

2011-2012 (Due by March 31, 2013)

For the Cities of Fitchburg, Madison, Middleton, Monona, Sun Prairie, and Verona; the Villages of DeForest, Maple Bluff, McFarland, Shorewood Hills, and Waunakee; the Towns of Blooming Grove, Burke, Madison, Middleton, Westport, and Windsor; Dane County; and the University of Wisconsin – Madison

This document is for the purpose of biennial reporting on activities undertaken pursuant to WPDES Permit No. WI-S058416-3 for the above listed municipalities. An owner or operator of a municipal separate storm sewer system covered by a municipal storm water discharge permit under Chapter NR 216, Wis. Adm. Code, is required to submit a biennial report to the Department of Natural Resources by March 31 of every odd numbered year to report on activities for the previous two (2) calendar year. Information in the biennial report will be used by the Department of Natural Resources to assist with assessing permit compliance. Use of this specific form is optional. The Department of Natural Resources has created this form for the user's convenience and believes that the information requested on this form meets the reporting requirements for an owner or operator of a municipal separate storm sewer system covered by WPDES Permit No. WI-S058416-3. However, an owner or operator of a municipal separate storm sewer system that uses and completes this form will not automatically be deemed to be in compliance with other requirements of WPDES Permit No. WI-S058416-3.

Complete and submit the biennial report by March 31, 2013, to the following address: Storm Water Management Specialist, Wisconsin Dept. of Natural Resources, South Central Region, 3911 Fish Hatchery Rd., Fitchburg, WI 53711

I. MUNICIPAL INFORMATION

Name of municipality City of Middleton	Contact person and title Gary Huth
Mailing Address 7426 Hubbard Ave. Middleton, WI 53562	Telephone no. 608-821-8370
	Fax no. 608-827-1080
	E-mail address ghuth@ci.middleton.wi.us

Does the municipality have an internet website? Yes No
If yes, provide internet address:
www.CityOfMiddleton.us

If the municipality has an internet website, is there current information posted about or links provided to the municipal storm water discharge permit and the municipality's storm water management program? Yes No
If yes, provide internet address:
Permit and Annual / BiAnnual Reports: <http://www.ci.middleton.wi.us/index.aspx?NID=279>
Storm Water Management Program: <http://www.ci.middleton.wi.us/index.aspx?NID=286>

II. CERTIFICATION

I certify that the information contained in this document and all attachments were gathered and prepared under my direction or supervision. Based on my inquiry of the person or persons under my direction or supervision involved in the preparation of this document, to the best of my knowledge, the information is true, accurate, and complete. I further certify that the municipality's governing body or delegated representatives have reviewed or been apprised of the contents of the biennial report.

Authorized representative printed name Lorie J Burns	Authorized representative title City Clerk
Authorized representative signature	Date signed

III. GENERAL INFORMATION

a. Has the municipality made any changes under its legal authority that affects implementation of the requirements of the municipal storm water discharge permit (e.g., changes to ordinances)? Yes No
 If yes, describe the changes in **Appendix A**.

b. List the people who attended quarterly meetings on behalf of the municipality and indicate the quarterly meetings in which the municipality was represented for the reporting year.

<u>Name</u>	<u>Title</u>	<u>Affiliation</u>
Gary Huth	Asst. Dir Public Works	City of Middleton
Kevin McNulty	Engineering Tech III	City of Middleton

c. Quarterly meetings represented: February May August November

d. Describe in **Appendix A** how the municipality internally coordinates implementation of the requirements of the municipal storm water discharge permit between the municipality's agencies, departments, and programs. Provide any documentation on how this was accomplished, such as meeting agendas, minutes, memos, etc.

e. Describe in **Appendix A** how elected and municipal officials and appropriate staff are kept apprised of the municipal storm water discharge permit. Provide any documentation on how this was accomplished, such as meeting agendas, minutes, memos, etc.

f. Has the municipality prepared its own municipal-wide storm water management plan? Yes No

If yes, date of storm water management plan: The storm water management plan was completed in winter 2007/2008 with respect to TSS. Revisions to that plan plus final summary were completed in 2010. A major update is proposed in 2013.

g. Describe in **Appendix A** how the requirements of the municipal storm water discharge permit are incorporated into master planning activities, neighborhood plans, development plans, or other comprehensive planning activities.

IV. Permit Conditions

a. Public Education and Outreach

Dane County only:

1. Has any municipality failed to submit its financial contribution in accordance with the *Intergovernmental Agreement to Create and Fund a Position Responsible for Storm Water Management Education and Outreach*? Yes No

If yes, list municipalities:

2. Describe in **Appendix B** the Information and Education plan implementation and activities for the reporting year(s), including any materials produced and their distribution. Provide examples. Include an assessment of the effectiveness of reaching targeted audiences and delivery of intended messages.

All municipalities:

3. Describe in **Appendix B** how any materials produced by Dane County on behalf of the municipality have been used and/or distributed. Provide examples.

4. Describe in **Appendix B** any individual information and education activities undertaken for the reporting year, including any materials produced and their distribution. Provide examples. Include an assessment of the effectiveness of reaching targeted audiences and delivery of intended messages.

b. Public Involvement and Participation

1. The group permit requires that the information in this biennial report be an agenda item for discussion before the appropriate governing board(s) or council(s) contemporaneous with the submittal of the biennial report to the Department of Natural Resources. Accordingly, please provide the following information:

2. Name of board(s)/council(s):

City of Middleton Common Council

3. Date(s) of meeting(s) to discuss the biennial report:

March 19, 2013 See minutes at: <http://sire.cityofmiddleton.us/mtgviewer.aspx?meetid=556&doctype=MINUTES>

4. Describe in **Appendix B** the opportunities and types of forums for public involvement and participation in permit related activities that occurred during the reporting year. Include an assessment of the effectiveness of efforts to involve the public and the level of participation.

c. Illicit Discharge Detection and Elimination

1. Describe in **Appendix B** the illicit discharge detection and elimination program developed to comply with the permit. Include information on the municipality's strategy to prevent, detect, and eliminate all types of illicit discharges; how priorities are established for field screening and the methodologies to be used for field screening; and procedures for responding to and rectifying illicit discharges to the MS4, including spills, improper disposal of waste or dumping. Also include an assessment of the effectiveness of detection and elimination of illicit discharges, prevention of improper disposal of waste and dumping, the handling of spills, and any enforcement efforts involving these activities.

2. Has the municipality performed any field screening for the reporting year? Yes As observed incidental to routine maint. No

If yes, please provide documentation in **Appendix B** the results of the field screening.

3. Has the municipality investigated any instances of spills, improper disposal of waste or dumping? Yes No
If yes, please provide documentation in **Appendix B** the results of the investigations.

4. Describe in **Appendix B** how the municipality facilitates public reporting of illicit discharges.

d. Construction Site Pollution Control

1. Does the municipality notify landowners who apply for local construction or land disturbing permits of the possible applicability of Subchapter III of Chapter NR 216, Wis. Adm. Code, *Construction Site Storm Water Discharge Permits*, to the landowners' construction projects? Yes No

If yes, please explain the process for providing this notification. If no, please explain why this notification is not provided.

City has included on its Land Disturbing Permit Application form the following statement:

"If your construction site includes 1 or more acres of land disturbance and it is not a commercial building site, you also need to obtain storm water construction site permit from the Department of Natural Resources (with few exceptions). For more information, see the DNR Construction Site Erosion Control and Storm Water Management web site at:

<http://www.dnr.state.wi.us/runoff/stormwater/const.htm> or contact Eric Rortvedt (DNR Storm Water Engineer) at 273-5612."

Dane County staff routinely provides similar notification on behalf of the City as part of their plan review services.

2. Describe in **Appendix B** the procedures the municipality employs to incorporate timely consideration of potential water quality impacts from construction sites and that ensure implementation of the standards of ss. NR 151.11 and 151.23, Wis. Adm. Code, or equivalent local standards. Be specific of when in the review and approval process this is done, and how the municipality ensures compliance with the standards.

3. Describe in **Appendix B** the procedures the municipality employs for the inspection of construction sites and enforcing erosion control standards. Provided documentation of any enforcement actions taken that resulted in the issuance of a stop work order, citation, or summons for a construction site where one or more acre of land is disturbed. Include the name and address of the landowner, the site name and location, date(s) of violation(s), type of violation(s), and the status of resolution of the enforcement action.

4. List the name, title, address, telephone number, e-mail address, and duties of all persons designated with the responsibility to ensure implementation of the standards of ss. NR 151.11 and 151.23, Wis. Adm. Code, or equivalent local standards.

Scott Ellarson, Building Inspector - approves plans, oversees Dane County plan review, E.C. inspection

Rich Weihert, Engineering Tech III - approves plans, performs erosion control inspection

Mark Walther, Compliance Officer - monitors field conditions for compliance of a variety of ordinances

7426 Hubbard Ave.

Middleton, WI 53562

5. Include in **Appendix B** an assessment of the municipality's construction site pollution control program effectiveness in meeting the standards of ss. NR 151.11 and 151.23, Wis. Adm. Code, including enforcement efforts.

e. Post-Construction Site Storm Water Management

1. Describe in **Appendix B** the procedures the municipality employs to incorporate timely consideration of potential water quality impacts from construction sites and that ensure implementation of the standards of ss. NR 151.12 and 151.24, Wis. Adm. Code, or equivalent local standards. Be specific of when in the review and approval process this is done, and how the municipality ensures compliance with the standards.

2. Describe in **Appendix B** the procedures the municipality employs for inspecting the construction and installation of storm water best management practices and enforcement actions to ensure compliance with post-construction storm water management standards. Provided documentation of any enforcement actions taken that resulted in the issuance of a stop work order, citation, or summons for non-compliance with post-construction storm water management standards for sites where one or more acre of land is disturbed. Include the name and address of the landowner, the site name and location, date(s) of violation(s), type of violation(s), and the status of resolution of the enforcement action.

3. List the name, title, address, telephone number, e-mail address, and duties of all persons designated with the responsibility to ensure implementation of the standards of ss. NR 151.12 and 151.24, Wis. Adm. Code, or equivalent local standards, and the requirements of Subchapter III of Chapter NR 216, Wis. Adm. Code, *Construction Site Storm Water Discharge Permits*, where applicable.

Shawn Stauske, Public Works Dir. / City Engineer - designs public improvement projects, oversees PW policies
Gary Huth, Asst Public Works Dir. / Asst City Engineer - staff to WRMC, reviews plans/storm calcs, drafts ordinances
7426 Hubbard Ave
Middleton, WI 53562
608-821-8370

4. Include in **Appendix B** an assessment of the municipality's post-construction site storm water management program effectiveness in meeting the standards of ss. NR 151.12 and 151.24, Wis. Adm. Code, including enforcement efforts.

f. Municipal Pollution Prevention

1. List in **Appendix B** an inventory of long-term storm water best management practices owned, operated, managed, or maintained by the municipality. Include storm water basins, infiltration practices, treatment structures, and other practices for long-term water quality treatment. For each best management practice, provide the name, location, type of practice, and any maintenance activities undertaken for the practice during the reporting year. Also in **Appendix B**, provide a description of the maintenance procedures used and schedules for each long-term storm water best management practice and the approximate amount of solids collected (tons or cubic yards) from any structural control receiving maintenance.

2. Does the municipality perform catch basin cleaning? Yes No
If yes, approximate amount of solids collected (tons or cubic yards): 112 CY. Describe in **Appendix B** the procedures used and schedules for catch basin cleaning. If no, explain:

3. Does the municipality perform street sweeping? Yes No
If yes, approximate number of street miles swept: 3997 lane miles ; approximate amount of solids collected (tons or cubic yards): 1530 CY sediment and leaves from streets .

Describe in **Appendix B** the procedures used and schedules for street sweeping. If no street sweeping is performed, explain:

4. Describe in **Appendix B** the municipality's procedures for roadway snow removal and de-icing. Provide information on what practice and procedures the municipality has implemented in consideration of water quality impacts from snow removal and de-icing. Include an estimate of the annual amount of salt and/or sand used for roadway de-icing.

5. Does the municipality haul snow to off-site disposal locations? Yes No
If yes, provide in **Appendix B** the location of all off-site snow disposal locations and describe what practices and procedures are used to protect water quality from snow and ice melt from the disposal site.

6. Does the municipality own or operate salt storage facilities? Yes No
If yes, provide in **Appendix B** the locations of all salt storage facilities. Are all salt storage facilities managed in accordance with Chapter TRANS 277, Wis. Adm. Code? Yes No

7. Does the municipality provide curbside pickup service for leaves, yard waste, and grass clippings? Yes No
If yes, approximate amount of material collected (tons or cubic yards): 19,198 CY leaves and brush from yards

8. Describe in **Appendix B** the municipality's procedures for the collection of leaves, yard waste, and grass clippings, and/or instruction to citizens for on-site management of these items. Provide the location of sites used by the municipality or citizens for the disposal of leaves, yard waste, and grass clippings.

9. Describe in **Appendix B** the municipality's policies and procedures for the use and application of lawn and garden fertilizers on municipally controlled properties. Include information on how these policies and procedures address pollution prevention efforts.

10. Describe in **Appendix B** any local program the municipality employs to regulate the private use of lawn and garden fertilizers.

11. Include in **Appendix B** an assessment of the effectiveness of the municipality's pollution prevention efforts through the municipal pollution prevention program.

g. Developed Urban Area Standard

1. Has the municipality completed a pollutant-loading analysis to assess compliance with the TSS reduction developed urban area performance standard? Yes No

Model used: WinSLAMM version 9.2.1 and P8 Version 3.4

Reduction %: 41.3

In **Appendix B**, please list or reference all practices that are currently in place that will be used to meet the TSS reduction percentage reported above. Additionally, please describe any maintenance activities that have occurred for these practices in 2011-12.

2. Has the municipality completed an evaluation of all municipal owned or operated structural flood control facilities to determine the feasibility of retrofitting to increase TSS removal? Yes No If yes, describe in **Appendix B**.

V. STORM SEWER SYSTEM MAP

City of Madison only:

a. Has any municipality failed to submit its hard copy changes for the storm sewer system map by January 31, 2013?

Yes No If yes, list municipalities:

b. Attach in **Appendix C** a copy of the updated storm sewer system map.

All municipalities:

c. Has the municipality updated and maintained documentation of all storm sewer outfalls from its MS4 to waters of the state?

Yes No

VI. Water Quality Concerns

a. Does any part of the MS4 discharge to an outstanding resource water (ORW) or exceptional resource water (ERW) listed under s. NR 102.10 or 102.11, Wis. Adm. Code? (A list of ORWs and ERWs may be found on the Department's Internet site at: <http://dnr.wi.gov/org/water/wm/wqs/orwers/>) Yes No If yes, list:

Black Earth Creek

b. Does any part of the MS4 discharge to an impaired waterbody listed in accordance with section 303(d)(1) of the federal Clean Water Act, 22 USC § 1313(d)(1)(C)? (A list of the most current Wisconsin impaired waterbodies may be found on the Department's Internet site at: <http://dnr.wi.gov/org/water/wm/wqs/303d/303d.html>). Yes No

If yes, identify the following information in **Appendix D**:

- Impaired Waterbody to which the MS4 discharges.
- Description of actions municipality has taken to comply with section A(13) of the MS4 permit for discharges of pollutant(s) of concern to an impaired waterbody.

c. In **Appendix D**, identify any known water quality improvements in the receiving water to which the MS4 discharges during the reporting period.

d. In **Appendix D**, identify any known water quality degradation in the receiving water to which the MS4 discharges during the reporting period and what actions are being taken to improve the water quality in the receiving water:

VII. ADDITIONAL INFORMATION

a. Provide in **Appendix E** a description of any revisions or proposed revisions to any element of the municipality's storm water management program.

b. Provide in **Appendix E** an updated listing and contact information for any new industrial facilities that may be regulated under Subchapter II of NR 216, Wis. Adm. Code, and that have commenced operation during the reporting period.

c. Provide in **Appendix E** a summary of any other activities undertaken to comply with the conditions of this permit or other information you feel the Department of Natural Resources should be aware of.

d. Complete the fiscal analysis table provided below.

Program Element	2011 Annual Expenditure	2012 Annual Expenditure	2013 Budget	2014 Budget	Source of Funds
Public Education and Outreach	\$4,249	\$4,461	\$4,685	N/A	Water Resources Operating Budget
Public Involvement and Participation	\$1000	\$1000	\$1000	N/A	Personnel Operation Budget from General Fund Taxing Levies: Answering general questions from the public; site investigations; public commi
Illicit Discharge Detection and Elimination	\$500	\$500	\$1,500	N/A	Personnel Operation Budget from General Fund Taxing Levies
Construction Site Pollution Control	\$189,500	\$263,800	\$252,400	N/A	Plan review and site inspection costs are funded from permit fees per fee schedule in ordinance.
Post-Construction Site Storm Water Management	\$194,200	\$193,700	\$835,700	N/A	Plan review and site inspection costs are funded from permit fees per fee schedule in ordinance; Other funding includes Capital Budget, Operating Budget, grants, fees in lieu of detention and TIF.
Municipal Pollution Prevention	\$532,500	\$820,400	\$502,000	N/A	Operating Budget from General Fund Taxing Levies Subsequent year's budget is an estimate only.

e. What is the overall estimated annual cost to the municipality for compliance with the permit in 2011? \$921,900 2012? \$1,283,900

f. Has the municipality implemented a storm water utility? Yes No, but considering No, and not considering
 If yes, provide a description of the storm water utility in **Appendix E** and any additional information that will assist the Department of Natural Resources in understanding how the utility works in your municipality.

Appendix A

General Information

III.a. Describe the changes in Appendix A any changes under its legal authority that affects implementation of the requirements of the municipal storm water discharge permit (e.g., changes to ordinances).

In 2012, the City amended the Storm Water Runoff Control ordinance to conform to changes in the County ordinance requiring that new commercial developments meet the 90% pre-development infiltration rate standard. Residential developments already were required to meet this standard.

III.d. Describe in Appendix A how the municipality internally coordinates implementation of the requirements of the municipal storm water discharge permit between the municipality's agencies, departments, and programs. Provide any documentation on how this was accomplished, such as meeting agendas, minutes, memos, etc.

The City's Water Resources Management Commission (WRMC) provides the lead in setting policy and providing recommendations to the Common Council regarding issues related to the management of storm water, erosion control and general matters related to any of the water resources of the City. Various staff within the Planning Department, the Department of Public Works, and the Building Inspection Department review submitted plans. Each department provides written comments to the submitter with copies to committees as applicable. The Plan Commission (PC) makes referrals when warranted to the WRMC and provides review comments to the Public Works Committee. At times, staff will take the initiative to seek input from the WRMC regarding a specific submission.

In addition to reviews performed in-house, the City has contracted with Dane County Land Conservation to provide the City with plan review and site inspection services for both Erosion Control and Storm Water Management plans. Dane County staff makes recommendations on any required enforcement action, which is then performed by City personnel.

The various committees provide broad direction to the plan submitter and delegate to staff the responsibility to ensure plans comply with the broad directives as well as applicable ordinances, codes, procedures, policies and practices. City staff and members of the Common Council and various committees receive copies of minutes of the meetings.

Staff attends the quarterly meetings with the Madison Area Municipal Storm Water Partnership (MAMSWaP) group and briefs the WRMC and department heads on developments as appropriate. Staff has also joined DNR in the formation of a Green Tier Charter to seek more effective ways to realize improvements to waters of the state through cooperation and coordination.

The City also has a Conservancy Lands Commission which sets policies for the Public Lands Department with respect to managing conservancy lands in the City. Management activities include implementing vegetation plantings in wetlands and pond buffer areas, and installing and maintaining channel bank stabilization measures along Pheasant Branch and other drainage ways. These management activities enhance the water quality and ecosystems and reduce erosion from channel banks.

In 2011, the City formed a Storm Water Facilities Maintenance Committee to explore best means by which to provide funding for maintenance of storm water facilities. After approximately 11 meetings, the Committee issued a final report in which it recommended to the Common Council to establish a storm water utility. In 2012, the Common Council acted on this recommendation and hired a consultant to begin the process of implementation. It is expected that the Common Council will make a final decision on implementation in 2013.

The City received a Gold Star rating in 2010 from the Water Star Wisconsin program.

III.e. Describe in Appendix A how elected and municipal officials and appropriate staff are kept apprised of the municipal storm water discharge permit. Provide any documentation on how this was accomplished, such as meeting agendas, minutes, memos, etc.

See answer III d. above.

III.g. Describe in Appendix A how the requirements of the municipal storm water discharge permit are incorporated into master planning activities, neighborhood plans, development plans, or other comprehensive planning activities.

Much of this process is described in III d. above. In addition, one of the primary issues on which the City has focused its planning efforts is the delineation of appropriate areas for development, and areas that are environmentally sensitive and merit consideration for being set aside and preserved. For the areas that are considered developable, the City has set high standards for development, including storm water management techniques and approaches. The City has incorporated storm water management requirements through adoption of ordinances, the design review process, and review of development trends at a larger scale.

The City is currently developing a Conservation Subdivision Ordinance, expected to be adopted in 2013.

Appendix B

Storm Water Management Program

IV.a.2 (Dane Co. only)

IV.a.3. Describe in Appendix B how any materials produced by Dane County on behalf of the municipality have been used and/or distributed. Provide examples.

See attached copies of Newsletter and Website Links.

IV.a.4. Describe in Appendix B any individual information and education activities undertaken for the reporting year, including any materials produced and their distribution. Provide examples. Include an assessment of the effectiveness of reaching targeted audiences and delivery of intended messages.

In 2012, the City did a complete redesign of its Website. The City posts on its web site the final reports for pond studies, environmental studies, hydrologic studies, and its storm water management plan, as well as the biannual WPDES reports. On its storm water page, located under Departments - Public Works - Storm Water, the City includes external "Quick Links" to MyFairLakes, Plant Dane!, USGS, Dane County Lakes and Watershed, and Dane County Land and Water Resources. Also included on the web site is a Salt Reduction Video link and "Save Money – Use less Salt."

The City has placed on display at three locations (City Hall, Public Works, Public Library) free copies of various pamphlets provided by MAMSWaP. (Copies previously submitted to DNR.)

- Love Your Lakes, Don't Leaf Them
- In Dane, Only the Rain goes down the drain
- Don't Leaf Them

The City includes relevant articles in its semiannual newsletters. Other publication samples were submitted with previous annual reports.) Also available at the Public Library in Middleton is a copy of the storm water educational video, Dane Waters: A Reflection on Us All," developed by MAMSWAP. The Public Works Department has a publicly accessible rack of various publications and pamphlets from Dane County / City of Madison Clean Sweep.

Trail signs throughout the City provide public education related to environmental issues.

Other activities include:

- Submitted ad to Middleton Times Tribune to advise homeowners against raking leaves into street.
- Placed Yard Signs for Leaf Collection on City lands to advise the public not to rake leaves into the street.
- Distributed Love your Lakes Don't leaf them coasters to area business.
- Distributed "Plant Dane!" Rain Garden program flyers at City Hall and Public Library, and sent notice of program to Middleton Times Tribune for publication.
- Included in the City's Newsletter articles on Rain Gardens, on Middleton's semi-annual Clean and Green event, and on the City's permanent Med Drop facility at the Police Dept.
- City staff attended winter road maintenance seminar regarding harmful consequences resulting from use of salt.

See also I&E summary checklist, enclosed.

IV.b.4. Describe in Appendix B the opportunities and types of forums for public involvement and participation in permit related activities that occurred during the reporting year. Include an assessment of the effectiveness of efforts to involve the public and the level of participation.

The public provides feedback directly to City staff and through opportunities to speak at public meetings of the Common Council, Plan Commission, Public Works Committee, Parks Recreation and Forestry Commission, Conservancy Lands Committee and the Water Resources Management Commission. The latter two are most

heavily involved with issues related to impacts of storm water generated events. The City also established a Storm Water Facilities Maintenance Committee in 2011, which met 11 times through February, 2012. The primary focus of this Committee was to determine best means to provide funding for storm water facilities.

The level of public participation remains high for issues adjacent to residential areas or those affecting the major water features of the City. Activities in the business parks do not seem to generate as much interest unless a major erosion event or flood event occurs. Overall, members of the public that do participate appear well-informed, dedicated, sincere and persistent in tracking the issues to resolution. The City cooperates with various private groups, including Friends of Pheasant Branch, Friends of Kettle Ponds, and Clean Lakes Alliance.

IV.c.1. Describe in Appendix B the illicit discharge detection and elimination program developed to comply with the permit. Include information on the municipality's strategy to prevent, detect, and eliminate all types of illicit discharges; how priorities are established for field screening and the methodologies to be used for field screening; and procedures for responding to and rectifying illicit discharges to the MS4, including spills, improper disposal of waste or dumping. Also include an assessment of the effectiveness of detection and elimination of illicit discharges, prevention of improper disposal of waste and dumping, the handling of spills, and any enforcement efforts involving these activities.

City staff and crews perform routine observations as part of normal facilities inspections. Crews are instructed to watch for any suspect discharges observed in the course of routine maintenance operations, and report same to the City Engineer. The City Plumbing Inspector performs checks of existing commercial sites during inspections of permitted remodeling projects to identify any code violations or cross-connections. In addition, staff periodically conducts site visits to major outfalls to determine whether dry weather flows are occurring. No illicit discharges were reported in 2011-2012. A comprehensive field check of major outfalls was done in 2010 and another is scheduled for 2013.

IV.c.2. N/A

IV.c.3. If yes, please provide documentation in Appendix B the results of the spill investigations.

Staff found no record of improper disposal of waste or of dumping. City crews on occasion will also respond to spills that are incidental to car crashes. However, the Fire Department responds to the majority of minor spills and all major spills since its crews are trained in handling of hazardous waste. For routine minor spills, crews will place an oil dry product on the spilled fluids and allow it to stand for 24 hours. The City street crew will sweep the site the following day using the power street sweeper. The sweepings are ultimately dumped at the municipal landfill.

See attached summaries of minor spill cleanup for 2011 and 2012.

IV.c.4. Describe in Appendix B how the municipality facilitates public reporting of illicit discharges.

Upon receipt of a notice of a spill, the Fire Department notifies Dane County Communications Center of the site location and severity of spill hazard. After clean-up is completed, FD staff fills out a spill report and files same on site.

IV.d.2. Describe in Appendix B the procedures the municipality employs to incorporate timely consideration of potential water quality impacts from construction sites and that ensure implementation of the standards of ss. NR 151.11 and 151.23, Wis. Adm. Code, or equivalent local standards. Be specific of when in the review and approval process this is done, and how the municipality ensures compliance with the standards.

See narrative in next subsection.

IV.d.3. Describe in Appendix B the procedures the municipality employs for the inspection of construction sites and enforcing erosion control standards. Provide documentation of any enforcement actions taken that resulted in the issuance of a stop work order, citation, or summons for a construction site where one or more acre of land is disturbed. Include the name and address of the landowner, the site name and location, date(s) of violation(s), type of violation(s), and the status of resolution of the enforcement action.

The City of Middleton has an intergovernmental agreement with Dane County for their staff to perform comprehensive reviews of erosion control and storm water runoff control plans, and inspections of active construction sites. The City requires permit applicants to provide a copy of submitted erosion control and storm water runoff control plans to the LCD whose staff reviews the plans to determine whether they meet the standards set forth under Middleton Municipal Code, Chapter 28 and NR 151. Where applicable, D.C. staff will notify the permit applicant of potential NR 216 requirements. If the submitted plan meets the erosion control requirements, LCD staff notifies the municipal official that the plan is complete. The authorized municipal official then issues the applicant an erosion control and storm water runoff control permit.

All active construction sites are inspected on a weekly basis. Frequency of inspections may increase based on weather conditions, scale of the construction activity, whether a site is in a sensitive area or has a greater potential for damage due to erosion, and when follow-up is required due to enforcement action.

When a non-compliance issue has been identified during an inspection, the inspector first tries to contact the designated person listed on the erosion control plan. For sites where the non-compliance issue is minor and has not been committed blatantly, the inspector will verbally give the developer a deadline to bring the site back into compliance. The vast majority of non-compliance issues are corrected in this manner, but if the verbal deadline is not met, an enforcement memo is sent to the developer and the City. The memo outlines the necessary actions to be completed by a specific time and date in order to avoid an enforcement action. Enforcement actions are carried out by City staff at the recommendation of the LCD and may include stop-work orders, citations, or a combination of both. The City determines the type and magnitude of the enforcement action. Stop-work-orders remain in effect and citations continue (each day is considered a new violation) until the LCD inspects the site and deems it in compliance.

If a non-compliance issue has been committed blatantly or if there is potential for significant erosion to occur, immediate enforcement action is recommended to the City. The City has the ability to issue a stop-work order, without notice, when conditions warrant immediate action.

See attached Dane County Services Summary for Erosion Control and Storm Water Runoff Control Site Inspections

IV.d.5. Include in Appendix B an assessment of the municipality's construction site pollution control program effectiveness in meeting the standards of ss. NR 151.11 and 151.23, Wis. Adm. Code, including enforcement efforts.

The construction site erosion control portion of the water quality program has been a major success because of the time, effort and expertise provided by Dane County personnel. In addition, the City has a part-time compliance officer who responds to complaints regarding erosion control. This officer recorded 34 hours and 22 hours spent on compliance calls in 2011 and 2012, respectively.

IV.e.1. Describe in Appendix B the procedures the municipality employs to incorporate timely consideration of potential water quality impacts from construction sites and that ensure implementation of the standards of ss. NR 151.12 and 151.24, Wis. Adm. Code, or equivalent local standards. Be specific of when in the review and approval process this is done, and how the municipality ensures compliance with the standards.

The City hires Dane County to perform all Erosion Control and Storm Water Management plan submittals and to perform the follow-up inspections during and after construction. Land Disturbing Permits are issued only upon complete review and approval of the EC and SW plans by Dane County staff. Active sites are inspected approximately once per week, more often if problems are noted or complaints received. These inspections are in addition to complaint responses by the Compliance Officer.

In addition, the City requires developers to deposit funds, for any developments that include public improvements, to pay for full-time construction observation. The construction observer is hired by the City to ensure compliance

with City standards for construction and with erosion control measures and storm water management practices. Deficiencies are identified and corrected, typically within 24 to 48 hours of occurrence.

The City Developer Agreement also requires a Letter of Credit to cover the warranty period following acceptance of the public improvements. This LOC provides financial protection against any failures of the Erosion Control Measures during the warranty period.

IV.e.2. Describe in Appendix B the procedures the municipality employs for inspecting the construction and installation of storm water best management practices and enforcement actions to ensure compliance with post-construction storm water management standards. Provided documentation of any enforcement actions taken that resulted in the issuance of a stop work order, citation, or summons for non-compliance with post-construction storm water management standards for sites where one or more acre of land is disturbed. Include the name and address of the landowner, the site name and location, date(s) of violation(s), type of violation(s), and the status of resolution of the enforcement action.

The City of Middleton has an agreement with Dane County for their staff to perform comprehensive reviews of storm water runoff control plans and calculations submitted by developers (or for plans developed in-house for small projects) for compliance with the requirements of Middleton ordinance, Chapter 26, and NR 151.12 and 151.24. For large City projects, the City may hire a consultant to assist with the plan preparation and review.

Dane County staff prepares review comments which are supplemented by City staff comments as may be warranted. These comments are sent to the developer's engineer as notification of any deficiencies in the plan and copies of the comments and plan are submitted to the Water Resources Management Commission for input from the members. The project engineer generally attends these meetings to brief the Commission on the plan and to solicit feedback regarding suggested improvements to the plan. Resubmitted plans undergo the same review and comment procedure and, if needed, are brought back to the WRMC for further review and approval.

The City uses a template Storm Water Management Maintenance Agreement form (copy available on web site) that must be completed and signed by the developer and the City to identify a party responsible for long term maintenance of the storm water runoff control practices.

Since early 2005, the City approval process has included the issuance of a permit for storm water runoff control practices. The permit includes an attendant fee schedule to cover the cost of plan review and site inspections.

Construction observation services for a given project are performed by City consultants. The City has standing agreements with several firms to provide such services on an as-needed basis. For developer projects, the City requires developers to deposit fees sufficient to cover the cost of these services. For City projects, the cost is included in the project budget. The construction observer will perform a final review of the project prior to final acceptance of the project by the City (public controls) or prior to release of the Letter of Credit guaranteeing the proper construction of the project (private controls).

When a non-compliance issue is identified during an inspection of a developer project, the construction observer first contacts the developer's project engineer to inform the engineer of the necessary corrective actions. If a problem persists, the construction observer will notify the City Engineer as well. A call from the City Engineer to the project engineer is generally sufficient to achieve project compliance with the approved plan.

OTHER TOPICS

The City contracted with UW-Madison to study a major failure of a local private bioretention system. The final Study Report presented in 2012 identified sodium from de-icing salt to be the primary cause of the failure. The site is required to provide a remediation plan to the City in spring, 2013.

The City was awarded a Gold Star rating from the Water Star Wisconsin program for excellence in water resources management, protection and conservation.

The City coordinated with DNR to form a Green Tier Charter, whereby members work cooperatively to enhance the effectiveness of programs for water resources management and for sustainability. The kick-off meeting was held in early 2011.

City staff attends the annual NASECA seminar.

The City completed construction of a sedimentation pond in Lakeview Park, a sixty acre park in the east-central portion of the City. The pond will treat runoff from a 140 acre drainage area, primarily lands in the older section of the City where on-site storm water runoff controls were not required at the time of development. The pond is expected to remove approximately 70% of the sediment load from the 54-inch storm pipe it now intercepts, thereby reducing the pollutant loading into Lake Mendota, including nutrients (nitrogen and phosphorus) and heavy metals.

The City was awarded three grants totaling \$143K (WDNR Urban NPS Construction, WDNR Lake Protection and Dane County Urban Water Quality) to help finance the Lakeview Park Pond.

IV.e.4. Include in Appendix B an assessment of the municipality's post-construction site storm water management program effectiveness in meeting the standards of ss. NR 151.12 and 151.24, Wis. Adm. Code, including enforcement efforts.

The efficacy of the City's efforts over the years has been exceptional as evidenced by the monitoring by USGS of Pheasant Branch at US 12. This monitoring shows significant reductions in sediments and phosphorus, even as the stream flows have trended to higher flow rates.

IV.f.1. List in Appendix B an inventory of long-term storm water best management practices owned, operated, managed, or maintained by the municipality. Include storm water basins, infiltration practices, treatment structures, and other practices for long-term water quality treatment. For each best management practice, provide the name, location, type of practice, and any maintenance activities undertaken for the practice during the reporting year. Also in Appendix B, provide a description of the maintenance procedures used and schedules for each long-term storm water best management practice and the approximate amount of solids collected (tons or cubic yards) from any structural control receiving maintenance.

Drainage ways are inspected annually or biannually for sediment build-up and vegetation overgrowth. Maintenance is performed as needed. Sediment traps on drainage ways are inspected weekly and after storms and are cleaned as needed.

The City signed an agreement with a consultant to perform a detailed field inspection of approximately 55 storm water control features in 2013. This inspection will identify the priority projects in need of maintenance and will guide the development of a Five Year Maintenance Plan.

IV.f.2. Describe in Appendix B the procedures used and schedules for catch basin cleaning.

** (NOTE: Quantity includes 112 C.Y. catch basin sediment and 72 C.Y. trash rack debris.)

City crews inspect inlets and manholes annually for structural damage and leaking, and perform repairs as needed. Once per year in the spring, City crews visit virtually every catch basin in the storm sewer system. Using a Vactor truck, they clean the water and sediments from the sump. Sumps may be cleaned a second time in the fall as time permits. Sediments are deposited in the yard at the City garage and are later transported to the landfill.

IV.f.3. Describe in Appendix B the procedures used and schedules for street sweeping.

Sweeping is done almost daily during non-winter (non-freezing weather) months, approximately March through November. The sweeper covers every street in the City a minimum of approximately once per month, and high-use / heavy-load streets approximately twice per month. The latter includes primarily the truck routes. The sweeping is done principally in the outside lane, against the curb. Parking prohibitions are not used to facilitate sweeping. Hence, if a parked car is encountered, the sweeper circumvents it. Sweepings are dumped at the landfill.

IV.f.4. Describe in Appendix B the municipality's procedures for roadway snow removal and de-icing. Provide information on what practice and procedures the municipality has implemented in consideration of water quality impacts from snow removal and de-icing. Include an estimate of the annual amount of salt and/or sand used for roadway de-icing.

The County performs snow removal on County routes. City crews use snow plow trucks which carry salt in the truck box. Plowing begins upon snowfall of 2". Depending on the forecast, salt will be applied prior to a snow or freezing rain that may result in treacherous conditions.

A typical salting pattern includes approaches to intersections, horizontal curves, hills, and school zones. When temperatures fall below 15° F, salt is not applied. Sand is used instead if needed for traction. Salt typically is not applied to flat, low traffic, mid blocks of streets. Ice storms require more salting of the streets. In extreme cases, salt is applied to all streets. The City also has begun to use brine on the streets to effect more efficient pre-snowfall resistance to icing on the roadways. This method proves very effective in the appropriate temperature ranges in that it sticks to the pavement better and is less wasteful.

The trucks have remote controlled tailgate spreaders to regulate the salt application to minimal amounts.

In 2011-2012, approximately 1887 tons of salt, 48,000 gal of brine (23% salt), and 0 tons of sand were applied to City streets. There are approximately 78 miles of streets in the City, including County roadways.

IV.f.5. If yes, provide in Appendix B the location of all off-site snow disposal locations and describe what practices and procedures are used to protect water quality from snow and ice melt from the disposal site.

Occasionally, the City will haul excess snow to Quisling Park parking lot on Airport Rd. An end loader is used to fill a dump truck for transport. No additional salt is added. The site has a very flat gradient. Approximately 150 feet of grass lies between the edge of the parking lot and the nearest drainage ditch.

IV.f.6. If yes, provide in Appendix B the locations of all salt storage facilities.

The salt shed is located on the same site as the City garage at 3300 Laura Ln.

IV.f.8. Describe in Appendix B the municipality's procedures for the collection of leaves, yard waste, and grass clippings, and/or instruction to citizens for on-site management of these items. Provide the location of sites used by the municipality or citizens for the disposal of leaves, yard waste, and grass clippings.

*** (NOTE: Quantity includes 6760 C.Y. brush and 12,438 C.Y. leaves and yard waste.)

The City collects in bulk non-woody vegetation such as leaves and yard waste. Leaves are collected curb-side via a vacuum leaf collector during October and November. Each street is visited 4 to 6 times during this period. The City disposes of leaves and yard waste either at UW farms, at individual farmsteads or at the compost site at the landfill on CTH Q. Property owners must dispose of their own grass clippings, typically through home composting or by hauling to the City's compost site on CTH Q. Brush is collected curb-side during warm weather months, chipped and composted or spread on farmland.

IV.f.9. Describe in Appendix B the municipality's policies and procedures for the use and application of lawn and garden fertilizers on municipally controlled properties. Include information on how these policies and procedures address pollution prevention efforts.

The City uses very little fertilizer – primarily on active ball diamonds at the High School and at Lakeview Park. None are applied in any of the kettle pond parks. The City uses only non-restricted herbicides including RoundUp, Garlon (treatment of phragmites, cattails or shrub stumps) and Poast to control invasive species. Herbicides are applied by hand or by use of a boom sprayer. Projects in which herbicides are applied include conservancy restoration including wetlands, prairie and oak savanna. The above chemicals are stored in ANSI compliant, fire-

proof cabinets and are applied by trained staff in strict conformance with the manufacturer's recommendations. The City does not use pesticides.

In those cases where chemical applications are necessary, City hires the services of consultants with special training in such use and who follow DATCP rules and regulations and keep records of such activities. The only wetland treatments the City does are by hand using consultants with wetlands expertise.

IV.f.10. Describe in Appendix B any local program the municipality employs to regulate the private use of lawn and garden fertilizers.

None are in place at this time.

IV.f.11. Include in Appendix B an assessment of the effectiveness of the municipality's pollution prevention efforts through the municipal pollution prevention program.

The implementation of the municipal pollution prevention program is consistent with the described policies. The effectiveness is a measure of how much pollution is delivered to Lake Mendota versus how much would have been delivered absent the program. The City has not done scientific research on this particular measurement. However, the monitoring done by USGS in cooperation with the City at the USH 12 gaging station shows significant drops in total suspended solids in Pheasant Branch Creek following the construction of the Confluence Pond.

OTHER TOPICS:

Waste oil is collected at the City garage (from municipal garage operations and from the community at large) and recycled. Maintenance on City vehicles, including mechanical repairs and washing, is done in a closed garage. (Exception: muddy vehicles are rinsed outside adjacent to a grassy area which drains to a vegetated swale.)

Other storage: street light poles, are stored outside; wood chip piles, gravel piles and dirt piles are stored outside on flat grade, separated from a drainage way by a vegetated surface, or inside in a shed.

The City participates in the annual cost of continuous monitoring by USGS of Pheasant Branch, plus new gaging stations on the North and South Forks of Pheasant Branch with a total City expenditure of \$48,918.

The City contributed \$6125 to WGNHS to upgrade the regional groundwater model.

The City spent \$10,000 to dredge "Concentric Pond" in Middleton Hills, \$5000 for erosion control in Conservancy View when developer defaulted, and \$7500 in annual storm ditch maintenance.

The City installed a permanent Med Drop site at the Police Station which provides a facility for members of the public to dispose of old medicines that otherwise might be flushed into the surface or ground water systems.

City hosts semi-annual Clean and Green events to allow for proper recycling or disposal of bulk or hazardous items. City also includes in its newsletter a notice of Dane County's Clean Sweep program.

IV.g.1. In Appendix B, please list or reference all practices that are currently in place that will be used to meet the TSS reduction percentage reported above. Additionally, please describe any maintenance activities that have occurred for these practices in 2011-12.

See attached Inventory of Storm Water Control Practices.

Also, see **IV.f.11.** above for references to maintenance items performed.

IV.g.2. If yes, describe in Appendix B whether the municipality has completed an evaluation of all municipal owned or operated structural flood control facilities to determine the feasibility of retrofitting to increase TSS removal?

The City examined a couple dozen potential sites for possible retrofit with BMP's to meet current storm water management standards. A few of these proved feasible and were constructed beginning in 2008. The most recent example and most substantial retrofit practice thus far was the construction in 2012 of a sedimentation pond at Lakeview Park. This pond is designed to serve a central neighborhood in the older part of the City and is modeled to trap approximately 70% of sediments.

A field inspection of all BMP's is under contract with an engineering consultant and is scheduled for completion in 2013.

Appendix D

Water Quality Concerns

VI.b. Identify in Appendix D, for any part of the MS4 that discharges to an impaired water body listed in accordance with section 303(d)(1) of the federal Clean Water Act, 22 USC § 1313(d)(1)(C), the following:

- Impaired water body to which the MS4 discharges.
 Lake Mendota
 Pheasant Branch
- Description of actions municipality has taken to comply with section A(13) of the MS4 permit for discharges of pollutant(s) of concern to an impaired water body.

These actions are described at length elsewhere in this report. In addition, the City completed in 2009 the modeling of pre-2004 developed areas of the City to determine its level of compliance with the 40% TSS removal standard. The model shows the City achieves approximately 41% removal. The City has contracted with its consultant to update the model in 2013 using the current version of WinSLAMM.

The TSS removal rates are dependent on proper performance of the City's storm water controls. The City has also contracted in 2013 to do a comprehensive inspection of principal controls to identify any that require maintenance.

The City entered into an agreement with MMSD and other communities to cooperate in the funding of a pilot project to determine optimal ways to meet the pollutant control standards required by the Rock River TMDL. The pilot project is scheduled to be completed at the end of 2015.

VI.c. In Appendix D, identify any known water quality improvements in the receiving water to which the MS4 discharges during the reporting period.

See attached chart from USGS which shows declining pollutants downstream of Confluence Pond in Pheasant Branch.

For more detail, see also USGS report at: <http://pubs.usgs.gov/sir/2012/5014/>.

VI.d. In Appendix D, identify any known water quality degradation in the receiving water to which the MS4 discharges during the reporting period and what actions are being taken to improve the water quality in the receiving water.

None known.

Appendix E

Additional Information

VII.a. Provide in Appendix E a description of any revisions or proposed revisions to any element of the municipality's storm water management program.

The City is proceeding in 2013 with a major update to its Storm Water Management Plan. A summary of the proposed work was included in the approved grant application for this project and is duplicated below.

PROJECT SUMMARY

The City of Middleton intends to revise its 2005 stormwater quality master plan to address requirements contained in the recently EPA-approved Rock River Total Maximum Daily Load (TMDL) Plan for Total Phosphorus (TP) and Total Suspended Solids (TSS). Although the City's 2005 plan showed them to be in compliance with then-municipal storm water discharge requirements by achieving a 41.3% annual reduction of TSS discharged in runoff from areas developed prior to 2002, the recently-approved TMDL has established maximum allocations to Pheasant Branch Creek and Lake Mendota that will translate into more stringent standards applicable Citywide. Specifically, the WDNR has indicated that the new allocation requirements, that are expected to be incorporated into the City's WPDES permit in the next permitting cycle, could translate into TSS reduction requirements in excess of 80 percent. Furthermore the TMDL includes municipal phosphorus allocations that will be addressed in the plan update.

Since the new reduction requirements are anticipated to be substantially more stringent than the previous versions, the City recognizes a need to begin the planning process as soon as possible. Furthermore, when areas of the City developed since 2002 are factored into the modeling, it is likely the City will achieve a substantially higher TSS reduction rate than reported in the previous study. Thus, the updated assessment is needed in order for the City to determine its existing level of compliance with the anticipated permit requirements. To that end, the proposed project includes the following elements:

- 1) Expand model to include all areas located within current City limits, including areas classified as "exempt" under NR 151 rules for regulated MS4s;
 - 2) Update the model to include all existing best management practices (BMPs), including BMPs serving exempt areas under NR 151 regulations;
 - 3) Physically inspect the City's 100-plus existing stormwater BMPS, including a topographic (bathymetric) survey of the 'top' 15 performing ponds to determine whether practices are providing the designed-for level of water quality treatment performance predicted by WinSLAMM or P8 modeling;
 - 4) Develop maintenance program recommendations to ensure existing BMPs are providing their intended level of water quality treatment;
 - 5) Evaluate and tabulate the results of revised modeling scenarios for TP and TSS, and develop recommendations for achieving the anticipated TSS and TP reduction standards;
 - 6) Hold regular meetings between the consultant and the City of Middleton Public Works and Engineering staff, and at appropriate intervals, with WNDR staff;
 - 7) Hold regular meetings between the consultant, City staff and the Middleton Water Resources Commission; and
 - 8) Develop and present interim and final study results to the City of Middleton Common Council.
- Note that other applicable performance standards under NR 151, such as storm sewer mapping, outfall inspection, and public education are covered under the City's existing stormwater quality master plan and/or Madison Area Municipal Storm Water Partnership (MAMSWaP) and are therefore not addressed by this plan update.

VII.b. Provide in Appendix E an updated listing and contact information for any new industrial facilities that may be regulated under Subchapter II of NR 216, Wis. Adm. Code, and that have commenced operation during the reporting period.

See attached listing of permits issued for New Commercial Sites for 2011-2012. The City does not have any information on the industrial codes assigned to the commercial sites.

VII.c. Provide in Appendix E a summary of any other activities undertaken to comply with the conditions of this permit or other information you feel the Department of Natural Resources should be aware of.

N/A

VII.f. N/A