COUNTY OF MILWAUKEE
INTEROFFICE COMMUNICATION

Date: February 8, 2011

To: Supervisor Michael Mayo, Sr., Chairperson, Transportation, Public Works Committee
Supervisor Gerry Broderick, Parks, Energy & Environment Committee Chairman

From: Jack Takerian, Director of Transportation and Public Works

Subject: **Milwaukee County NR 216 Permit**
Informational Report – Annual Report

Background

The Wisconsin Department of Natural Resources (WDNR) issued an NR 216 Stormwater Permit to Milwaukee County on December 15, 2006. The permit requires that Milwaukee County submit an annual report to the WDNR by March 31st each calendar year. The annual report provides status updates on each of the permit requirements. The permit further requires that the Milwaukee County Board of Supervisors review or be apprised of the content of the report.

Prepared by: Tim Detzer, P.E. Environmental Engineer

Approved by:

Jack Takerian, Director Transportation & Public Works	Gregory High, P.E., Director DTPW-A&E-ES

Attachments: 2010 Annual Report, Milwaukee County NR 216 Permit

cc: County Executive Marvin Pratt
Lee Holloway, County Board Chairman
Terry Cooley, Chief of Staff

2010 ANNUAL REPORT
MILWAUKEE COUNTY NR 216 PERMIT

I. Background

An NR 216 permit for the Milwaukee County's municipal separate storm sewers system was issued to Milwaukee County on December of 2006. The permit conditions set forth a number of tasks and established a schedule for completing these tasks. This report summarizes the progress made in 2010 and prior towards coming into compliance with the permit.

II. Permit Implementation Schedule

Table 1 provides a summary of the compliance schedule and the status of each permit condition. Milwaukee County has met the schedule for condition requirements in 2010.

Table 1 Compliance Schedule

PERMIT CONDITION	ACTIVITY	DUE DATE	STATUS
Public Education and Outreach - Part II.A	Submit the public education and outreach program	March 31, 2008	**COMPLETE**
Public Involvement and Participation – Part II.B	Submit public involvement and participation program	March 31, 2008	**COMPLETE**
Illicit Discharge Detection and Elimination - Part II.C	1. Submit illicit discharge ordinance	October 31, 2007	**COMPLETE**
	2. Complete initial field screening	December 31, 2007	**COMPLETE**
	3. Submit illicit discharge response procedures	October 31, 2007	**COMPLETE**
Construction Site Pollutant Control - Part II.D	1. Submit construction site pollutant control ordinance or declaration	June 30, 2007	**COMPLETE**
	2. Submit construction site inspection and enforcement procedures	March 31, 2008	**COMPLETE**
Post-Construction Storm Water Management - Part II.E	1. Submit post-construction stormwater ordinance or declaration	June 30, 2007	**COMPLETE**
	2. Submit long-term maintenance procedures	March 31, 2008	**COMPLETE**
Pollution Prevention - Part II.F	Submit pollution prevention program	March 31, 2008	**COMPLETE**

Table 1 Compliance Schedule			
Storm Water Quality Management - Part II.G	1. 20% reduction in total suspended solids in runoff that enters waters of the state, to the maximum extent practicable	March 10, 2008	**COMPLETE**
	2. 40% reduction in total suspended solids in runoff that enters waters of the state, to the maximum extent practicable	March 10, 2013	COMPLETE BY DUE DATE
	3. Submit evaluation of flood control structures	March 31, 2008	**COMPLETE**
	4. Submit assessment of compliance	March 31, 2008	**COMPLETE**
Storm Sewer System Map - Part II.H	1. Submit remaining storm sewer system maps	March 31, 2007	**COMPLETE**
	2. Maintain a current storm sewer system map	March 31 of each year	COMPLETE BY DUE DATE
Lake Michigan Outfalls – Part II.I	1. Submit alternatives and recommendation	March 31, 2007	**COMPLETE**
	2. Construct selected alternative	January 1, 2008	**COMPLETE**
Annual Report - Part II.J	Submit annual reports	March 31of each year	COMPLETE BY DUE DATE
Reapplication for Permit Coverage	Submit new application	June 15, 2011	COMPLETE BY DUE DATE

III. Implementation Status of Permit Requirements

Public Education and Outreach

In 2007, Milwaukee County began investigating public education and outreach efforts of municipalities within Milwaukee County to avoid duplicative effort. Milwaukee County has collaborated with the WDNR and the University of Wisconsin-Extension to develop a regional approach to public education and outreach. Milwaukee County submitted a draft of its Public Education and Outreach program outlining this approach in March 2008.

In 2008, Milwaukee County helped plan and host the January 20th *Stormwater Education & Outreach and Public Participation Plan Update Workshop* for southern municipalities of the Milwaukee and Menomonee River Basins.

In January 2009 a meeting was held with various communities and the Milwaukee Metropolitan Sewerage District (MMSD) to discuss the coordination of public outreach and education programs. Villages and cities from two counties met to brainstorm ways to deliver a consistent message and eliminate duplication. A consortium concept was examined and making use of existing watershed groups was viewed as an intermediate step toward this goal, but eventually it was determined that there was little interest in creating another group devoted to storm water. Milwaukee County considered joining

other stormwater interest groups in an attempt to create a bridge between them and aid in idea sharing and again, avoid duplication of effort. To this end in 2010 Milwaukee County has been attending Menomonee River Group Meetings and Southeastern Wisconsin Watershed Trust Watershed Action Team (WAT) meetings.

Public Education & Outreach—Public Events/Education

- Milwaukee County sponsored winter maintenance (salt reduction) workshops in 2008 and 2009. Workshops were geared toward public works departments and maintenance employees of public spaces such as parking lots, schools, etc. The 2008 workshops had nearly 300 attendees. Ninety-six people attended the classes in 2009.
- In 2009 Milwaukee County won the Blue Wave Award from the Clean Beach Council for our storm water work at Bradford Beach. Milwaukee County held a media day at Bradford in conjunction with the award. This project also won awards from the American Public Works Association and the American Council of Engineering Companies. In addition, a tour of the Bradford Beach project was given at the annual State of the Lakes conference held in Milwaukee in September 2009.
- Milwaukee County hosted a "Rainwater Harvesting Event" August 12-21, 2009. This hands-on workshop was geared toward landscape professionals, engineers and architects and homeowners. Topics included rainwater harvesting basics, wetland filtration, systems design, permeable pavers, water feature design and construction, rain gardens and a special day for homeowners to incorporate all of these ideas into their own spaces. The even took place at Boerner Botanical Gardens during the construction of their rainwater harvesting system.
- For projects with a storm water or runoff component Milwaukee County has included educational signage as part of the scope of work. To date signs have been installed for Milwaukee County's Pond and Lagoon Projects at Humboldt, Jacobus, McGovern, Washington, and Dineen Parks. Signs have also been installed for Bradford Beach's outfall project and were installed at McKinley Beach in 2010.
- Milwaukee County Department of Parks, Recreation and Culture has also installed signs to educate the public regarding the importance of picking up pet waste as well as reminders to pick up pet waste on the Parks' website. In addition, the Parks Department encourages pet owners to utilize certain parks that allow dogs including four off-leash dog parks. Dogs are prohibited by ordinance at beaches and child play areas in Milwaukee County.
- DTPW-A&E-Environmental Services gave a presentation on rain gardens to the UW-Extension Master Gardeners in October 2010.

Public Education & Outreach—Required Program Elements
Milwaukee County is also required to establish measurable goals for the eight program elements as listed in the permit. Although some of these elements are not directly applicable to Milwaukee County, they may be addressed by future collaboration with other municipalities as stated above. What follows are brief summaries of how the County is currently addressing these issues.

1. Promote detection and elimination of illicit discharges and water quality impacts associated with such discharges of pollution into storm sewer systems.

Milwaukee County addresses this through our Illicit Discharge Detection & Elimination Program, which was submitted on October 30, 2007.

Many of the County's most visible and accessible catch basins and storm inlets were labeled as "NO DUMPING Drains to Lake Michigan" or "NO DUMPING Drains to River" through a partnership with Milwaukee Riverkeeper (formerly Friends of Milwaukee Rivers).

Milwaukee County began investigation of Great Lakes Water Institute's findings of genetic markers of human fecal matter within Milwaukee's waterways and beaches. The investigation centered on the County's beaches (See Appendix 5.). More recently, Milwaukee County is working with Milwaukee Riverkeeper to help evaluate the Great Lakes Water Institutes data.

2. Inform and educate employees and the public using its lands about the proper management of materials that may cause storm water pollution from sources including automobiles and pets.

A major component of our program focuses on training of County employees to improve compliance. In 2008, Milwaukee County established budgets for County departments to implement elements of the County's stormwater management program. Funds have been allocated for employee training and the development of Storm Water Pollution Prevention Plans (SWPPPs) to deal with these issues.

In 2009 meetings were held with County departments to begin implementing training requirements. A stormwater training presentation was developed to educate County employees about stormwater and to introduce permit requirements and stormwater regulations. This presentation was given in February 2010 to employees from the Parks Department and the Zoo. Employees from the Department of Transportation & Public Works were given the training in May of 2010. This training included the proper management of materials that may cause storm water pollution from sources including automobiles and pets. Employees will also be trained through the development and maintenance of Storm Water Pollution Prevention Plans (SWPPPs—see below).

Milwaukee County has attempted to educate the public on pet waste and its impact on stormwater through signs and its website—described above.

3. Promote beneficial onsite reuse of leaves and grass clippings and proper use of lawn fertilizers and pesticides.

Milwaukee County does not collect leaves or grass clippings for offsite disposal. Leaves and grass clippings are mulched in place. County golf courses apply fertilizers based upon site-specific soil testing results. Other County Departments do not typically apply fertilizers.

4. Promote the management of streambanks and shorelines on County lands to minimize erosion and restore and enhance the ecological value of waterways.

In 2004 Milwaukee County completed its Streambank Inventory to identify and prioritize areas of concern and potential projects. Milwaukee County has completed several projects from this list, but a lack of funding at the State and County level has slowed this effort.

Milwaukee County also promotes the management of shorelines through our Pond and Lagoon Projects. A summary of the projects for the permit period follows:

Jacobus, Dineen and Humbolt Park Lagoons
Work of the project includes the stabilization of lagoon shorelines and the installation of other best management practices to reduce nutrient loadings and improve water quality. Methods used include: the installation of fiber rolls, rock armoring, and native plantings along the lagoon shoreline, the construction of rain gardens, and the installation of educational signage. Work began September 2007. Substantially complete August 2008. Water quality monitoring continued in 2010, but analyzing the results could be premature, as the vegetation will not be fully established until 2011 (see water quality monitoring analytical in Appendix 1).

Washington and McGovern Park Lagoons
Work of the project includes the stabilization of lagoon shorelines and the installation of other best management practices to reduce nutrient loadings and improve water quality. Methods used include: the installation of fiber rolls, rock armoring, and native plantings along the lagoon shoreline, the construction of rain gardens, the installation of sedimentation chambers, and the installation of educational signage. Work began October 2008 and was substantially complete by August 2009.

Mitchell Park Lagoon
In 2010 Milwaukee County began a conceptual design for the restoration of Mitchell Park Lagoon. Restoration work will begin in spring 2011.

5. *Promote infiltration of residential storm water runoff from rooftop downspouts, driveways and sidewalks.*

Milwaukee County does not have jurisdiction over municipalities in matters of private residential ownership, but we have encouraged our employees to promote infiltration during storm water training. Milwaukee County has also been implementing infiltration practices on our properties such as the storm water practices along Lake Michigan and projects at the Zoo, which include downspout disconnection, rain barrels, and porous pavement (pavers).

6. Inform and educate those responsible for the design, installation, and maintenance of construction site erosion control practices and storm water management facilities on how to design, install, and maintain the practices.

Milwaukee County has allocated funds for the training of personnel for this purpose. The introduction of the County's Green Print Program in 2007 requires the evaluation of erosion control methods, storm water best management practices and other innovative design elements in all applicable County projects.

7. Target County departments and activities that may pose a storm water contamination concern, and where appropriate, educate specific audiences including grounds workers and maintenance shops on methods of storm water pollution prevention.

Milwaukee County has created and will maintain Storm Water Pollution Prevention Plans (SWPPPs) for such facilities and the employees at these facilities will be trained on stormwater pollution prevention.

8. Promote environmentally sensitive land use decisions by planners and designers.

Milwaukee County has developed a state-approved Land & Water Resource Management Plan. This plan promotes water quality and land conservation by identifying land and water related problems and priorities; developing objectives and goals; and tracking progress. The plan helps to guide land use decision-making. In 2010 Milwaukee County began the process to revise the plan, which is currently underway. The plan is available online at http://www.county.milwaukee.gov/LandandWaterResource23110.htm Drafts of the new plan are available for review at Southeastern Wisconsin Regional planning Commission's (SEWRPC) website at http://www.sewrpc.org/SEWRPC/Environment/LandandWaterResourceManagementPlanning.htm

IV. Public Involvement and Participation

Milwaukee County is a unique Wisconsin county in that it is wholly incorporated with 19 municipalities within its boundary. It is also unique in that it is almost entirely urban.

Milwaukee County, however, has miles of Lake Michigan Shoreline, over 120 miles of streams and rivers, approximately 70 ponds and lagoons, and countless opportunities for urban nonpoint source and storm water pollution.

As a result of these challenges Milwaukee County maintains a constant dialogue with its many partners year-round in order to plan for growth and maintain our natural resources. Because of Milwaukee's population density and many natural resources, parks, and natural areas, these groups are very numerous. Planning for the management of our land and water resources is a continuing effort and occurs within this dialogue with these diverse groups.

For example, Milwaukee County maintains quarterly meetings with the Wisconsin Department of Natural Resources to discuss topical issues such as urban nonpoint source pollution, beach closings, and brownfields; priorities and goals for natural resource management are thus discussed throughout the year. Other groups with which Milwaukee County maintains contact play a key role in the planning process for our natural resources are:

- The Southeastern Wisconsin Regional Planning Commission (Milwaukee County's official planning office)
- The Department of Agriculture, Trade & Consumer Protection
- The Milwaukee Metropolitan Sewerage District
- 19 municipalities within Milwaukee County
- The Southeastern Wisconsin Beach Task Force
- University of Wisconsin Extension
- The Great Lakes Nonpoint Abatement Coalition
- The Southeastern Wisconsin Watershed Trust

In addition, the Milwaukee County Parks Department, which largely maintains the county's natural areas and leased agricultural lands as well as the parks, is in frequent communication with a large number of citizen advocacy groups. These groups include:

Center Street Park Watch
Friends of Boerner Botanical Gardens
Friends of Cathedral Square Park
Friends of Estabrook Park
Friends of Grant Park
Friends of Hales Corners Pool
Friends of Johnsons Park
Friends of Kletzsch Park
Friends of Mill Pond
Friends of Wehr Nature Center
Jackson Park Watch
Lake Park Friends
McCarty Park Watch
Neighbors United for Washington Park
Partners in Parks
Riverside Urban Ecology Center
Sheridan Park Friends
Wedgewood Park Watch
The Park People, Friends of the Milwaukee County Park System
Cooper Park Watch
Friends of Bradford Beach
Friends of Dineen Park
Friends of Franklin Park
Friends of Greenfield Park
Friends of Jacobus Park
Friends of Juneau Park
Friends of Kohl Park
Friends of the Domes
Humboldt Park Watch
Kops Park Watch
Lyons Park Watch
Nash Park Watch
North Point Lighthouse Friends
Residents for Off-Leash Milwaukee Parks
Saveland Park Watch
South Shore Park Watch

Due to the level of public participation that occurs continuously within Milwaukee County's planning process we feel that we can effectively incorporate storm water issues into our dialog with the many and varied stakeholders and citizen advocacy groups.

Specifically, public involvement in NR 216 issues can occur:

- As part of public participation for Milwaukee County's Land Water Resource Management Plan (LWRMP), for which implementation of NR 216 requirements is a goal.
- At meetings of the Land Conservation Committee and Parks Energy & Environment Committee, which are open to the public, and are the committees that submit NR 216 issues to the Milwaukee County Board of Supervisors.
- Milwaukee County also held public comment sessions for the installation of best management practices at Bradford and McKinley Beaches.
- Milwaukee also attends and participates in meetings and sessions open to the public such as those by the Southeastern Wisconsin Watershed Trust

V. Illicit Discharge Detection and Elimination Program (IDDE)

Regulatory Mechanism to Prevent Illicit Discharges

In October 2007, Milwaukee County submitted a proposal to the WDNR to comply with the requirement to establish a regulatory mechanism to prohibit illicit discharges and illicit connections into Milwaukee County's storm sewer system.

Milwaukee County proposed to add language to Chapter 39, Disposal of Refuse or Waste to comply with the permit requirements. The Milwaukee County Board approved the proposed ordinance at the March 20, 2008 board meeting.

Two illicit connections were discovered in 2009. In both instances the storm sewer had been connected to the sanitary sewer. The WDNR was not notified since the storm sewer drained to the sanitary sewer system. The Milwaukee Metropolitan Sewerage District was notified and both connections were corrected. No illicit connections were discovered in 2010.

Major Outfalls—Field Screening

Through discussions between Milwaukee County and the Department of Natural Resources it was decided that Milwaukee County would be required to include municipal contributions to the County's storm sewer when determining which County outfalls would be considered major outfalls for the purposes of field screening (e.g. City of Milwaukee contributes 25 acres to an outfall and Milwaukee County contributes 35 acres creating a major outfall of greater than 50 acres.).

The effort to identify major outfalls was completed and submitted to the WDNR on February 7, 2008. In that report, Milwaukee County identified 22 major outfalls. Since then it has been determined that twelve of these outfalls were already claimed or should be claimed by other municipalities. Please see Table 2 for Milwaukee County's corrected list of major outfalls. Dry-weather field screening for all major outfalls was completed in 2010. See Appendix 2 for outfall screening summary.

Table 2 Milwaukee County Major Outfalls

County ID	Location of Major Outfall	Drainage Basin (Acres)	Contribution from other Municipality
16000	Fox Point - Doctor's Park	89.63	No
16984	Greendale - 76th and Root River (Outfall on North side of river)	58.01	Yes
16985	Brown Deer - Teutonia at South Branch Creek	151.95	Yes
16982	Greenfield - Layton Ave at Honey Creek (west)	60.64	Yes
16983	Greenfield - Layton Ave at Honey Creek (east)	56.28	Yes
16006	Timmerman - Hampton Avenue and East of 100th St	316.94	No
8055	Zoo - Bluemound and Mayfair	153.95	No
296	County Grounds - Hwy 100 & Watertown Plank Road	103.74	Yes
17003	County Grounds Wisconsin & Windsor (84th)	51.02	No
16979	County Grounds at 87th	419.01	Yes

VI. Construction Site Pollutant Control

Milwaukee County has elected to defer to municipal construction site pollution control ordinances in lieu of creating a County ordinance. Milwaukee County previously submitted a declaration of this policy to the WDNR.

Procedures for construction site inspection and enforcement of erosion and sediment measures were submitted to the WDNR with the 2007 Annual Report.

VII. Post-Construction Storm Water Management

Milwaukee County has elected to defer to municipal post-construction storm water discharge ordinances in lieu of creating a County ordinance. Milwaukee County previously submitted a declaration of this policy to the WDNR.

Procedures for site planning for water quality impacts and procedures to ensure long-term maintenance of storm water management facilities were submitted to the WDNR with the 2007 Annual Report.

VIII. Pollution Prevention

Milwaukee County submitted a Pollution Prevention Program to the WDNR with the 2007 Annual Report. Measurable goals as outlined by permit elements Part II. F. Paragraphs 1-7 for 2010 are presented below.

1. Routine inspection and maintenance of County owned, permitted or operated structural storm water management facilities to maintain their pollutant removal operating efficiency.

Milwaukee County inspects structural storm water facilities twice annually. These inspections were completed in 2010. No enforcement actions resulting from inspections occurred in 2010.See Appendix 3 for summary of inspections.

2. Routine street sweeping and catch basin cleaning where appropriate.

In 2010, Milwaukee County Departments cleaned catch basins on an as-needed basis. Table 3 indicates the roads swept and the amount of material collected.

Table 3
Street Sweeping Summary

County Highway	Frequency	Collected (Cubic yards)
Silver Spring Dr	2	9
Hampton Ave	1	12
Oklahoma Ave	3	21
76th Street	1	6
92nd St	1	3
Layton Ave	1	7
Mill Rd	10	50
Good Hope Rd	10	50
Teutonia Ave	7	35
43rd St	7	35
Port Washington Rd	7	36
107th St	6	20
Lincoln Memorial Drive	4	not reported
Total		**284**

Table 3 Street Sweeping Summary		
County Zoo	Frequency	Collected (Cubic yards)
April	19	**
May	14	**
June	11	**
July	19	**
August	18	**
September	9	**
October	10	**
* Includes the parking lots and all inside road/walk ways		
**No records of amount collected were kept.		

3. Proper disposal of street sweeping and catch basin cleaning waste.

Milwaukee County disposes of street sweeping and catch basin cleaning waste at a licensed sanitary landfill. In 2010, Milwaukee County began design of a catch basin dewatering system to correctly process solid wastes removed as a result of catch basin cleaning. This will help lower costs associated with the land filling of wet materials and allow for more collection.

4. Limitation to the application of road salt.

Milwaukee County follows Department of Transportation guidance for the application of road salt and other deicers.

5. Proper collection and disposal of leaves and grass clippings, which may involve beneficial on-site reuse as opposed to collection.

Milwaukee County does not collect or dispose of leaves or grass clippings. In golf courses leaves are typically moved to another area of the park if necessary.

6. Storm water pollution prevention planning for County garages, storage areas and other sources of storm water pollution, including quarterly inspections from these facilities.

Milwaukee County has created and will maintain Storm Water Pollution Prevention Plans (SWPPPs) for such facilities and the employees at these facilities will be trained on stormwater pollution prevention. In 2009 Milwaukee County developed SWPPPs for the Fleet Management North Shop and Milwaukee County Transit System's Fiebrantz Bus Garage. These plans were implemented in 2010. Also in 2010 Milwaukee County received a "No Exposure Certification" for the Fiebrantz Bus Garage as a result of creating the SWPPP.

Milwaukee County maintains SWPPPs for the following:

- Lawrence J. Timmerman Airfield
- Fleet Management Main Shop
- Fleet Management North Shop
- Milwaukee County Zoo

SWPPP quarterly reports are in Appendix 9.

7. Application of lawn and garden fertilizer on County controlled properties, with pervious surfaces over five acres each, in accordance with a site-specific nutrient application schedule based on appropriate soil tests.

This is applicable to County golf courses. Fertilizers are applied based on soil testing and meet the requirements of this section.

Spill responses.

In 2010, seven spills were reported on Milwaukee County property or as a result of equipment failure of County property. Please see Appendix 4, 2010 Spills. The spill list was compiled from the WDNRs Bureau for Remediation and Redevelopment Tracking System (BRRTS).

IX. Storm Water Quality Management

Milwaukee County has modeled our storm system to determine compliance with the developed urban area performance standards of s. NR151, Wis. Adm. Code. Milwaukee County has met the goal of 20% reduction of Total Suspended Solids (TSS) by the 2008 deadline. The results of the modeling were submitted with the 2007 Annual Report.

In 2009 Milwaukee County hired Sigma Environmental Services to review the previous modeling effort, to remodel the system based on any errors found in the previous effort and change of conditions (addition of BMPS since the original modeling), and make recommendations as to how to achieve the 40% goal by 2013. This effort is ongoing.

X. Storm Sewer Map

The Milwaukee County storm sewer map undergoes continuous revisions. The map is updated when errors are found in the field and as a result of projects in which the storm sewers were altered.

Updates to the map will be submitted via e-mail to the WDNR before March 31, 2011.

XI. Lake Michigan Outfalls

Studies by the Great Lakes Water Institute (GLWI) and the City of Milwaukee have determined that stormwater runoff is a major contributor to poor water quality at Milwaukee County Beaches. Currently the following Milwaukee County beaches do not meet water quality standards and are listed under Section 303(d) of the federal Clean Water Act as being "Impaired Waters."

- Bender Park
- Bradford
- Doctors Park
- Grant Park
- McKinley
- South Shore Park

Bradford and McKinley Beaches have storm sewer outfalls directly on the beach, and Milwaukee County's stormwater permit required the County to address adverse impacts from stormwater at these beaches. Milwaukee County is also required by the stormwater permit to implement best management practices to reduce contaminants of concern for discharges to impaired waters listed under Section 303(d). The table in Appendix 7 of this report contains best management practices implemented by Milwaukee County at all of these beaches and other areas discharging to impaired waters. A summary of specific measures taken during the permit period beyond the best management practices listed in the table follows:

Bender Park
No additional actions taken.

Bradford Beach
An innovative design incorporating sustainable and aesthetic features was successfully implemented in 2008. Bio-infiltration cells situated along the beach help reduce the volume of stormwater generated and capture contaminants to improve water quality. Infiltration swales with native plantings were incorporated into the design of a re-built parking lot. Additional measures, such as the construction of rain gardens and re-vegetated hillsides in the "upstream" areas of the drainage basin have helped to reduce stormwater volume and siltation. Work in 2009 at Bradford Beach was largely plant maintenance.

Doctors Park
A major outfall is located within Doctors Park. This outfall is inspected annually for dry weather flow. Stormwater, if present, is analyzed for the presence of cross connections during this inspection. In 2009, there was no flow when inspected. In 2009 the storm sewer and sanitary sewer were smoke tested in an effort to locate potential cross connections of the storm and sanitary sewers. No evidence of a cross connection was found. Also see Appendix 5.

Grant Park
No additional actions taken.

McKinley Beach
The design of the McKinley Beach outfall controls was completed in November 2008. Two infiltration systems were installed to reduce stormwater volume and capture contaminants at the McKinley outfalls. At the southern outfall by the sand beach, a surface infiltration basin with native plantings was installed. At the north outfall situated in a rocky, natural-looking beach a subsurface infiltration basin was installed. The construction was substantially complete in August 2009.

South Shore Park
In 2005, Milwaukee County installed a treatment system to treat storm runoff from the boat launch parking lot, which appeared to be a major contributor of stormwater pollution in the park. Aside from the boat launch area, there is no direct stormwater outfall discharge at the beach.

In addition, research by the GLWI has found indications of human fecal contamination within Milwaukee waterways and at beaches along Lake Michigan. In 2009 Milwaukee County began an investigation into possible cross connections of storm and sanitary sewers at these beach locations to attempt to locate a possible source of the possible contamination. A summary of the investigation for 2009 was prepared for an internal memo and is presented in Appendix 5.

XII. Fiscal Analysis

The Table in Appendix 6 provides estimates of the expenditures in 2008, 2009, 2010 and anticipated budget for 2011. Beginning in 2009, County Departments budgeted separately for NR 216 implementation.

XIII. Water Quality Impacts
Milwaukee County anticipates that certain projects carried out in within the permit period will have positive water quality impacts. These projects include:

- Lake Michigan Outfalls as described in the NR 216 Permit (Bradford and McKinley Beaches)
- Pond & Lagoon Demonstration Projects
- Boerner Botanical Gardens Rainwater Harvesting System

XIV. Impaired Water Bodies

Appendix 7 contains a list of Impaired Water Bodies in Milwaukee County and the county action taken to reduce the discharge of pollutants of concern to these waters.

XV Certification

Stevan Keith, P.E. — Date

Sustainability and Environmental Engineer, Environmental Services Division

Appendix 1

Pond and Lagoon Analytical Summary

Pond and Lagoon - Analytical Summary

Humboldt Lagoon		9/17/2003	6/8/2004	6/15/2004	8/31/2004	9/18/2008	10/22/2008	7/22/2009	9/15/2010
E Coli	(per 100 ml)	139.6	2	11		11	23	11*	26*
TSS	(mg/l)	6	5	3		3.2	2.8	9.8	33
Total P	(mg/l)	0.269	0.135	0.2		0.055	0.039	0.11	0.26
Diss P	(mg/l)	0.236	0.072	0.119		0.032	0.016	0.03	0.22
Turb	(NTU)	6	6	5		3.1	2	5.6	15
Chlor A	(ug/L)	10	2			5	5.8	25	130
Chloride	(mg/l)					12	14	10	9.4
pH		8.73	9.72	9.39	8.22	8.31	7.51	8	7.7
Alk	(mg/l CaCO3)	105	71	71	117	120	100	110	130
Cond	(umhos)	285	178	180	332	275	267	263	284

Dineen Lagoon		9/15/2003	6/7/2004	6/15/2004	8/30/2004	9/18/2008	10/22/2008	7/22/2009	9/15/2010
E Coli	(per 100 ml)	390	220	99		112	345	68*	199*
TSS	(mg/l)		40		26	9.8	4.5	6	24
Total P	(mg/l)		0.039		0.128	0.073	0.14	0.051	0.11
Diss P	(mg/l)		ND		ND	0.022	0.039	0.013	0.095
Turb	(NTU)		13		24	7.1	9.5	5.5	17
Chlor A	(ug/L)				43	30	5.3	6.2	38
Chloride	(mg/l)					52	82	100	62
pH			8.29		7.83	7.86	7.4	7.43	8.09
Alk	(mg/l CaCO3)		298		169	170	320	230	220
Cond	(umhos)		917		518	506	689	849	629

Jacobus Lagoon		9/16/2003	6/7/2004	6/15/2004	8/30/2004	9/18/2008	10/22/2008	7/22/2009	9/15/2010
E Coli	(per 100 ml)		19	310		40	5	3*	13*
TSS	(mg/l)	48	13	37	40	21	15	15	29
Total P	(mg/l)	0.11	0.052	0.084	0.063	0.29	0.14	0.28	0.19
Diss P	(mg/l)	0.014	ND	ND	ND	0.12	0.021	0.061	0.2
Turb	(NTU)	47	16	41	46	17	14	12	24
Chlor A	(ug/L)	44			14	26	22	32	77
Chloride	(mg/l)					68	68	56	82
pH		8.25	8.65	8.32	8.14	7.88	7.62	7.79	7.95
Alk	(mg/l CaCO3)	217	186	180	210	150	190	190	170
Cond	(umhos)	835	812	766	801	543	606	590	618

Mitchell Lagoon		9/16/2003	6/7/2004	6/15/2004	8/30/2004				9/15/2010
E Coli	(per 100 ml)								30*
TSS	(mg/l)	11	9	8	5				4.8
Total P	(mg/l)	0.299	0.07	0.123	0.123				0.077
Diss P	(mg/l)	0.086	0.006	0.032	0.028				0.068
Turb	(NTU)	7	4	9	6				3.1
Chlor A	(ug/L)	39			16				17
Chloride	(mg/l)								20
pH		7.89	8.48	8	7.89				7.57
Alk	(mg/l CaCO3)	102	96	93	123				130
Cond	(umhos)	312	305	290	337				344

Washington Lagoon		9/15/2003	6/7/2004	6/15/2004	8/30/2004				9/15/2010
E Coli	(per 100 ml)	1600	61	66					281*
TSS	(mg/l)	61	10	15	25				11
Total P	(mg/l)	0.31	0.09	0.098	0.213				0.16
Diss P	(mg/l)	0.068	ND	ND	0.003				0.15
Turb	(NTU)	76	12	13	23				28
Chlor A	(ug/L)	105			80				55
Chloride	(mg/l)								22
pH			8.28	8.37	8.17				8.1
Alk	(mg/l CaCO3)		147	147	113				120
Cond	(umhos)		405	401	323				317

McGovern Lagoon		9/15/2003	6/7/2004	6/15/2004	8/30/2004				9/15/2010
E Coli	(per 100 ml)								27*
TSS	(mg/l)	94	4	5	21				19
Total P	(mg/l)	0.672	0.056	0.047	0.119				0.15
Diss P	(mg/l)	0.013	ND	ND	ND				0.14
Turb	(NTU)	27	5	6	21				9.4
Chlor A	(ug/L)	52			64				150
Chloride	(mg/l)								34
pH			8.12	8.16	8.03				8.64
Alk	(mg/l CaCO3)		179	173	145				130
Cond	(umhos)		759	751	761				402

* Samples recived beyond EPA holding time for: E.coli by Enzymatic Substrate (by 1 hour).

Appendix 2

Major Outfalls—Dry Weather Field Screening

Appendix 2
Outfall Field Screening

County ID	Prog. Year	Outfall	Date	Time	Last Rain Fall	Amount	Flow	pH	Chlorine	Copper	Turbidity	Phenols	Detergents	Ammonia	Notes
16979	2010	County Grounds at 87th	6/15/2010	2:20 PM	9/11/2010	0.72	LIGHT	8.3	ND	ND	LOW	ND	ND	ND	
16000	2010	Doctor's Park	6/14/2010	1:45 PM	9/11/2010	0.72	NONE	NA	NA	NA	NA	NA	NA	NA	no flow
16985	2010	Brown Deer - Teutonia at South Branch Creek	10/19/2010	10:00 AM	10/14/2010	TRACE	LIGHT	8.6	ND	ND	LOW	ND	ND	ND	
8055	2010	Zoo	6/15/2010	1:05 PM	9/11/2010	0.72	MODERATE	8.4	ND	ND	LOW	ND	ND	ND	
17003	2010	County Grounds Wisconsin & Windsor (84th)	6/15/2010	12:20 PM	9/11/2010	0.72	LIGHT	7.6	ND	ND	LOW	ND	ND	ND	no flow
17022	2010	Highway 100 & Watertown Plank	6/15/2010	1:45 PM	9/11/2010	0.72	LIGHT	8.3	ND	ND	LOW	ND	ND	ND	
16006	2010	Timmerman	10/19/2010	11:10 AM	10/14/2010	TRACE	NONE*	NA	NA	NA	NA	NA	NA	NA	* river water present/ no flow in upstream manholes
16982	2010	Layton Ave at Honey Creek (west)	10/19/2010	11:47 AM	10/14/2010	TRACE	NONE*	NA	NA	NA	NA	NA	NA	NA	* river water present/ no flow in upstream manholes
16983	2010	Layton Ave at Honey Creek (east)	10/19/2010	11:53 AM	10/14/2010	TRACE	NONE*	NA	NA	NA	NA	NA	NA	NA	* river water present/ no flow in upstream manholes
16984	2009	76th Street at Root River	6/14/2010	10:30 AM	9/11/2010	0.72	LIGHT	8.2	ND	ND	LOW	ND	ND	ND	light flow attributed to water in a wetland ditch upstream of outfall

Appendix 3

Storm Water Management Facility Inspections

Spring 2010 Storm Water Management Facility Inspections

	Inspection Type	Location Notes	Major Outfall?	Date Inspected	Date Sediment Depth Taken	GPS STRUCTURES	Serious Problems Reported to Owner?	Comments
South Shore Rain Garden	Rain Garden & Infiltration		No	6/24/2010				
South Shore StormTreat	Sedimentation Chamber	South of boat launch	No	6/24/2010				clear out inlet (already told)
Bradford Beach Outfall 0	Rain Garden & Infiltration	Farthest South	No	6/24/2010				pump out fall 2010
Bradford Beach Outfall 2	Rain Garden & Infiltration		No	6/24/2010				
Bradford Beach Outfall 3	Rain Garden & Infiltration		No	6/24/2010				
Bradford Beach Outfall 4	Rain Garden & Infiltration		No	6/24/2010				
Bradford Beach Outfall 5	Rain Garden & Infiltration		No	6/24/2010				
Bradford Beach Outfall 6	Rain Garden & Infiltration		No	6/24/2010				okay
Bradford Beach Outfall 7	Rain Garden & Infiltration	Farthest North	No	6/17/2010				okay
County Grounds Pond 1	Pond	Near Daycare	yes	6/16/2010				requested repairs complete. Pond looks great
County Grounds Basin 2 - Pond 1	Pond	Wisconsin Ave ponds	yes	6/17/2010				okay
County Grounds Basin 2 - Pond 2	Pond	Wisconsin Ave ponds	yes	6/17/2010				okay
County Grounds Basin 2 - Pond 3	Pond	Wisconsin Ave ponds	yes	6/17/2010				okay
County Grounds Pond 3	Pond	Near Underwood Parkway	yes	6/16/2010				erosion (already told)
County Grounds Pond 10	Pond	Behind Children's Court	No	6/16/2010				Many problems - work on getting a maintenance agreement
Greenfield Park	Pond		No	6/15/2010				okay -
Menomonee Parkway	Pond		No	6/15/2010				
Brown Deer Park	Pond		No	6/15/2010				some erosion in road inlet. Already told parks.
McGovern Park	Pond		No	6/15/2010				
51st St. And Rawson Ave.	Pond		No					NOT OUR JOB TO INSPECT THIS POND (WE HAVE A PARTNERSHIP WITH FRANKLIN)
Washington Park	Pond		No	6/15/2010				
McKinley Raingarden	Rain Garden & Infiltration		No	6/24/2010				
McKinley Subsurface	Rain Garden & Infiltration		No	6/24/2010				Pump out fall 2010

Fall 2010 Storm Water Management Facility Inspections

	Inspection Type	Location Notes	Major Outfall?	Date Inspected	Date Sediment Depth Taken	GPS STRUCTURES	Serious Problems Reported to Owner?	Comments
South Shore Rain Garden	Rain Garden & Infiltration		No	12/17/2010				This BMP does very little.
South Shore StormTreat	Sedimentation Chamber	South of boat launch	No	12/17/2010			yes	clogging of inlet - Difficult to clean trench. This BMP is not very effective.
Bradford Beach Outfall 0	Rain Garden & Infiltration	Farthest South	No	12/7/2010			yes	remove plugs in parking lot rg for the winter. Suck out sed chamber. - leaving plugs in this winter. Will monitor pla
Bradford Beach Outfall 2	Rain Garden & Infiltration		No	12/7/2010			yes	remove plugs in parking lot rg for the winter. - leaving plugs in this winter. Will monitor plant growth next spring
Bradford Beach Outfall 3	Rain Garden & Infiltration		No	12/7/2010				okay
Bradford Beach Outfall 4	Rain Garden & Infiltration		No	12/7/2010				okay
Bradford Beach Outfall 5	Rain Garden & Infiltration		No	12/7/2010				okay
Bradford Beach Outfall 6	Rain Garden & Infiltration		No	12/7/2010			yes	major damage from summer flooding. Parks is applying for funding. Ask parks for update
Bradford Beach Outfall 7	Rain Garden & Infiltration	Farthest North	No	12/7/2010				all not too bad. The outlet is still off kilter. I don't see a problem with leaving it this way - will continue to monitor.
County Grounds Pond 1	Pond	Near Daycare	yes	12/6/2010			yes	Erosion
County Grounds Basin 2 - Pond 1	Pond	Wisconsin Ave ponds	yes	12/10/2010			yes	clear off debris from outlet structure. Repair cmp wier. Stablizie erosion from parkinglots (topsoil, fabric, seed)
County Grounds Basin 2 - Pond 2	Pond	Wisconsin Ave ponds	yes	12/10/2010				
County Grounds Basin 2 - Pond 3	Pond	Wisconsin Ave ponds	yes	12/10/2010			yes	repair cmp wier. Address erosion (more fabric and rip rap). Address sediment pile at outfall (likely from parking lo
County Grounds Pond 3	Pond	Near Underwood Parkway	yes	12/6/2010				
County Grounds Pond 10	Pond	Behind Children's Court	No	12/10/2010			yes	Meet with owners. Working on lagoon management agreement. Notified county of county problems.
Greenfield Park	Pond		No	12/17/2010				
Menomonee Parkway	Pond		No	12/9/2010				Bridge knocked off foundation. Found another inlet, need to map. Jim Cliha is working on changing this pond.
Brown Deer Park	Pond		No	12/9/2010			yes	Inlet failing / sink hole in road.
McGovern Park	Pond		No	12/9/2010			yes	pump out sed chamber
51st St. And Rawson Ave.	Pond		No					NOT OUR JOB TO INSPECT THIS POND (WE HAVE A PARTNERSHIP WITH FRANKLIN)
Washington Park	Pond		No	12/6/2010				condition ok
McKinley Raingarden	Rain Garden & Infiltration		No	12/7/2010				Ok
McKinley Subsurface	Rain Garden & Infiltration		No	12/7/2010			yes	pump out sed tank

Appendix 4

2010 Spill Responses

Milwaukee County NR 216 Permit
2010 Annual Report
2010 Spill Responses

Date	BRRTS Activity Number	Activity Name	Address	Substance	Quantity
7/12/2010	341555662	NIKE MISSILE BATTERY M421FC FORMER/KELLY	6100 S LAKE DR	petroleum (LUST*)	unknown
1/29/2010	441554932	CHILDRENS HOSPITAL OF WISCONSIN SPILL	9000 W WISCONSIN AVE	transmission fluid	2 gallons
3/12/2010	441555078	2900 W KINNICKINNIC RIVER PKWY SPILL	2900 W KINNICKINNIC RIVER PKWY	unknown petroleum	> 5 gallons
3/17/2010	441555088	GENERAL MITCHELL INTERNATIONAL AIRPORT SPILL	5300 S HOWELL AVE GATE C24	hydraulic fluid	30 gallons
3/19/2010	441555137	AIRCRAFT SERVICE INTERNATIONAL GROUP SPILL	5300 S HOWELL AVE	jet fuel	50 gallons
6/22/2010	441555486	MILWAUKEE CNTY PARKS SPILL	2600 16TH AVE	Industrial Chemical (acid)	200 lb
				Bleach	5 Gal
				Industrial Chemical (Base)	50 lb
7/17/2010	441555590	MILWAUKEE CNTY TRANSIT SYSTEM SPILL	6701 S 27TH ST	diesel fuel	1 gallon

Appendix 5

Memo—Investigation Into Possible Cross Connections on Lake Michigan Beaches

COUNTY OF MILWAUKEE

INTER-OFFICE COMMUNICATION

DATE: December 21, 2009

TO: Chuck Ward, Dept. of Parks, Recreation and Culture

C: Greg High, Dept. of Transportation & Public Works

Steve Keith, Dept. of Transportation & Public Works

Dr. Sandra McClellan, Great Lakes Water Institute

FROM: Tim Detzer, Dept. of Transportation & Public Works

SUBJECT: Investigation into possible cross connections on Lake Michigan Beaches in Milwaukee County

Research by the Great Lakes Water Institute (GLWI) as described in their report *Greater Milwaukee Watersheds Pathogen Source Identification* (November, 2009) has found that human fecal contamination is present throughout watersheds in Milwaukee including beaches owned and operated by Milwaukee County.

In the report, researchers at the Great Lakes Water Institute surmise that the source of the human fecal contamination is either illicit connections of the sanitary sewer into storm sewer, or more likely the exfiltration of contaminated water from the sanitary sewer into the storm system due to leaks and breaks in aging sewer systems.

Several storm sewer outfalls along Lake Michigan located in or adjacent to County Parks/Beaches were sampled and reported to contain human fecal contamination. They are:

Bay View Beach
Big Bay Beach
Bradford Beach
Doctors Park
Russell Outfall--South Shore Beach

What follows is a summary to date of our investigations regarding the GLWI's findings of human fecal contamination in storm sewers outfalls at Lake Michigan beaches.

Bay View Beach
GLWI collects samples from a 48-inch storm sewer that outfalls to Lake Michigan in Bay View Park. This storm sewer is owned by the City of Milwaukee. Milwaukee County does own and operate a storm sewer within the park with an outfall to Lake Michigan approximately 500 feet southeast of the 48-inch outfall. The two storm sewers cross on the map, but are not connected. Milwaukee County's storm sewer only collects storm water from Bay View Park.

Milwaukee County does not own or operate any sanitary sewer in Bay View Park. There had been a beach house with sanitary service at the north end of the park, but the beach house was demolished years ago and the only remnant of sanitary sewer was abandoned as a result of Sanitary Sewer Evaluation Survey (SSES) in 2007 or 2008. The sanitary sewer was approximately 1,600 feet northwest of the 48-inch sewer.

At this time, we are not investigating further at this site since we do not operate any sanitary sewer and GLWI is not sampling our outfall.

Big Bay Beach
GLWI collects samples from a 48-inch storm sewer that outfalls to Lake Michigan in Big Bay Park. The outfall is shown in the figure, but the sewer is not. The Village of Whitefish Bay presumably owns this storm sewer. There is another separate (County-owned) storm sewer that collects storm runoff only from the park and Whitefish Bay's neighboring Buckley Park that was installed in the early 1990s. This sewer drains into the 48-inch storm sewer. Milwaukee County does not own or operate any sanitary sewer in Big Bay Park.

During a dry weather site visit (no rain for 72 hours) in the summer of 2009 the 48-inch outfall was flowing, but the County-owned storm sewer in the park was not.

We are not currently investigating this site since we do not operate any sanitary sewer within the park or in the area. Although the park's storm sewer is tributary to the sampled outfall, it is unlikely that Milwaukee County's storm sewer contributes to fecal indicators detected at the outfall.

Bradford Beach
Bradford Beach has multiple storm sewers--twelve being sampled by GLWI (they also collect samples in two ravines). Milwaukee County owns several sanitary sewers in Lake Park and on the beach. These include sewers servicing: Bartolotta's/Lake Park Pavilion, the former NIKE site/service building, the lighthouse, the Bradford Beach house, and the North Point Snack Bar. Investigations to date have not found an illicit connection that could explain the presence of fecal indicator organisms and include:

- CCTV of half the Bartolotta's sewer, which connects to the City of Milwaukee sanitary sewer in Lincoln Memorial Drive. Apparently they hit a buried manhole and could not videotape the entire sewer.
- Dye testing at the Nike Service Building, which also connects to City sewer in Lincoln Memorial Drive
- CCTV of the sewer servicing the lighthouse, which connects to City of Milwaukee sewer in Wahl Avenue. Half of this sewer was newly installed around 2006.
- CCTV of a section of Milwaukee County sanitary sewer in Lincoln Memorial Drive just downstream of the Bradford Beach House. This sewer connects the Bradford beach House with a City of Milwaukee Sanitary sewer. About half of the County's sewer was televised and was in good shape. The remainder could not be televised because it was surcharged. In addition, the City of Milwaukee smoke tested the sanitary sewer in Lincoln Memorial Drive from the Beach House to Kenwood Avenue.

Doctors Park

The outfall sampled at Doctors Park is at the end of the service drive, which leads to the beach on the north end of the park. The sewer collects stormwater from the ravines within the park as well as the drive and outfalls onto the beach. There are two sanitary sewers on the property, one of which has not been in operation for years.. There is a three-inch pressure sewer that serves a comfort building around mid park. It connects to a Fox Point sanitary sewer manhole in Dean Road. There is another gravity sewer that runs the length of the park just west of the beach. It had connected a bathhouse near the storm outfall to Fox Point sanitary sewer south of the park. The bathhouse has been closed for several years, and although the sewer is not abandoned it is no longer connected to Fox Point's sewer because a homeowner installed an in-ground swimming pool and had the sewer capped off. The County would like to abandon the sewer, but access issues have prevented that to date.

During inspection of the storm sewer it was noted that several catch basins were completely clogged. The catch basins were cleaned to permit smoke testing of the storm and pressure sewers to check for possible cross connections. Visu-Sewer completed smoke testing on November 30th, 2009. Smoke testing revealed unmapped storm sewers and highlighted the poor condition of those sewers (smoke rose out of the ground where the condition of the pipes was poor), but yielded no illicit or cross connections. Smoke testing of the pressure sewer was inconclusive as water in the pipes and lift station did not allow smoke through the entire system. No illicit connections were found between the manhole where the pressure sewer outfalls and the connection to Fox Point's sanitary sewer.

Storm and sanitary sewers cross geographically at one point in the two systems, but the sanitary sewer is approximately three to four feet below the storm. The pressure sewer is

also relatively new PVC (installed in 2000). For these two reasons it is not likely that contaminated water is exfiltrating the system and flowing upward to enter the storm at that point.

We will consider dye testing of the comfort station sewer to rule it out as a source of human fecal contamination.

Russell Outfall--South Shore Beach

The Russell avenue outfall is not owned or operated by Milwaukee County, but is adjacent to Cupertino Park. The outfall is approximately 2,400 feet from South Shore Beach so the outfall name is a bit of a misnomer. Milwaukee County does not own any storm sewer within the park. There is approximately 70 feet of 36-inch City of Milwaukee storm sewer within Cupertino Park.

There is 500 feet of 2-inch sanitary force main on the southern end of Cupertino Park approximately 1,000 feet from the outfall. This connects with the City of Milwaukee combined sewer at the intersection of Shore Drive and Iron Street.

We will continue to investigate the potential for cross connections and the condition of sewers at these locations and provide updates as new information is obtained. If you have questions please call me at (414) 278-2988 or reach me via e-mail at tim.detzer@milwcnty.com.

Appendix 6

2008-2011 Budget Estimates

Milwaukee County NR 216 Permit
2010 Annual Report
2008-2011 Budget

Operating Budget	**2008**	**2009**	**2010**	**2011**
Environmental Services	$ 165,179	$ 70,000	$ 130,160	$ 118,600
A&E		$ 19,500	$ 19,500	$ 19,500
Parks		$ 57,900	$ 57,900	$ 57,800
Facilities Management		$ 17,500	$ 17,500	$ 16,300
Timmerman Airport		$ 9,520	$ 9,520	$ 8,600
Zoo		$ 3,700	$ 3,700	$ 3,700
Highway		$ 36,720	$ 36,720	$ 24,700
Fleet		$ 2,700	$ 2,700	$ 2,000
HOC		$ 1,500	$ 1,500	$ 1,500
Transit		$ 19,900	$ 19,900	$ 7,500
Total	**$ 165,179**	**$ 238,940**	**$ 299,100**	**$ 260,200**
Capital Budget	**2008**	**2009**		**2010-2013**
NR 216	$ 3,379	$ -		$ 503,000.00
Bradford Beach	$ 851,602	$ 169,955		$ -
McKinley Beach	$ 176,893	$ 461,419		$ -
Pond & Lagoon	$ 283,609	$ 305,250		$ 186,000
Total	**$ 1,315,482**	**$ 936,625**		**$ 689,000**
Consultant	**$ 65,440**	**$ -**		**$ -**
Total	**$ 1,546,101**	**$ 1,175,565**		**$ 949,200**

Appendix 7

Impaired Water Bodies/Pollutant Reduction

Milwaukee County NR 216 Permit
2010 Annual Report
Impaired Water Bodies/Pollutant Reduction

Impaired Waters	Impairment	County Action
Atwater (Lake Michigan)	bacteria	No County storm sewer input
Beaver Creek	TBD	No County storm sewer input
Bender Park (Lake Michigan)	bacteria	Ponds, rain gardens, catch basin cleaning, street sweeping
Bradford Beach (Lake Michigan)	bacteria	Bioretention, sedimentation chambers, raingardens, catch basin cleaning, street sweeping
Grant Park (Lake Michigan)	bacteria	Ponds, catch basin cleaning, street sweeping
Indian Creek (natural channel downstream of I-43)	sedimentation, phosphorous, metals	No County storm sewer input
Jackson Park Pond	PCBs	No action for PCBs
Lake Michigan	Hg, PCBs	No action for Hg, PCBs
Lincoln Creek	metals, PAHs, phosphorous, sedimentation	Catch basin cleaning, street sweeping
Little Menomonee River	creosote	No County action for creosote (Superfund Site Remediation)
McKinley Beach (Lake Michigan)	bacteria	Infiltration basins, sedimentation chambers, catch basin cleaning, street sweeping
Milwaukee River Estuary (outer harbor to Lake Michigan)	bacteria, metals, PCB	No County storm sewer input
Milwaukee River Estuary (Menomonee River)	bacteria, metals, PCB, phosphorus	No County storm sewer input
Milwaukee River Estuary (Kinnickinnic River)	bacteria, metals, PCB, phosphorus	No County storm sewer input
Milwaukee River Estuary (Milwaukee River)	bacteria, metals, PCB, phosphorus	No County storm sewer input
Milwaukee River	bacteria, PCB	Catch basin cleaning, street sweeping, no County action for PCBs (Legacy Act Cleanup)
Natural Channel Reaches (T8N R21E SW NW 12)	sedimentation	No County storm sewer input
Oak Creek	TBD	Catch basin cleaning, street sweeping
South Shore Beach (Lake Michigan)	bacteria	Sedimentation chamber, catch basin cleaning, street sweeping
Tietjen Beach/Doctors Park (Lake Michigan)	bacteria	Catch basin cleaning, street sweeping
Zeunert Pond	Hg	No County storm sewer input

Appendix 8

Submission of Annual Report to the Milwaukee County Board of Supervisors

COUNTY OF MILWAUKEE
INTEROFFICE COMMUNICATION

Date: February 8, 2011

To: Supervisor Michael Mayo, Sr., Chairperson, Transportation, Public Works Committee
Supervisor Gerry Broderick, Parks, Energy & Environment Committee Chairman

From: Jack Takerian, Director of Transportation and Public Works

Subject: **Milwaukee County NR 216 Permit**
Informational Report – Annual Report

Background

The Wisconsin Department of Natural Resources (WDNR) issued an NR 216 Stormwater Permit to Milwaukee County on December 15, 2006. The permit requires that Milwaukee County submit an annual report to the WDNR by March 31st each calendar year. The annual report provides status updates on each of the permit requirements. The permit further requires that the Milwaukee County Board of Supervisors review or be apprised of the content of the report.

Prepared by: Tim Detzer, P.E. Environmental Engineer

Approved by:

Jack Takerian, Director Transportation & Public Works	Gregory High, P.E., Director DTPW-A&E-ES

Attachments: 2010 Annual Report, Milwaukee County NR 216 Permit

cc: County Executive Marvin Pratt
Lee Holloway, County Board Chairman
Terry Cooley, Chief of Staff

Appendix 9

Storm Water Pollution Prevention Plan Reports

State of Wisconsin
Department of Natural Resources
dnr.wi.gov

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)

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			
Timmerman Airport			
Street Address	City	State	ZIP Code
9305 W. Appleton Ave	Milwaulcee	WI	
County	Facility Contact Person		
Milwaulcee	Greg Failey		

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	
Timothy Detzer		7/20/2010	
Type or Print Name	Position Title		
Timothy Detzer	Environmental Engineer		
Company Name		Telephone Number	
Milwaukee County		414-278-2988	
Mailing Address	City	State	ZIP Code
2711 W. Wells St #213	Milwaukee	WI	53208

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.

DNR Use Only
FIN
FID

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	Inspection Date
Timothy Detyn	7/20/2010
Employer: Milwaukee County	Telephone Number: 414-278-2988

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.

(1)	Has your SWPPP been updated to include current Non-Storm Water Discharge Evaluation results?	☐ Yes	☒ No	☐ N/A
	Has your SWPPP been amended for any new construction that would effect the site map or drainage conditions at the facility?	☐ Yes	☒ No	☐ 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?	☐ Yes	☒ No	☐ N/A
(2)	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?	☐ Yes	☒ No	☒ N/A
(3)	Are there any maintenance or material handling activities conducted outdoors that have not been addressed in your SWPPP?	☐ Yes	☒ No	☐ N/A
	Are outside areas kept in a neat and orderly condition?	☒ Yes	☐ No	☐ N/A
	Are regular housekeeping inspections made?	☒ Yes	☐ No	☐ N/A
	Do you see spots, pools, puddles, or other traces of oils, grease, or other chemicals on the ground?	☐ Yes	☒ No	☐ N/A
	Are particulates on the ground from industrial operations or processes being controlled?	☒ Yes	☐ No	☐ N/A
	Do you see leaking equipment, pipes or containers?	☐ Yes	☒ No	☐ N/A
	Do drips, spills, or leaks occur when materials are being transferred from one source to another?	☐ Yes	☒ No	☐ N/A
	Are drips or leaks from equipment or machinery being controlled?	☒ Yes	☐ No	☐ N/A
	Are cleanup procedures used for spilled solids?	☒ Yes	☐ No	☐ N/A
	Are absorbent materials (floor dry, kitty litter, etc.) regularly used in certain areas to absorb spills?	☒ Yes	☐ No	☐ N/A
	Can you find discoloration, residue, or corrosion on the roof or around vents or pipes that ventilate or drain work areas?	☐ Yes	☒ No	☐ N/A
	Are Best Management Practices implemented to reduce or eliminate contamination of storm water from source areas at the facility?	☒ Yes	☐ No	☐ N/A
	Are Best Management Practices adequately maintained?	☒ Yes	☐ No	☐ 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?	☐ Yes	☒ No	☐ N/A

Comments:

(1) can't find copy of the SWPPP

(2) unknown, but probably not (not much to expose to stormwater)

(3) same as above

(4) - also conducted dry weather inspection - water coming flowing from outfall, but this is also the beginning of Granteera Creek. I check all of the CB's on the non-AOA area where all stormwater contamination would occur and there was no flow in any of them except one by the NW runway. I believe

Quarterly Visual Inspection Reports

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, Tier 2, and Nonmetallic Mining Industrial Storm Water General Permits. These inspections 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 soon thereafter 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. If you were unable to evaluate an outfall during a specific quarter, this should be indicated along with a reason as to why this could not be done.

Outfall Number	Date of Inspection			
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
72a	—	6/3/2010		

Briefly summarize what you found when conducting your Quarterly Visual Inspections. (Include any observations of color, odor, turbidity, floating solids, foam, oil sheen, or any other indications of storm water pollution and the probable sources of any observed storm water contamination.)

Milwaukee County

Semi-annual Non-Storm Water Discharge Evaluation

Inspection Date: 10/19/2010
Inspection Personnel: 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		constant water due to headwaters of Drantora Creek. no flow in upstream manholes.
Outfall 2		X	no flow
Outfall 3			
Outfall 4			

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

State of Wisconsin
Department of Natural Resources

Quarterly Visual Inspection - Field Sheet

Form 3400-176A (R 3/01)

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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			
North Shop			
Street Address	City	State	ZIP Code
6270 North Hopkins St	Milwaukee	WI	53209
Name of Person Conducting Inspection		Inspection Date	
Steven Sieberg		6-17-10	
Employer		Telephone Number	
Sigma Environmental		414-643-4200	
Outfall Number (make reference to site map)	Description of Outfall (e.g., ditch, concrete pipe, grassed swale, etc.)		
1	Grass/paved area on south end of facility		
Time of Rainfall Event	Time of Visual Inspection	**Optional:** Amount of Rainfall at the Time of Observation (nearest tenth of an inch)	
12:00 P	12:30P		

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:	☑ Clear	☐ Red	☐ Yellow	☐ Brown	☐ Other:
Odor:	☑ None	☐ Musty	☐ Sewage	☐ Rotten Egg	☐ Other:
Clarity:	☑ Clear	☐ Cloudy	☐ Opaque	☐ Suspended Solids	☐ Other:
Floatables:	☑ None	☐ Foam	☐ Garbage	☐ Oily Film	☐ Other:
Deposits / Stains:	☑ None	☐ Oily	☐ Sludge	☐ Sediments	☐ Other:

Comments:

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

State of Wisconsin
Department of Natural Resources

Quarterly Visual Inspection - Field Sheet

Form 3400-176A (R 3/01)

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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			
North Shop			
Street Address	City	State	ZIP Code
6270 North Hopkins Street	Milwaukee	WI	53209
Name of Person Conducting Inspection		Inspection Date	
Steven Syburg		6-17-10	
Employer		Telephone Number	
Sigma Environmental			
Outfall Number (make reference to site map)	Description of Outfall (e.g., ditch, concrete pipe, grassed swale, etc.)		
2	Storm Sewer / outlet on west side of facility		
Time of Rainfall Event	Time of Visual Inspection	**Optional:** Amount of Rainfall at the Time of Observation (nearest tenth of an inch)	
12:00 P	12:30 P		

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:	☐ Clear	☐ Red	☐ Yellow	☑ Brown	☐ Other:
Odor:	☐ None	☐ Musty	☑ Sewage	☐ Rotten Egg	☐ Other:
Clarity:	☐ Clear	☐ Cloudy	☑ Opaque	☐ Suspended Solids	☐ Other:
Floatables:	☐ None	☐ Foam	☐ Garbage	☑ Oily Film	☐ Other:
Deposits / Stains:	☐ None	☑ Oily	☐ Sludge	☐ Sediments	☐ Other:

Comments:

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

State of Wisconsin
Department of Natural Resources

Quarterly Visual Inspection - Field Sheet

Form 3400-176A (R 3/01)

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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			
North Shop			
Street Address	City	State	ZIP Code
6270 North Hopkins St	Milwaukee	WI	53209
Name of Person Conducting Inspection		Inspection Date	
Steven Syburg		6-17-16	
Employer		Telephone Number	
Sigma Environmental		414-643-4200	
Outfall Number (make reference to site map)	Description of Outfall (e.g., ditch, concrete pipe, grassed swale, etc.)		
3	Storm Sewer on the north end of the facility		
Time of Rainfall Event	Time of Visual Inspection	**Optional:** Amount of Rainfall at the Time of Observation (nearest tenth of an inch)	
12:00 P	12:30 P	Storm Sewer	

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:	☐ Clear	☐ Red	☐ Yellow	☑ Brown	☐ Other:
Odor:	☐ None	☐ Musty	☑ Sewage	☐ Rotten Egg	☐ Other:
Clarity:	☐ Clear	☐ Cloudy	☑ Opaque	☐ Suspended Solids	☐ Other:
Floatables:	☐ None	☐ Foam	☑ Garbage	☑ Oily Film	☐ Other:
Deposits / Stains:	☐ None	☑ Oily	☐ Sludge	☑ Sediments	☐ Other:

Comments:

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

State of Wisconsin
Department of Natural Resources

Quarterly Visual Inspection - Field Sheet

Form 3400-176A (R 3/01)

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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			
FLEET MANAGEMENT/HIGHWAY WORKS SHOP			
Street Address	City	State	ZIP Code
6270 NORTH HOPKINS STREET	HUMBOLDT	WI	53209
Name of Person Conducting Inspection		Inspection Date	
JONATHAN HOOPER		3-11-10	
Employer		Telephone Number	
SIGMA ENVIRONMENTAL			
Outfall Number (make reference to site map)	Description of Outfall (e.g., ditch, concrete pipe, grassed swale, etc.)		
#01	GRASSED/PAVED AREA SURROUNDING FACILITY		
Time of Rainfall Event	Time of Visual Inspection	**Optional:** Amount of Rainfall at the Time of Observation (nearest tenth of an inch)	
3-11-10 (1ST RAIN)	4:30 PM	0.16"	

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:	☒ Clear	☐ Red	☐ Yellow	☐ Brown	☐ Other:
Odor:	☒ None	☐ Musty	☐ Sewage	☐ Rotten Egg	☐ Other:
Clarity:	☒ Clear	☐ Cloudy	☐ Opaque	☐ Suspended Solids	☐ Other:
Floatables:	☒ None	☐ Foam	☐ Garbage	☐ Oily Film	☐ Other:
Deposits / Stains:	☒ None	☐ Oily	☐ Sludge	☐ Sediments	☐ Other:

Comments:

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

State of Wisconsin
Department of Natural Resources

Quarterly Visual Inspection - Field Sheet

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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			
FLEET MANAGEMENT/HIGHWAY NORTH SHOP			
Street Address	City	State	ZIP Code
6270 NORTH HOPKINS STREET	MILWAUKEE	WI	53209
Name of Person Conducting Inspection		Inspection Date	
JONATHAN HOOPER		3-11-10	
Employer		Telephone Number	
SIGNS ENVIRONMENTAL			
Outfall Number (make reference to site map)	Description of Outfall (e.g., ditch, concrete pipe, grassed swale, etc.)		
#02	DITCH / PIPE		
Time of Rainfall Event	Time of Visual Inspection	**Optional:** Amount of Rainfall at the Time of Observation (nearest tenth of an inch)	
3-11-10 (AT RAIN)	4:30 PM	0.10"	

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:	☒ Clear	☐ Red	☐ Yellow	☐ Brown	☐ Other:
Odor:	☒ None	☐ Musty	☐ Sewage	☐ Rotten Egg	☐ Other:
Clarity:	☒ Clear	☐ Cloudy	☐ Opaque	☐ Suspended Solids	☐ Other:
Floatables:	☒ None	☐ Foam	☐ Garbage	☐ Oily Film	☐ Other:
Deposits / Stains:	☒ None	☐ Oily	☐ Sludge	☐ Sediments	☐ Other:

Comments:

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

State of Wisconsin
Department of Natural Resources

Quarterly Visual Inspection - Field Sheet

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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			
Fleet Management / Highway North Shop			
Street Address	City	State	ZIP Code
6270 North Hopkins Street	Hillward	WI	54829
Name of Person Conducting Inspection		Inspection Date	
Jonathan Moore		3-11-10	
Employer		Telephone Number	
Sigma Environmental			
Outfall Number (make reference to site map)	Description of Outfall (e.g., ditch, concrete pipe, grassed swale, etc.)		
# 03	Storm Sewer		
Time of Rainfall Event	Time of Visual Inspection	**Optional:** Amount of Rainfall at the Time of Observation (nearest tenth of an inch)	
3-11-10 (Light Rain)	4:30 PM	0.16"	

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:	☒ Clear	☐ Red	☐ Yellow	☐ Brown	☐ Other:
Odor:	☒ None	☐ Musty	☐ Sewage	☐ Rotten Egg	☐ Other:
Clarity:	☒ Clear	☐ Cloudy	☐ Opaque	☐ Suspended Solids	☐ Other:
Floatables:	☐ None	☐ Foam	☒ Garbage	☐ Oily Film	☐ Other: Debris
Deposits / Stains:	☒ None	☐ Oily	☐ Sludge	☐ Sediments	☐ Other:

Comments: Some garbage/debris collecting near outfall 03

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

State of Wisconsin
Department of Natural Resources

Quarterly Visual Inspection - Field Sheet

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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			
Milwaukee County Fleet Management / Highway North Shop			
Street Address	**City**	**State**	**ZIP Code**
6270 North Hopkins Street	Milwaukee	WI	53209
Name of Person Conducting Inspection		**Inspection Date**	
Steven Syburg		7-23-10	
Employer		**Telephone Number**	
Sigma Environmental		414-643-4200	
Outfall Number (make reference to site map)	**Description of Outfall (e.g., ditch, concrete pipe, grassed swale, etc.)**		
1	grass slope		
Time of Rainfall Event	**Time of Visual Inspection**	**Optional:** Amount of Rainfall at the Time of Observation (nearest tenth of an inch)	
2:00 - 10:00 pm	3:00 pm		

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:	☒ Clear	☐ Red	☐ Yellow	☐ Brown	☐ Other:
Odor:	☒ None	☐ Musty	☐ Sewage	☐ Rotten Egg	☐ Other:
Clarity:	☒ Clear	☐ Cloudy	☐ Opaque	☐ Suspended Solids	☐ Other:
Floatables:	☒ None	☐ Foam	☐ Garbage	☐ Oily Film	☐ Other:
Deposits / Stains:	☒ None	☐ Oily	☐ Sludge	☐ Sediments	☐ Other:

Comments:

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

State of Wisconsin
Department of Natural Resources

Quarterly Visual Inspection - Field Sheet

Form 3400-176A (R 3/01)

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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			
Milwaukee County Fleet Management / Highway North Shop			
Street Address	**City**	**State**	**ZIP Code**
6270 North Hopkins Street	Milwaukee	WI	53209
Name of Person Conducting Inspection		**Inspection Date**	
Steven Syburg		7-23-10	
Employer		**Telephone Number**	
SIGMA ENVIRONMENTAL		414-643-4200	
Outfall Number (make reference to site map)	**Description of Outfall (e.g., ditch, concrete pipe, grassed swale, etc.)**		
2	street drain		
Time of Rainfall Event	**Time of Visual Inspection**	**Optional:** Amount of Rainfall at the Time of Observation (nearest tenth of an inch)	
2:00 - 10:00 pm	3:00 pm		

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:	☒ Clear	☐ Red	☐ Yellow	☐ Brown	☐ Other:
Odor:	☒ None	☐ Musty	☐ Sewage	☐ Rotten Egg	☐ Other:
Clarity:	☐ Clear	☒ Cloudy	☐ Opaque	☐ Suspended Solids	☐ Other:
Floatables:	☐ None	☐ Foam	☐ Garbage	☒ Oily Film	☐ Other:
Deposits / Stains:	☐ None	☒ Oily	☐ Sludge	☐ Sediments	☐ Other:

Comments:

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

State of Wisconsin
Department of Natural Resources

Quarterly Visual Inspection - Field Sheet

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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			
Milwaukee County Fleet Management / Highway North Shop			
Street Address	**City**	**State**	**ZIP Code**
6270 North Hopkins Street	Milwaukee	WI	53209
Name of Person Conducting Inspection		**Inspection Date**	
Steven Syburg		7-23-10	
Employer		**Telephone Number**	
Sigma Environmental		414-643-4200	
Outfall Number (make reference to site map)	**Description of Outfall (e.g., ditch, concrete pipe, grassed swale, etc.)**		
3	site drain. grate on top		
Time of Rainfall Event	**Time of Visual Inspection**	**Optional:** Amount of Rainfall at the Time of Observation (nearest tenth of an inch)	
2:00 - 10:00 pm	3:00 pm		

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:	☐ Clear	☐ Red	☐ Yellow	☒ Brown	☐ Other:
Odor:	☐ None	☐ Musty	☒ Sewage	☐ Rotten Egg	☐ Other:
Clarity:	☐ Clear	☒ Cloudy	☐ Opaque	☐ Suspended Solids	☐ Other:
Floatables:	☐ None	☐ Foam	☒ Garbage	☐ Oily Film	☐ Other:
Deposits / Stains:	☐ None	☐ Oily	☐ Sludge	☒ Sediments	☐ Other:

Comments:

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

Milwaukee – North Shop
Semi-annual Non-Storm Water Discharge Evaluation

Inspection Date: 6/19/10
Inspection Personnel: DAVID BUCK

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 outfall 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		light flow, oil film on top of water. color / odor normal.
Outfall 3		X	

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

Milwaukee – North Shop
Semi-annual Non-Storm Water Discharge Evaluation

Inspection Date: 7/27/10
Inspection Personnel: David Buck

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 outfall 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	X	
Outfall 3	X	X	Trickle, dark color, normal smell

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

State of Wisconsin
Department of Natural Resources

Quarterly Visual Inspection - Field Sheet

Form 3400-176A (R 3/01)

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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			
North Shop			
Street Address	**City**	**State**	**ZIP Code**
6270 North Hopkins St	Milwaukee	WI	53209
Name of Person Conducting Inspection		**Inspection Date**	
Jon Mader		12-31-10	
Employer		**Telephone Number**	
Sigma Environmental		414-643-4200	
Outfall Number (make reference to site map)	**Description of Outfall (e.g., ditch, concrete pipe, grassed swale, etc.)**		
1	Grass / paved areas on south side of facility		
Time of Rainfall Event	**Time of Visual Inspection**	**Optional:** Amount of Rainfall at the Time of Observation (nearest tenth of an inch)	
9:20	9:25		

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:	☒ Clear	☐ Red	☐ Yellow	☐ Brown	☐ Other:
Odor:	☒ None	☐ Musty	☐ Sewage	☐ Rotten Egg	☐ Other:
Clarity:	☒ Clear	☐ Cloudy	☐ Opaque	☐ Suspended Solids	☐ Other:
Floatables:	☒ None	☐ Foam	☐ Garbage	☐ Oily Film	☐ Other:
Deposits / Stains:	☒ None	☐ Oily	☐ Sludge	☐ Sediments	☐ Other:

Comments:

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

State of Wisconsin
Department of Natural Resources

Quarterly Visual Inspection - Field Sheet

Form 3400-176A (R 3/01)

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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			
NORTH SHOP			
Street Address	**City**	**State**	**ZIP Code**
6270 NORTH HOPKINS ST	MILWAUKEE	WI	53209
Name of Person Conducting Inspection		**Inspection Date**	
JONATHAN MAYER		12/31/10	
Employer		**Telephone Number**	
SIGMA ENVIRONMENTAL		414-643-4200	
Outfall Number (make reference to site map)	**Description of Outfall (e.g., ditch, concrete pipe, grassed swale, etc.)**		
2	STORM WATER OUTLET ON WEST SIDE OF THE FACILITY		
Time of Rainfall Event	**Time of Visual Inspection**	**Optional:** Amount of Rainfall at the Time of Observation (nearest tenth of an inch)	
9:25	9:30		

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:	☐ Clear	☐ Red	☐ Yellow	☒ Brown	☐ Other:
Odor:	☒ None	☐ Musty	☐ Sewage	☐ Rotten Egg	☐ Other:
Clarity:	☐ Clear	☐ Cloudy	☐ Opaque	☒ Suspended Solids	☐ Other:
Floatables:	☐ None	☒ Foam	☐ Garbage	☐ Oily Film	☐ Other:
Deposits / Stains:	☐ None	☐ Oily	☐ Sludge	☒ Sediments	☐ Other:

Comments:

DIRT / YELLOW SILTEN FROM STREET, NOT FROM PROPERTY

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

State of Wisconsin
Department of Natural Resources

Quarterly Visual Inspection - Field Sheet

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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			
North Shop			
Street Address	**City**	**State**	**ZIP Code**
6270 North Hopkins St	Milwaukee	WI	53209
Name of Person Conducting Inspection		**Inspection Date**	
Jonathan Hader		12/31/10	
Employer		**Telephone Number**	
Sigma Environmental		414-643-4200	
Outfall Number (make reference to site map)	**Description of Outfall (e.g., ditch, concrete pipe, grassed swale, etc.)**		
3	Storm water sewer on the north end of the facility		
Time of Rainfall Event	**Time of Visual Inspection**	**Optional:** Amount of Rainfall at the Time of Observation (nearest tenth of an inch)	
9:20	9:35		

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:	☐ Clear	☐ Red	☐ Yellow	☐ Brown	☒ Other:
Odor:	☐ None	☐ Musty	☐ Sewage	☐ Rotten Egg	☑ Other:
Clarity:	☐ Clear	☐ Cloudy	☐ Opaque	☐ Suspended Solids	☑ Other:
Floatables:	☐ None	☐ Foam	☐ Garbage	☐ Oily Film	☒ Other:
Deposits / Stains:	☐ None	☐ Oily	☐ Sludge	☐ Sediments	☑ Other:

Comments:

Gate locked could not observe outfall

Some garbage/stones by outfall

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

Gate was locked

State of Wisconsin
Department of Natural Resources
dnr.wi.gov

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)

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			
Fleet Management – Main Shop / Highway Operations			
Street Address	**City**	**State**	**ZIP Code**
10340/10190 W. Watertown Plank Rd	Wauwatosa	WI	53226
County	**Facility Contact Person**		
Milwaukee	Dan Goeden		

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
Timothy Detzer	5/18/2010
Type or Print Name	**Position Title**
Timothy Detzer	Environmental Engineer
Company Name	**Telephone Number**
Milwaukee County DTPW	414-278-2988

Mailing Address	City	State	ZIP Code
2711 W. Wells St. #213	Milwaukee	WI	53208

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.

DNR Use Only
FIN
FID

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	Inspection Date
Tim Detzer	4/14/2010
Employer	**Telephone Number**
Milwaukee County DTPW	414-278-2988

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.

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

Comments:

- areas are considerably cleaner than they were during my last inspection in 2003.
- Sediment should be removed from paved areas in storage yards
- Catch basins should be cleaned
- limit the amount of time crash vehicles remain on site.
- should attempt some sort of erosion control for material piles (or cover)
- vehicle wash pit

Milwaukee – Fleet Management
Semi-annual Non-Storm Water Discharge Evaluation

Inspection Date: 11/16/2010
Inspection Personnel: Tim Oetzer

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		light flow (clear) water is coming from CB west of salt dome. CB is clogged and there is pooling.
Outfall 2		X	(in parking lot in front of main building
Outfall 3	X		light flow - clear ; swale is wet and is source - no entry from laterals and flow diminishes upstream
Outfall 4	NA		~~sta~~ need to dye test pipe.

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

- clean CB in grass by sheriffs' substation
- clean CB west of salt dome
- north west ~~CB~~ in Hwy storage yard ~~with debris and vegetation~~ conditions

Milwaukee County– Main Shop/Hi ghway Operations
Semi-annual Non-Storm Water Discharge Evaluation

Inspection Date: April 14, 2010
Inspection Personnel: Tim Detzer/Sean Hayes

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 west of gas pumps Light flow originating from vehicle was pit. Sediment in CB
Outfall 2		X	West Parking Lot (by USTs)
Outfall 3	X		Outfall between Fleet and Sheriff buildings—lightflow diminished as we traced it upstream-appeared to be from groundwater
Outfall 4			

Report any issues to the Fleet Management Director or County Environmental Engineer. Submit completed inspection documentation to the Director and County Environmental Engineer.

State of Wisconsin
Department of Natural Resources

Quarterly Visual Inspection - Field Sheet

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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			
Milwaukee County - Fleet Management Main Shop			
Street Address	**City**	**State**	**ZIP Code**
10340 W. Watertown Plank Rd	Wauwatosa	WI	53226
Name of Person Conducting Inspection		**Inspection Date**	
Tim Detzer		11/4/2010	
Employer		**Telephone Number**	
Milwaukee County		414-278-2988	

Outfall Number (make reference to site map)	Description of Outfall (e.g., ditch, concrete pipe, grassed swale, etc.)

Time of Rainfall Event	Time of Visual Inspection	**Optional:** Amount of Rainfall at the Time of Observation (nearest tenth of an inch)
3:30 - 4:45	3:45 pm	0.1

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:	☐ Clear	☐ Red	☐ Yellow	☐ Brown	☐ Other:
Odor:	☐ None	☐ Musty	☐ Sewage	☐ Rotten Egg	☐ Other:
Clarity:	☐ Clear	☐ Cloudy	☐ Opaque	☐ Suspended Solids	☐ Other:
Floatables:	☐ None	☐ Foam	☐ Garbage	☐ Oily Film	☐ Other:
Deposits / Stains:	☐ None	☐ Oily	☐ Sludge	☐ Sediments	☐ Other:

Comments:

CB south of building had oily sheen on ground
- highway yard was locked
- lots of debris at wash pit
- sediment accumulation at western CB by Watertown Plank (clear flow)
- fine sediment in CB by gas pumps

all other CB's clear

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

State of Wisconsin
Department of Natural Resources

Quarterly Visual Inspection - Field Sheet

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

Facility Name: Zoo

Street Address	City	State	ZIP Code

Name of Person Conducting Inspection	Inspection Date
Karl Ittackkarth	6/2/2010
Employer Milw Co. Zoo	**Telephone Number**

Outfall Number (make reference to site map)	Description of Outfall (e.g., ditch, concrete pipe, grassed swale, etc.)
	72" box to open ditch (creek)

Time of Rainfall Event	Time of Visual Inspection	**Optional:** Amount of Rainfall at the Time of Observation (nearest tenth of an inch)
~ (inspected during event)	5:30 pm	0.64"

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:	☑ Clear	☐ Red	☐ Yellow	☐ Brown	☐ Other:
Odor:	☑ None	☐ Musty	☐ Sewage	☐ Rotten Egg	☐ Other:
Clarity:	☑ Clear	☐ Cloudy	☐ Opaque	☐ Suspended Solids	☐ Other:
Floatables:	☑ None	☐ Foam	☐ Garbage	☐ Oily Film	☐ Other:
Deposits / Stains:	☑ None	☐ Oily	☐ Sludge	☐ Sediments	☐ Other:

Comments: sticks / leaves / grass

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