaski Park	Rain Garden & Infiltration	Cudahy	No		X	Parks	Gene Andrzejak		Site was not visited due to road construction
Bender Dry Ponds	Pond (Dry Pond)	Oak Creek	No	6/28/2016	X	Parks	Gene Andrzejak		Failing outlet structure and pipe have caused erosion and should be repaired. There are also many invasives that should be removed.
County Grounds Pervious	Pervious Pavement	Behavioral Health & CATC	No	6/7/2016	X	Facilities	John Westrich & Tom Travia		Mostly in good condition. Slight clogging on south end of CATC installation
Weir & Botanical Gardens Pervious	Pervious Pavement	Weir & Botanical Gardens	No	6/28/2016	X	Parks	X		Both sites looked to be in good shape.
Moody Park Rain Gardens	Rain Garden & Infiltration	Community Building	No	6/3/2016	X	Parks	Gene Andrzejak		Hardwood bark mulch should be removed in order for plants to thrive.

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Item. (Site)	Inspection Date	GSI Performance*	Owner	Maintenance Needs
1. (David Shultz Aquatic Center Rain Garden)	8/15/2016	5	Parks	This rain garden had invasive weeds and trees including queen anne's lace, thistle, and cattails which should be removed.
2. (107th Street PaveDrain)	9/28/2016	3	Highway	There is sediment and debris clogging many of the voids between the PaveDrain pavers. Concrete has been spalling on 100+ blocks, which has caused up to 1/8" to 1/2" of the block surface to break off. Many PaveDrain pavers have begun to settle up to 2" below the road elevation. A street sweeper was used on the PaveDrain pavers in summer of 2015. This improved the aesthetics of the pavers, though it did little to remediating the clogging. A vacuum sweeper or PaveDrain Vac Head should be used to remove the clogged material from the joints between the pavers. The PaveDrain pavers that are significantly spalled should be replaced if there are spare PaveDrain paver blocks. If the settlement of the PaveDrain pavers is of concern, additional stone should be placed underneath the pavers to raise them to the same elevation as the road. There was also significant trash in the ditches.
3. (Doctors Park Sedimentation Chamber)	9/28/2016	5	Parks	There is roughly 19" of sediment in the structure that should be vacuumed out.
4. (Brown Deer Park Pond)	9/28/2016	5	Parks	The pavement "look-out-area" near the pavilion at the pond's edge is substantially cracked and could be replaced. There are also muskrats living in the pond.
5. (McGovern Park)	9/28/2016	4	Parks	The outlet structure of the pond is cracked and flow appears to be leaving the pond from beneath it. Replacing the outlet structure should be considered before it gets worse. The stone "look-out-area" has multiple stone blocks that appear to have been thrown into the pond. These stone blocks should be put back into place. There are phragmites near the outlet structure and "look-out-area" that should be removed before they take over the shoreline. The sedimentation chamber near the Senior Center has roughly 21" of sediment and should be vacuumed out. The pond and rain garden near the service yard had trash that should be removed.

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Item. (Site)	Inspection Date	GSI Performance*	Owner	Maintenance Needs
6. (Bradford Beach and Lake Park)	9/28/2016	3	Parks	The shoreline of Outfall 7 had many willows that have nearly all been eroded away by the lake. This erosion has also exposed much of the protective rip rap along the shoreline. While the eastern edge of the infiltration basin is armored with heavy rip rap, additional erosion has the potential to erode the wall of the basin, specifically on the southern edge. This situation should be monitored and additional heavy rip rap may be warranted. Trash and weeds should be removed from the parking lot bioinfiltration swale, Outfall 2, and Lake Park Rain Garden 3. The parking lot sedimentation chamber had roughly 17" of sediment and should be vacuumed out.
7. (Moody Park Rain Garden)	10/3/2016	3	Parks	Both raingardens have large amounts of shredded hardwood bark mulch in their basin, which appear to be stifling the rain garden plants. Mulch should be replaced with oat or wheat straw and reseeded to grow native plants. The eastern rain garden does not have a downspout which is causing erosion. The downspout should be replaced or rip rap installed. Weeds should be removed.
8. (Dineen Park Pervious Pavement)	10/3/2016	3	Parks	The southern pervious pavement installation near the old golf course is beginning to clog in spots and has weeds growing between the pavers. This lot should be vacuum swept and have the joint material replaced. The northern pervious cement installation had loose gravel on the surface and sediment clogging the voids of the concrete. This pervious concrete could use a vacuum sweeping.
9. (Greenfield Park Pond)	10/3/2016	3	Parks	Inlet I-2 has a broken pipe. As a result, a large area of soil has eroded into the pond. This pipe should be replaced. Inlet I-7 appears to be seeping up from the ground and causing erosion issues. Replacing this pipe should be looked into. There are two cracked pipes at inlet I-4, though neither appear to be causing immediate issues. The pavement "look-out-area" near the pavilion has frequently had water ponding on top of it, and should perhaps be replaced. There are also muskrats living in the pond.

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Item. (Site)	Inspection Date	GSI Performance*	Owner	Maintenance Needs
10. (Mitchell Park Rain Garden)	11/3/2016		4 Parks	The raingarden in the northeastern parking lot is having sediment build-up along its western edge from parking lot runoff which should be removed. The outlet structure of the rain garden should be cleaned out, as it has begun to clog with debris. Weeds, trash and volunteer trees should also be removed from this rain garden as well as the rain garden directly east of the pond.
11. (Milwaukee County Grounds Basin 10)	11/8/2016		2 Facilities & Milwaukee Research Park	The south side of the pond is owned by Milwaukee Research Park and has issues with inlets I-5, I-7, and I-14. Inlet I-5 is having serious erosion problems that are forming a peninsula. I-5 has rip rap, though it appears to have been poorly installed and not large enough. I-5 should have larger rip rap installed with erosion control fabric. Inlet I-7 has been crushed, which may cause problems in the future, though does not appear to be causing any immediate issues. Inlet I-9 now has a new 6" inlet I-14 running adjacent to it. Flow from I-14 is discharging at the top of the hill and cutting a large erosion channel on its way to the pond. Inlet I-14 should be connected to I-9, extended down to the surface of the water, or have a rip rap channel installed. The north side of the pond is owned by Milwaukee County and has a few issues. There are many bare patches of land on the north side which should be addressed with the addition of new soil, seed, and erosion control fabric. Inlets I-10, I-11, and I-15 are having minimal erosion issues and could use some more rip rap. An abandon inlet between I-3 and the rip-rap channel appears to have some seepage leaking out, despite being sealed shut. All volunteer trees within 20' of the pond should be removed. The pond has many invasive species which should be removed including phragmites, teasel, crown vetch, cattails, and trefoil.
12. (Milwaukee County Grounds Basin 3)	11/8/2016		4 Facilities	Invasive plants including phragmites, teasel, crown vetch, birdsfoot trefoil, and thistle were growing at the site and should be removed. There was significant trash on the west side of the pond which should be removed. There still are a few hundred wooden stakes in the pond which should be removed if they are not in use for something apparent.

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Item. (Site)	Inspection Date	GSI Performance*	Owner	Maintenance Needs
13. (Pulaski Park Rain Garden)	11/22/2016	5	Parks	This rain garden had invasive weeds which should be removed. The rain barrel should be placed back in order to prevent erosion.
14. (Layton Ave PaveDrain)	11/22/2016	4	Highway	The PaveDrain is beginning to clog in the upstream locations of all three installations and has plants growing between the pavers. A vacuum sweeper or PaveDrain Vac Head can be used to remove the clogged material from the joints between the pavers. The pavers are also 1 to 2 inches below the road in many locations. If this settlement is a concern, additional stone should be placed underneath the pavers to raise them to the same elevation as the road
15. (County Grounds PaveDrain)	11/22/2016	5	Facilities	The PaveDrain in the CATC parking lot is beginning to have some minor clogging and plant growth on the southern end. A vacuum sweeper or PaveDrain Vac Head can be used to remove the clogged material from the joints between the pavers
16. (Milwaukee County Zoo Pervious Pavement)	11/22/2016	3	Zoo	PP-1, PP-2, PP-3: These pervious pavement installations are in mostly good shape. PP-4, PP-5, PP-6, PP-7, PP-8: These pervious pavement installations could use a vacuum sweeping and replacement of the joint material. PP-4 has significant clogging and plants growing out of the pavers. PP-5 is in decent shape, though there are multiple locations where the joints between the pavers are clogged with sediment. PP-6 is in decent shape, though there are spots where the joints between the pavers are clogged with sediment. PP-7 has significant clogging between the joints of the pavers, there is some settlement of the pavers, and many of the pavers have large chunks of the bricks missing. PP-8 has significant clogging of the joints between the pavers and significant settlement of the pavers.
17. (South Shore Sedimentation Chamber)	11/29/2016	2	Parks	The trench drain was completely filled with sediment and sand blocking flow into the sedimentation chamber. There was also a large amounts of sand and stone piled up on top of the south end of the trench drain. The sediment, sand, and stones should be removed.

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18. (Grant Park Beach Rain Garden)	11/29/2016		5 Parks	This rain garden had a decent amount of trash and weeds which should be removed. Phragmites are growing along the shoreline of the creek, which should be removed before they migrate into the rain garden.
19. (Bender Park Dry Ponds)	11/29/2016		2 Parks	A stormwater ditch that flows into dry pond #2 has an outlet structure and pipe that have failed, leaving an erosion channel that is nearly 10 ft in depth at some points. There is an orange fence around the affected area, though aerial photos seem to indicate that this has been an issue for years. This pipe and outlet structure need to be replaced. Both dry ponds #1 and #2 have many invasive plants including phragmites, crown vetch, birdsfoot trefoil, teasel, and thistles that should be removed.
20. (Milwaukee County Sports Complex)	11/29/2016		5 Parks	There are some weeds growing on the outer edges of the pavers that should be removed. One of the underdrains no longer has a flap gate, which should be replaced.
21. (Whitnall Park Pervious Pavement)	11/29/2016		5 Parks	There is some clogging of the pavers at the Wehr Nature Center and the Botanical Gardens. The locations of these installations make it difficult to clean with a vacuum sweeper, though they should be cleaned via other methods.
22. (Rawson Ave PaveDrain)	11/29/2016		5 Highway	Gravel has started to fill gaps on the eastern end and plants are growing out of the cracks on the western end. The majority of the PaveDrain is not clogged and does not have plants.

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***GSI Performance:** *Green Stormwater Infrastructure Performance* - A priority rating system was used for each of the GSI sites to determine which sites need the most maintenance attention. The criteria for the GSI sites are listed in Table 1 below.

Table 1: Priority Rating System for Green Stormwater Infrastructure Performance	
Priority Rating	Site Condition
1	The site's GSI has completely failed and requires immediate maintenance
2	The site's GSI is having substantial issues and requires maintenance
3	The site's GSI is having issues and requires maintenance
4	The site's GSI is mostly working properly, though there are maintenance issues
5	The site's GSI is working properly, though there are minor maintenance issues