



Illinois Environmental Protection Agency

Bureau of Water • 1021 N. Grand Avenue E. • P.O. Box 19276 • Springfield • Illinois • 62794-9276

Division of Water Pollution Control ANNUAL FACILITY INSPECTION REPORT

for NPDES Permit for Storm Water Discharges from Separate Storm Sewer Systems (MS4)

This fillable form may be completed online, a copy saved locally, printed and signed before it is submitted to the Compliance Assurance Section at the above address. Complete each section of this report.

Report Period: From March, 2014 To March, 2015

Permit No. ILR40 0517

MS4 OPERATOR INFORMATION: (As it appears on the current permit)

Name: Lake County Mailing Address 1: 18 North County Street
Mailing Address 2: _____ County: Lake
City: Waukegan State: IL Zip: 60085 Telephone: 847-377-2232
Contact Person: Ryan Waller, Asst. County Administrator Email Address: RWaller@lakecountyil.gov
(Person responsible for Annual Report)

Name(s) of governmental entity(ies) in which MS4 is located: (As it appears on the current permit)

Lake County, Illinois

THE FOLLOWING ITEMS MUST BE ADDRESSED.

A. Changes to best management practices (check appropriate BMP change(s) and attach information regarding change(s) to BMP and measurable goals.)

- | | | | |
|--|--------------------------|---|--------------------------|
| 1. Public Education and Outreach | <input type="checkbox"/> | 4. Construction Site Runoff Control | <input type="checkbox"/> |
| 2. Public Participation/Involvement | <input type="checkbox"/> | 5. Post-Construction Runoff Control | <input type="checkbox"/> |
| 3. Illicit Discharge Detection & Elimination | <input type="checkbox"/> | 6. Pollution Prevention/Good Housekeeping | <input type="checkbox"/> |

- B. Attach the status of compliance with permit conditions, an assessment of the appropriateness of your identified best management practices and progress towards achieving the statutory goal of reducing the discharge of pollutants to the MEP, and your identified measurable goals for each of the minimum control measures.
- C. Attach results of information collected and analyzed, including monitoring data, if any during the reporting period.
- D. Attach a summary of the storm water activities you plan to undertake during the next reporting cycle (including an implementation schedule.)
- E. Attach notice that you are relying on another government entity to satisfy some of your permit obligations (if applicable).
- F. Attach a list of construction projects that your entity has paid for during the reporting period.

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))



Owner Signature:
Barry Burton
Printed Name:

5/28/15

Date:
County Administrator
Title:

EMAIL COMPLETED FORM TO: epa.ms4annualinsp@illinois.gov

or Mail to: ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
WATER POLLUTION CONTROL
COMPLIANCE ASSURANCE SECTION #19
1021 NORTH GRAND AVENUE EAST
POST OFFICE BOX 19276
SPRINGFIELD, ILLINOIS 62794-9276

IL 532 2585 WPC 691 Rev 6/10 This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues (415 ILCS 5/42) and may also prevent this form from being processed and could result in your application being denied. This form has been approved by the Forms Management Center.

Illinois Environmental Protection Agency Annual Facility Inspection Report

**for General Permit for Discharges from Small MS4s
National Pollutant Discharge Elimination System, Phase II**

Lake County, Illinois

Permit Year 12: March 2014 to February 2015



Contents

Part A. Changes to Best Management Practices A-1

Part B. Status of Compliance with Permit ConditionsB-1

Part C. Information and Data Collection Results C-1

Part D. Summary of Year 13 Stormwater Activities D-1

Part E. Notice of Qualifying Local ProgramE-1

 Part E1. Changes to Best Management Practices E-2

 Part E2. Status of Compliance with Permit Conditions E-3

 Part E3. Information and Data Collection Results E-11

 Part E4. Summary of Year 13 Stormwater Activities..... E-14

 Part E5. Construction Projects Conducted During Year 12..... E-26

Part F. Construction Projects Conducted During Year 12 F-1

Part A. MS4 Changes to Best Management Practices, Year 12

Information regarding the status of all of the BMPs and measurable goals described in the MS4's SMPP is provided in the following table.

Note: X indicates BMPs that were implemented in accordance with the MS4's SMPP
 ✓ indicates BMPs that were changed during Year 12

Year 12	
MS4	
A. Public Education and Outreach	
X	A.1 Distributed Paper Material
X	A.2 Speaking Engagement
X	A.3 Public Service Announcement
X	A.4 Community Event
	A.5 Classroom Education Material
	A.6 Other Public Education
B. Public Participation/Involvement	
X	B.1 Public Panel
	B.2 Educational Volunteer
X	B.3 Stakeholder Meeting
X	B.4 Public Hearing
X	B.5 Volunteer Monitoring
	B.6 Program Coordination
X	B.7 Other Public Involvement
C. Illicit Discharge Detection and Elimination	
X	C.1 Storm Sewer Map Preparation
X	C.2 Regulatory Control Program
X	C.3 Detection/Elimination Prioritization Plan
X	C.4 Illicit Discharge Tracing Procedures
X	C.5 Illicit Source Removal Procedures
X	C.6 Program Evaluation and Assessment
X	C.7 Visual Dry Weather Screening
X	C.8 Pollutant Field Testing
X	C.9 Public Notification
	C.10 Other Illicit Discharge Controls

Year 12	
MS4	
D. Construction Site Runoff Control	
X	D.1 Regulatory Control Program
X	D.2 Erosion and Sediment Control BMPs
X	D.3 Other Waste Control Program
X	D.4 Site Plan Review Procedures
X	D.5 Public Information Handling Procedures
X	D.6 Site Inspection/Enforcement Procedures
X	D.7 Other Construction Site Runoff Controls
E. Post-Construction Runoff Control	
	E.1 Community Control Strategy
X	E.2 Regulatory Control Program
X	E.3 Long Term O&M Procedures
X	E.4 Pre-Const Review of BMP Designs
X	E.5 Site Inspections During Construction
X	E.6 Post-Construction Inspections
	E.7 Other Post-Const Runoff Controls
F. Pollution Prevention/Good Housekeeping	
X	F.1 Employee Training Program
X	F.2 Inspection and Maintenance Program
X	F.3 Municipal Operations Storm Water Control
X	F.4 Municipal Operations Waste Disposal
	F.5 Flood Management/Assess Guidelines
X	F.6 Other Municipal Operations Controls

Part B. MS4 Status of Compliance with Permit Conditions, Year 12

Stormwater Management Activities, Year 12

The stormwater management activities that Lake County performed during Year 12, including Lake County's BMPs and measurable goals, are described in detail in Lake County's SMPP. A brief summary of the status of Lake County's stormwater management program, as of the end of Year 12, is provided below.

Lake County's SMPP can be viewed at:

http://www.lakecountyil.gov/Transportation/Documents/Lake_County_SMPP.pdf

A copy of Lake County's Stormwater Management Program Plan (SMPP) has also been attached for reference.

A. Public Education and Outreach

Lake County remains committed to implementing the Public Education and Outreach component of its SMPP. Lake County's Public Education and Outreach program includes: the distribution of educational materials to the community, conducting equivalent outreach activities about the impacts of stormwater discharges on water bodies and the steps that the public can take to reduce those impacts; supporting classroom education; supporting storm drain stenciling and watershed delineation and planning efforts; and supporting SWALCO events.

Measurable Goal(s): Implement BMPs and track progress of BMP implementation, as described in the SMPP.

The MS4 continues to implement the BMPs described in its SMPP and to track progress in implementing its stormwater management program.

B. Public Participation/Involvement

The MS4 is committed to implementing the Public Participation/Involvement component of its SMPP. Lake County's Public Participation/Involvement program includes: maintaining a process for receiving and processing citizen input; attending and publicizing stakeholder meetings; presenting program-related information at public meetings throughout the year; and, publicizing IDDE reporting contact numbers.

Measurable Goal(s): Implement BMPs and track progress of BMP implementation, as described in the SMPP.

The MS4 continues to implement the BMPs described in its SMPP and to track progress in implementing its stormwater management program.

C. Illicit Discharge Detection and Elimination

The MS4 conducts activities related to the Illicit Discharge Detection and Elimination (IDDE) minimum control measure. According to the IEPA's General NPDES Permit No. ILR40, Lake County's IDDE program must include:

- A storm sewer system map showing the locations of all outfalls and the names and locations of all waters that receive discharges from those outfalls;
- An ordinance or other regulatory mechanism that prohibits all non-storm water discharges into the storm sewer system and provides the authority for appropriate enforcement procedures and actions;
- A plan to detect and address all non-stormwater discharges, including illegal dumping, into the storm sewer system;
- A program to educate public employees, businesses, and the general public about the hazards associated with illegal discharges and improper disposal of waste; and,
- Periodic inspection of storm sewer outfalls for detection of non-stormwater discharges and illegal dumping.

Measurable Goal(s): Implement BMPs and track progress of BMP implementation, as described in the SMPP.

- **The MS4 continues to implement the BMPs described in its SMPP and to track progress in implementing its stormwater management program. During Year 12 Lake County completed “dry weather” screening inspections of 100% of the 1,998 storm water outfalls owned and operated by the MS4. Associated water quality testing at approximately 40 locations in accordance with the procedures outlined in the SMPP will be completed in Permit Year 13.**

D. Construction Site Runoff Control

Lake County has a well-established countywide Watershed Development Ordinance (WDO) that defines the minimum stormwater management requirements for development in Lake County. These minimum standards for construction site runoff control of the WDO have been incorporated and adopted by Lake County into a Unified Development Ordinance, which is administered and enforced within the unincorporated communities by Lake County.

Measurable Goal(s): Implement BMPs and track progress of BMP implementation, as described in the SMPP. Enforce the WDO or Assist SMC in ensuring that all applicable developments are in compliance with the WDO.

Lake County continues to implement the BMPs described in its SMPP and to track progress in implementing its stormwater management program. Lake County continues to enforce the Unified Development ordinance to ensure that all applicable developments are in compliance.

In addition, Lake County managed nineteen (15) construction projects with individual NPDES permits during the permit period. Documentation for active Lake County projects with individual NPDES permits can be found at the following link:

<http://www.lakecountyil.gov/Transportation/ProgramsPlansStudies/Pages/NPDES.aspx>

E. Post-Construction Runoff Control

As described in Part D above, the countywide WDO establishes the minimum stormwater management requirements for development in Lake County. The WDO also establishes standards for post-construction site runoff control. These standards apply to any new development or redevelopment resulting in over 0.5 acres of new impervious area. Lake County's SMPP also includes inspection procedures for pre-WDO developments, streambanks and shorelines, streambeds, and detention/retention ponds.

Measurable Goal(s): Implement BMPs and track progress of BMP implementation, as described in the SMPP. Enforce the WDO or Assist SMC in ensuring that all applicable developments are in compliance with the WDO.

The MS4 continues to implement the BMPs described in its SMPP and to track progress in implementing its stormwater management program. The MS4 continues to enforce the WDO or to assist SMC in ensuring that all applicable developments are in compliance with the WDO.

F. Pollution Prevention/Good Housekeeping

Lake County remains committed to implementing the Pollution Prevention/Good Housekeeping component of its Stormwater Management Program Plan (SMPP). The MS4's Pollution Prevention/Good Housekeeping program includes: the evaluation and improvement of municipal policies and procedures to reduce the discharge of pollutants from municipal activities and operations; and, a training program for municipal employees.

Measurable Goal(s): Implement BMPs and track progress of BMP implementation, as described in the SMPP.

The MS4 continues to implement the BMPs described in its SMPP and to track progress in implementing its stormwater management program. During the permit period the Lake County Division of Transportation conducted a review of on-site facilities, housekeeping policies and procedures, and employee training with modifications to be implemented during Permit Year 13.

Stormwater Management Program Assessment, Year 12

An overall assessment of the MS4's stormwater management program and the appropriateness of its BMPs is provided below.

During Year 10, Lake County adopted a Stormwater Management Program Plan (SMPP) to provide both a framework and also additional guidance for staff in addressing the annual program requirements of the IEPA's General NPDES Permit No. ILR40. The SMPP represents an organized approach to achieving compliance with the requirements of the NPDES Phase II program for both private and public activities taking place within the county. The SMPP documents and organizes the previously existing procedures and incorporates the objectives of the WDO to create one cohesive program addressing the pre-development, construction, post-development activities and municipal operations. A copy of Lake County's Stormwater Management Program Plan (SMPP) is attached and may also be found at the following link:

http://www.lakecountyil.gov/Transportation/Documents/Lake_County_SMPP.pdf

In consideration of current and anticipated future water quality monitoring needs, Lake County has partnered with Publicly Owned Treatment Works (POTWs) operators, Municipal Separate Storm Sewer System (MS4) communities, environmental advocacy groups, consultants and other interested parties located within the Des Plaines River Watershed to form the Des Plaines River Watershed Workgroup during Year 12. The primary purpose of the workgroup is to design and implement a stormwater monitoring program within the watershed for the collection of water quality data that will meet current and anticipated future monitoring and wet weather sampling requirements. It is expected that these monitoring activities will begin in the next permit year (Year 13) and it is hoped that this watershed-based approach will serve as a model for future water quality monitoring in the three remaining watersheds in Lake County.

Program evaluation is performed on an annual basis. The primary mechanism for evaluating the program and ensuring that staff has adequate knowledge is supervision by responsible department managers. Management support tasks include observing and evaluating design, construction and field personnel as they implement the requirements of the SMPP on both municipal and private projects, and maintenance personnel as they conduct their assigned activities.

Part C. MS4 Information and Data Collection Results, Year 12

Annual Monitoring and Data Collection, Year 12

Information and data that the MS4 collected to meet the annual monitoring requirement of IEPA's General NPDES Permit No. ILR40 are summarized below.

In consideration of current and anticipated future water quality monitoring needs, Lake County has partnered with operators of Municipal Separate Storm Sewer Systems (MS4s), Publicly Owned Treatment Works (POTWs), environmental advocacy groups, consultants, and other interested parties within the Des Plaines River watershed in Lake County, Illinois to form the Des Plaines River Watershed Workgroup (DRWW) during Year 12. The primary purpose of the workgroup is to design and implement a stormwater monitoring program within the watershed for the collection of water quality data that will meet necessary monitoring and wet weather sampling requirements. It is expected that these monitoring activities will begin within the next permit year (Year 13) and it is hoped that this watershed-based, collaborative approach will serve as a model for future water quality monitoring programs for the three remaining watersheds in Lake County.

The DRWW has initially selected 45 sampling locations within the watershed to gather biological, chemical, and habitat data in order to assess the current status and associated causes and sources of impairment to the rivers and streams within the watershed. The DRWW envisions this becoming part of a long term water quality monitoring program that will aid in restoring water quality within the watershed.

It is the goal of the DRWW that this data will be made available for use by the IEPA, the Illinois Department of natural Resources, local decision makers, and all other interested parties. A copy of the Des Plaines River Watershed Workgroup Agreement and Request for Proposals for Water and Sediment Chemistry Monitoring is attached to this Year 12 Annual Report.

IDDE Monitoring and Data Collection, Year 12

Information and data that the MS4 collected as part of its illicit discharge detection and elimination program are summarized below.

Lake County completed "dry weather" screening inspections of 100% of the 1,998 storm water outfalls owned and operated by the MS4 during Permit Year 12. No illicit discharges were identified at any of these locations however follow-up water quality testing is planned at approximately 40 locations that were selected during the screening process in accordance with the procedures outlined in the SMPP. This follow-up water quality testing will be completed in Permit Year 13.

Part D. MS4 Summary of Year 13 Stormwater Activities

The table below indicates the stormwater management activities that the MS4 plans to undertake during Year 13. Additional information about the stormwater management activities that the MS4 will perform during Year 13 is provided in the section following the table.

Note: X indicates BMPs that will be implemented during Year 13

Year 13	
MS4	
A. Public Education and Outreach	
X	A.1 Distributed Paper Material
X	A.2 Speaking Engagement
X	A.3 Public Service Announcement
X	A.4 Community Event
	A.5 Classroom Education Material
	A.6 Other Public Education
B. Public Participation/Involvement	
X	B.1 Public Panel
X	B.2 Educational Volunteer
X	B.3 Stakeholder Meeting
X	B.4 Public Hearing
X	B.5 Volunteer Monitoring
X	B.6 Program Coordination
X	B.7 Other Public Involvement
C. Illicit Discharge Detection and Elimination	
X	C.1 Storm Sewer Map Preparation
X	C.2 Regulatory Control Program
X	C.3 Detection/Elimination Prioritization Plan
X	C.4 Illicit Discharge Tracing Procedures
X	C.5 Illicit Source Removal Procedures
X	C.6 Program Evaluation and Assessment
X	C.7 Visual Dry Weather Screening
X	C.8 Pollutant Field Testing
X	C.9 Public Notification
	C.10 Other Illicit Discharge Controls

Year 13	
MS4	
D. Construction Site Runoff Control	
X	D.1 Regulatory Control Program
X	D.2 Erosion and Sediment Control BMPs
X	D.3 Other Waste Control Program
X	D.4 Site Plan Review Procedures
X	D.5 Public Information Handling Procedures
X	D.6 Site Inspection/Enforcement Procedures
X	D.7 Other Construction Site Runoff Controls
E. Post-Construction Runoff Control	
	E.1 Community Control Strategy
X	E.2 Regulatory Control Program
X	E.3 Long Term O&M Procedures
X	E.4 Pre-Const Review of BMP Designs
X	E.5 Site Inspections During Construction
X	E.6 Post-Construction Inspections
X	E.7 Other Post-Const Runoff Controls
F. Pollution Prevention/Good Housekeeping	
X	F.1 Employee Training Program
X	F.2 Inspection and Maintenance Program
X	F.3 Municipal Operations Storm Water Control
X	F.4 Municipal Operations Waste Disposal
	F.5 Flood Management/Assess Guidelines
X	F.6 Other Municipal Operations Controls

Please note that the most recent version of IEPA's General NPDES Permit No. ILR40 (Permit) expired on March 31, 2014, but has been administratively continued by IEPA. Since the new version of the Permit has not yet been released to the public, and there is not yet a timeline for its release, the MS4 assumes that the most recent version of the Permit will continue to apply through the at least the end of Year 13. The MS4 remains committed to performing activities related to the six MCMs described in the most recent version of the Permit.

Stormwater Management Activities, Year 13

During Year 13, Lake County plans to continue to perform a variety of stormwater management activities, as described in detail in the MS4's SMPP and in brief below. Lake County's Stormwater Management Program Plan (SMPP) can be viewed at:

http://www.lakecountyil.gov/Transportation/Documents/Lake_County_SMPP.pdf

It is also attached for reference.

A. Public Education and Outreach

The MS4 is committed to implementing the Public Education and Outreach component of its SMPP. Lake County's Public Education and Outreach program includes: the distribution of educational material to the community or conducting equivalent outreach activities about the impacts of stormwater discharges on water bodies and the steps that the public can take to reduce those impacts; supporting classroom education; supporting storm drain stenciling efforts; and, supporting SWALCO events such as Household Hazardous Waste disposal events.

Measurable Goal(s): Implement BMPs and track progress of BMP implementation, as described in the SMPP.

B. Public Participation/Involvement

The MS4 is committed to implementing the Public Participation/Involvement component of its SMPP. Lake County's Public Participation/Involvement program includes: maintaining a process for receiving and processing citizen input; attending and publicizing stakeholder meetings; presenting program information at a public meeting at least once annually; publicizing IDDE reporting contact numbers; sponsoring/supporting an "Adopt-a-Highway Program; and participating in SMC Municipal Advisory Committee meetings.

Measurable Goal(s): Implement BMPs and track progress of BMP implementation, as described in the SMPP.

C. Illicit Discharge Detection and Elimination

Lake County will conduct activities related to the Illicit Discharge Detection and Elimination (IDDE) minimum control measure. According to IEPA's General NPDES Permit No. ILR40, the MS4's IDDE program must include:

- A storm sewer system map showing the locations of all outfalls and the names and locations of all waters that receive discharges from those outfalls;
- An ordinance or other regulatory mechanism that prohibits all non-storm water

discharges into the storm sewer system and provides the authority for appropriate enforcement procedures and actions;

- A plan to detect and address all non-stormwater discharges, including illegal dumping, into the storm sewer system;
- A program to educate public employees, businesses, and the general public about the hazards associated with illegal discharges and improper disposal of waste; and,
- Periodic “dry weather screening” and follow-up investigation of storm sewer outfalls for detection of non-stormwater discharges and illegal dumping.

Measurable Goal(s): Implement BMPs and track progress of BMP implementation, as described in the SMPP.

D. Construction Site Runoff Control

Lake County has adopted a countywide Watershed Development Ordinance (WDO) that establishes the minimum stormwater management requirements for development in Lake County. The WDO, which is administered and enforced within the community by Lake County or by SMC, establishes standards for construction site runoff control.

Measurable Goal(s): Implement BMPs, track progress of BMP implementation and ensure compliance with the minimum WDO requirements as described in the SMPP.

E. Post-Construction Runoff Control

Lake County complies with NPDES permit requirements by incorporating ordinance and BMP standards to minimize the discharge of pollutants for new development projects. As a Certified Community, the County enforces this portion of the Program by performing post-construction site inspections on developments throughout unincorporated Lake County. As an applicant, Lake County is responsible for the inspection of its own facilities, including the County Highway System, for compliance with this portion of the program.

Measurable Goal(s): Implement BMPs, track progress of BMP implementation and ensure compliance with the minimum WDO requirements as described in the SMPP.

F. Pollution Prevention/Good Housekeeping

Lake County is responsible for the implementation of an operation and maintenance program to reduce the discharge of pollutants from municipal operations. Lake County is committed to implementing the Pollution Prevention/Good Housekeeping component of its SMPP. Lake County’s Pollution Prevention/Good Housekeeping program includes: the evaluation and improvement of municipal policies and procedures to reduce the discharge of pollutants from municipal activities and operations; and, a training program for municipal employees.

Measurable Goal(s): Implement BMPs and track progress of BMP implementation, as described in the SMPP.

Part E. Notice of Qualifying Local Program

The Lake County Stormwater Management Commission (SMC) serves as a Qualifying Local Program (QLP) for MS4s in Lake County. In accordance with IEPA's General NPDES Permit No. ILR40, as a QLP, SMC performs activities related to each of the six minimum control measures. This part of the Annual Report, which summarizes the stormwater management activities performed by SMC as a QLP, consists of the following five sections:

- **Part E1** identifies changes to Best Management Practices (BMPs) that occurred during Year 12 and includes information about how these changes affected the QLP's stormwater management program.
- **Part E2** describes the stormwater management activities that the QLP performed during Year 12.
- **Part E3** summarizes the information and data collected by the QLP during Year 12.
- **Part E4** describes the stormwater management activities that the QLP plans to undertake during Year 13.
- **Part E5** lists the construction projects conducted by the QLP during Year 12.

Part E1. QLP Changes to Best Management Practices, Year 12

Note: X indicates BMPs that were implemented as planned
 ✓ indicates BMPs that were changed during Year 12

Year 12	
QLP	
A. Public Education and Outreach	
X	A.1 Distributed Paper Material
	A.2 Speaking Engagement
X	A.3 Public Service Announcement
X	A.4 Community Event
X	A.5 Classroom Education Material
X	A.6 Other Public Education
B. Public Participation/Involvement	
X	B.1 Public Panel
	B.2 Educational Volunteer
X	B.3 Stakeholder Meeting
	B.4 Public Hearing
	B.5 Volunteer Monitoring
X	B.6 Program Coordination
	B.7 Other Public Involvement
C. Illicit Discharge Detection and Elimination	
	C.1 Storm Sewer Map Preparation
X	C.2 Regulatory Control Program
	C.3 Detection/Elimination Prioritization Plan
	C.4 Illicit Discharge Tracing Procedures
	C.5 Illicit Source Removal Procedures
	C.6 Program Evaluation and Assessment
	C.7 Visual Dry Weather Screening
	C.8 Pollutant Field Testing
	C.9 Public Notification
X	C.10 Other Illicit Discharge Controls

Year 12	
QLP	
D. Construction Site Runoff Control	
X	D.1 Regulatory Control Program
X	D.2 Erosion and Sediment Control BMPs
X	D.3 Other Waste Control Program
X	D.4 Site Plan Review Procedures
X	D.5 Public Information Handling Procedures
X	D.6 Site Inspection/Enforcement Procedures
	D.7 Other Construction Site Runoff Controls
E. Post-Construction Runoff Control	
	E.1 Community Control Strategy
X	E.2 Regulatory Control Program
X	E.3 Long Term O&M Procedures
X	E.4 Pre-Const Review of BMP Designs
X	E.5 Site Inspections During Construction
X	E.6 Post-Construction Inspections
X	E.7 Other Post-Const Runoff Controls
F. Pollution Prevention/Good Housekeeping	
X	F.1 Employee Training Program
	F.2 Inspection and Maintenance Program
	F.3 Municipal Operations Storm Water Control
	F.4 Municipal Operations Waste Disposal
X	F.5 Flood Management/Assess Guidelines
	F.6 Other Municipal Operations Controls

Part E2. QLP Status of Compliance with Permit Conditions, Year 12

The Lake County Stormwater Management Commission (SMC) serves as a Qualifying Local Program (QLP) for MS4s in Lake County. In accordance with IEPA's NPDES General Permit No. ILR40, as a QLP, SMC performs activities related to each of the six minimum control measures. The stormwater management activities that the QLP performed during Year 12 are described below.

A. Public Education and Outreach

A.1 Distributed Paper Material

Measurable Goal(s): Distribute informational materials from "take away" rack at SMC. Upon request, distribute materials directly to municipalities for local distribution.

SMC distributes a variety of informational materials related to stormwater management through its "take away" rack and website.

Upon request, informational materials are distributed directly to Lake County MS4s in .PDF format for use on community websites, in community newsletters, and in community "take away" racks.

A.3 Public Service Announcement

Measurable Goal(s): Include public service announcement highlighting community accomplishments related to IEPA's NPDES Stormwater Program in "Mainstream" once annually. Post watershed identification signage with LCDOT. Upon request, present "The Big Picture: Water Quality, Regulations & NPDES" to Lake County MS4s.

SMC includes announcements highlighting community accomplishments related to IEPA's NPDES Stormwater Program on its website, in its newsletter, and through other media outlets.

Watershed identification signage is located throughout the county.

SMC continues to make available "The Big Picture: Water Quality, Regulations & NPDES" presentation to Lake County MS4s.

A.4 Community Event

Measurable Goal(s): Sponsor or co-sponsor workshop on a topic related to IEPA's NPDES Stormwater Program.

SMC sponsored or co-sponsored a number of workshops and events on stormwater-related topics between March 1, 2014 and February 28, 2015, including:

- **Webcast on The Life of a Stormwater Practice: The Role of Local Codes on Mar. 12, 2014**
- **Presentation from IEPA on IEPA's Proposed New General NPDES Permit No. ILR40 at Mar. 19, 2014 MAC meeting**
- **Presentation on Des Plaines River Watershed Workgroup at Mar. 19, 2014 MAC meeting**
- **Designated Erosion Control Inspector (DECI) Workshop held on Mar. 28, 2014**
- **Webcast on The Life of a Stormwater Practice: Design and Construction of BMPs on Apr. 9, 2014**
- **Homeowners Association (HOA) Stormwater Maintenance Workshop held on Apr. 16, 2014**
- **Fox River/Chain O'Lakes river clean-up in Fox Lake, Port Barrington & Antioch, IL May 3, 2014**
- **Chicago River Day clean-up in Highland Park, Lake Forest & Deerfield, IL on May 9, 2014**
- **Rain Barrel, Compost Bin, and Native Plant Sale held on May 9, 2014**
- **Webcast on The Life of a Stormwater Practice: BMP Maintenance on May 21, 2014**
- **Presentation on Fox River Study Group's Fox River Implementation Plan at Jun. 11, 2014 MAC meeting**
- **Presentation on ASCE's Envision's Rating System at Jun. 11, 2014 MAC meeting**
- **Webcast on How to Pick the Right Vegetation for Bioretention and Its Cousins on Jun. 11, 2014**
- **Workshop on Watershed-Based Planning at Beyond the Basics 2014: Making Green Stormwater Practices Pay Off for Your Community Conference on Sep. 9, 2014**
- **Webcast on Stream Restoration as a Pollutant Reduction Strategy on Sep. 10, 2014**
- **Presentation on Municipal Spill Response Programs at Sep. 10, 2014 MAC meeting**
- **Des Plaines River clean-up in Riverwoods, IL on Sep. 13, 2014**
- **Presentation on the Illinois Urban Manual at Sep. 10, 2014 MAC meeting**
- **Roadway De-Icing Workshop held on Oct. 7 & 8, 2014**
- **Webcast on Implementing TMDLs: Local TMDLs and Regional/River Basin TMDLs: A Happy Engagement or a Shotgun Wedding on Oct. 8, 2014**
- **Webcast on Implementing TMDLs: Retrofitting Existing Stormwater Ponds & Basins on Nov. 12, 2014**
- **Presentation from IEPA on the Requirements of and Expectations Associated with IEPA's General NPDES Permit No. ILR40 at Dec. 10, 2014 MAC meeting**

- **Webcast on Using Illicit Discharge Programs to Monitor Bacteria on Feb. 18, 2015**

A.5 Classroom Education

Measurable Goal(s): Develop and compile information for stormwater educational kit for distribution upon request.

Provide materials and training on storm sewer inlet stenciling kits to teachers upon request.

Stormwater educational materials were compiled for use at several public education events that were held between March 1, 2014 and February 28, 2015, including:

- **Lake County Green Living Fair held in Libertyville, IL on Mar. 15, 2014**
- **Homeowners Association (HOA) Stormwater Maintenance Workshop held on Apr. 16, 2014**
- **Rain Barrel, Compost Bin, and Native Plant Sale held on May 9, 2014**
- **Village of Round Lake Public Works Week Celebration held in Round Lake, IL on May 21, 2014**
- **League of Women Voters Presentations on Lake Michigan: Stormwater From the Ground Up held in various locations on Jul. 9, Jul. 31, and Sep. 14, 2014**

A.6 Other Public Education

Measurable Goal(s): Maintain and update the portion of the SMC website dedicated to IEPA's NPDES Stormwater Program with resource materials such as model ordinances, case studies, brochures and web links.

Make "The Big Picture: Water Quality, Regulations & NPDES" presentation available to Lake County MS4s.

As new information and resource materials become available, they are posted to the SMC website and/or distributed directly to Lake County MS4s.

SMC continues to make available "The Big Picture: Water Quality, Regulations & NPDES" presentation to Lake County MS4s.

B. Public Participation/Involvement

B.1 Public Panel

Measurable Goal(s): Provide notice of public meetings on SMC website.

Track number of meetings conducted.

Notice of all public meetings continues to be provided on the SMC website and through direct mailings and e-mailings to distribution lists.

SMC tracked the number of Stormwater Management Committee Board (SMC) meetings, Technical Advisory Committee (TAC) meetings, Municipal Advisory Committee (MAC), and Watershed Management Board (WMB) meetings conducted during Year 12. According to records, there were 9 SMC meetings, 2

TAC meetings, 4 MAC meetings, and 1 WMB meeting conducted during this reporting period.

B.3 Stakeholder Meeting

*Measurable Goal(s): Provide notice of stakeholder meetings on SMC website.
Track number of watershed planning committee meetings conducted.
Establish watershed planning committees for each new watershed planning effort.*

Notice of all stakeholder meetings continues to be provided on the SMC website and through direct mailings and e-mailings to stakeholder lists.

SMC tracked the number of stakeholder meetings conducted for the various watershed planning committees during the reporting period. The list below summarizes the watershed planning committee meetings that were conducted during Year 12:

- **North Branch Chicago River Planning Committee – 4**
- **North Branch Watershed Consortium – 1**
- **Mill Creek Watershed Planning Committee – 1**
- **Bull Creek/Bull's Brook Watershed Council – 4**
- **Buffalo Creek Clean Water Partnership – 5**
- **Flint Creek Watershed Partnership – 2**
- **Tower Lake Drain Watershed Partnership – 4**
- **9 Lakes Watershed Planning Committee – 2**

SMC continues to establish and/or assist watershed planning committees for each new watershed planning effort.

B.6 Program Coordination

*Measurable Goal(s): Track number of MAC meetings conducted during Year 12.
Prepare annual report on Qualifying Local Program activities at end of Year 12.*

SMC tracked the number of Municipal Advisory Committee (MAC) meetings conducted during Year 12. According to records, there were 4 MAC meetings conducted during this reporting period.

The stormwater management activities that SMC performed as a QLP during Year 12 are described in the Annual Facility Inspection Report (i.e., Annual Report) template provided to Lake County MS4s. The stormwater management activities that SMC plans to perform as a QLP during Year 13 are described in Part E4 of the Annual Report template.

C. Illicit Discharge Detection and Elimination

C.2 Regulatory Control Program

Measurable Goal(s): Continue to enforce the countywide WDO.

SMC continues to enforce the countywide WDO.

C.10 Other Illicit Discharge Controls

Measurable Goal(s): Sponsor or co-sponsor and track the number of attendees at an Illicit Discharge Detection and Elimination workshop or other training workshop related to IEPA's NPDES Stormwater Program.

SMC sponsored or co-sponsored a number of workshops and events on stormwater-related topics between March 1, 2014 and February 28, 2015. Such workshops and events are described above.

D. Construction Site Runoff Control

D.1 Regulatory Control Program

*Measurable Goal(s): Continue to enforce the countywide WDO.
Administer the Designated Erosion Control Inspector (DECI) program outlined by the WDO.*

**SMC continues to enforce the countywide WDO.
SMC continues to administer the Designated Erosion Control Inspector (DECI) program as outlined by the WDO.**

D.2 Erosion and Sediment Control BMPs

*Measurable Goal(s): Continue to enforce the countywide WDO.
Complete TRM update and work toward final approval and publication of the document.*

**SMC continues to enforce the countywide WDO.
The TRM is currently being updated to include guidance on the WDO amendments as well as ordinance administration and enforcement.**

D.3 Other Waste Control Program

Measurable Goal(s): Enforce WDO provisions regarding the control of waste and debris at construction sites.

SMC continues to enforce the countywide WDO.

D.4 Site Plan Review Procedures

*Measurable Goal(s): Track number of enforcement officers who have passed the exam.
Track number of communities that undergo a performance review.
Complete ordinance administration and enforcement chapter of TRM.*

SMC continues to track the number of enforcement officers (EOs) who have passed the EO exam and have become EOs. According to records, as of the end of Year 12, there were 67 EOs in Lake County.

SMC last completed a cycle of the community re-certification process, which included a performance review of all 53 certified and non-certified communities, during a previous reporting period (i.e., Year 9). In accordance with the amended countywide WDO, the next cycle of the community re-certification process is scheduled to be completed in 2017.

The TRM is currently being updated to include guidance on the WDO amendments as well as ordinance administration and enforcement.

D.5 Public Information Handling Procedures

Measurable Goal(s): Track number of complaints received and processed related to soil erosion and sediment control.

SMC continues to track the number of complaints received and processed related to soil erosion and sediment control. According to records, between March 1, 2014 and February 28, 2015, 4 SE/SC complaints were received and processed by SMC staff.

D.6 Site Inspection/Enforcement Procedures

Measurable Goal(s): Track number of site inspections conducted by SMC.

SMC continues to track the number of site inspections conducted by SMC staff. According to records, between March 1, 2014 and February 28, 2015, 655 site inspections were conducted by SMC staff.

E. Post-Construction Runoff Control

E.2 Regulatory Control Program

Measurable Goal(s): Continue to enforce the countywide WDO.

SMC continues to enforce the countywide WDO.

E.3 Long Term O&M Procedures

Measurable Goal(s): Continue to enforce the countywide WDO.

SMC continues to enforce the countywide WDO.

E.4 Pre-Construction Review of BMP Designs

Measurable Goal(s): Continue to enforce the countywide WDO.

SMC continues to enforce the countywide WDO.

E.5 Site Inspections During Construction

Measurable Goal(s): Continue to enforce the countywide WDO.

SMC continues to enforce the countywide WDO.

E.6 Post-Construction Inspections

Measurable Goal(s): Continue to enforce the countywide WDO.

SMC continues to enforce the countywide WDO.

E.7 Other Post-Construction Runoff Controls

Measurable Goal(s): Conduct annual WMB meeting.

Contribute funding to flood reduction and water quality improvement projects, including stormwater retrofits, through the WMB.

The annual WMB meeting was held on Dec. 11, 2014.

At the annual WMB meeting, 16 flood reduction and water quality improvement projects, including stormwater retrofit projects, were selected to receive \$152,000 of funding through the WMB.

F. Pollution Prevention/Good Housekeeping

F.1 Employee Training Program

Measurable Goal(s): Provide list of available resources to MS4s.

*Sponsor or co-sponsor employee training workshops or events.
Make available the Excal Visual Municipal Storm Water
Pollution Prevention Storm Watch Everyday Best Management
Practices software.*

SMC continues to provide information on training opportunities and training resources to Lake County MS4s.

SMC sponsored or co-sponsored a number of workshops and events on stormwater-related topics between March 1, 2014 and February 28, 2015. Such workshops and events are described above.

SMC continues to make available the Excal Visual Storm Watch Municipal Stormwater Pollution Prevention software to Lake County MS4s. According to records, between March 1, 2014 and February 28, 2015, 1 MS4 borrowed the Excal Visual software.

F.5 Flood Management/Assess Guidelines

Measurable Goal(s): Track number of projects that are reviewed for multi-objective opportunities.

SMC continues evaluate all SMC-sponsored projects for multi-objective opportunities, such as flood control and water quality.

Part E3. QLP Information and Data Collection Results, Year 12

The QLP did not collect any monitoring data on behalf of Lake County's MS4s during Year 12. However, SMC has reviewed information presented by the Illinois EPA in the 2014 Illinois Integrated Water Quality Report and 303(d) List and has developed the brief "State of Lake County's Waters" report provided below.

State of Lake County's Waters April 2015

This brief report is based on information contained in the Illinois EPA's 2014 Illinois Integrated Water Quality Report and Section 303(d) List, dated March 24, 2014. Its purpose is to provide basic information to Lake County's MS4 on the condition of surface waters within Lake County. More detailed information about the condition of surface waters in Lake County can be found in the Illinois EPA's 2014 Illinois Integrated Water Quality Report and Section 303(d) List.

Streams

An analysis of data accompanying the Illinois EPA's 2014 Illinois Integrated Water Quality Report and Section 303(d) List shows that 183 stream miles in Lake County have been assessed by the Illinois EPA for attainment of at least one designated use. The degree of support (attainment) of a designated use in a particular stream segment is determined by the Illinois EPA through an analysis of various types of information, including biological, physicochemical, physical habitat, and toxicity data. When sufficient data are available, the Illinois EPA assesses each applicable designated use in a particular stream segment as Fully Supporting (good), Not Supporting (fair), or Not Supporting (poor). Waters in which at least one applicable use is not fully supported are called "impaired."

An analysis of data accompanying the Illinois EPA's 2014 Illinois Integrated Water Quality Report and Section 303(d) List shows that 139 stream miles (of the 183 stream miles that have been assessed) in Lake County are considered impaired by the Illinois EPA. These stream segments have been mapped and are shown in Figure E3.1.

Lakes

An analysis of data accompanying the Illinois EPA's 2014 Illinois Integrated Water Quality Report and Section 303(d) List shows that 170 inland lakes in Lake County have been assessed by the Illinois EPA for attainment of at least one designated use. As with streams, the degree of support (attainment) of a designated use in a particular lake is determined by the Illinois EPA through an analysis of various types of information, including biological, physicochemical, physical habitat, and toxicity data. When sufficient data are available, the Illinois EPA assesses each applicable designated use in a particular lake as Fully Supporting (good), Not Supporting (fair), or Not Supporting (poor). Waters in which at least one applicable use is not fully supported are called "impaired."

An analysis of data accompanying the Illinois EPA's 2014 Illinois Integrated Water Quality Report and Section 303(d) List shows that 135 inland lakes in Lake County are considered impaired by the Illinois EPA. These lakes have been mapped and are shown in Figure E3.1.

Lake Michigan

Lake Michigan is monitored by the Illinois EPA through the Lake Michigan Monitoring Program. Bordering Cook and Lake Counties, the State of Illinois has jurisdiction over approximately 1,526 square miles of open water, 2.62 square miles of harbors, and 64 shoreline miles of Lake Michigan.

196 square miles of open water of Lake Michigan, or about thirteen percent of the total open water located within Illinois, were assessed for the Illinois EPA's 2014 Illinois Integrated Water Quality Report and Section 303(d) List, and all 196 assessed square miles were rated as Fully Supporting for the following uses: aquatic life use, primary contact use, secondary contact use, and public and food processing water supply use. However, fish consumption use in all 196 assessed square miles of open water was rated as Not Supporting due to contamination from polychlorinated biphenyls (PCBs) and mercury. Additionally, aesthetic quality use in all 196 assessed square miles of open water was rated as Not Supporting due to exceedances of the Lake Michigan open water standard for total phosphorus. It should be noted that such exceedances do not necessarily indicate that there are offensive conditions in Lake Michigan due to excessive algal or aquatic plant growth.

A portion of all 2.62 square miles of harbors of Lake Michigan located in Illinois were assessed for the Illinois EPA's 2014 Illinois Integrated Water Quality Report and Section 303(d) List for several different designated uses. 66.7 percent of the square miles of harbors assessed for aesthetic quality (i.e., 0.12 of 0.18 sq. mi.) were rated as Fully Supporting, while the remaining 33.3 percent (i.e., 0.06 of 0.18 sq. mi.) were rated as Not Supporting. 97.6 percent of the square miles of harbors assessed for aquatic life use (i.e., 2.52 of 2.58 sq. mi.) were rated as Fully Supporting, while the remaining 2.4 percent (i.e., 0.06 of 2.58 sq. mi.) were rated as Not Supporting. 100 percent of the square miles of bays and harbors assessed for fish consumption (i.e., 2.62 of 2.62 sq. mi.), were rated as Not Supporting. Potential causes of impairment in the harbors of Lake Michigan located in Illinois include contamination from polychlorinated biphenyls (PCBs), mercury, bottom deposits, lead, zinc, cadmium, arsenic, phosphorus, copper, and chromium.

A portion of all 64 shoreline miles of Lake Michigan located in Illinois were assessed for the Illinois EPA's 2014 Illinois Integrated Water Quality Report and Section 303(d) List for several different designated uses. All 64 of the shoreline miles assessed for fish consumption and primary contact use were rated as Not Supporting due to bacterial contamination from *Escherichia coli* (*E. coli*) bacteria and contamination from polychlorinated biphenyls (PCBs) and mercury.

Part E4. QLP Summary of Year 13 Stormwater Activities

The table below indicates the stormwater management activities that the QLP plans to undertake during Year 13. Additional information about the BMPs and measurable goals that the QLP will implement during Year 13 is provided in the section following the table.

Note: X indicates BMPs that will be implemented during Year 13

Year 13	
QLP	
A. Public Education and Outreach	
X	A.1 Distributed Paper Material
	A.2 Speaking Engagement
X	A.3 Public Service Announcement
X	A.4 Community Event
X	A.5 Classroom Education Material
X	A.6 Other Public Education
B. Public Participation/Involvement	
X	B.1 Public Panel
	B.2 Educational Volunteer
X	B.3 Stakeholder Meeting
	B.4 Public Hearing
	B.5 Volunteer Monitoring
X	B.6 Program Coordination
	B.7 Other Public Involvement
C. Illicit Discharge Detection and Elimination	
	C.1 Storm Sewer Map Preparation
X	C.2 Regulatory Control Program
	C.3 Detection/Elimination Prioritization Plan
	C.4 Illicit Discharge Tracing Procedures
	C.5 Illicit Source Removal Procedures
	C.6 Program Evaluation and Assessment
	C.7 Visual Dry Weather Screening
	C.8 Pollutant Field Testing
	C.9 Public Notification
X	C.10 Other Illicit Discharge Controls

Year 13	
QLP	
D. Construction Site Runoff Control	
X	D.1 Regulatory Control Program
X	D.2 Erosion and Sediment Control BMPs
X	D.3 Other Waste Control Program
X	D.4 Site Plan Review Procedures
X	D.5 Public Information Handling Procedures
X	D.6 Site Inspection/Enforcement Procedures
	D.7 Other Construction Site Runoff Controls
E. Post-Construction Runoff Control	
	E.1 Community Control Strategy
X	E.2 Regulatory Control Program
X	E.3 Long Term O&M Procedures
X	E.4 Pre-Const Review of BMP Designs
X	E.5 Site Inspections During Construction
X	E.6 Post-Construction Inspections
X	E.7 Other Post-Const Runoff Controls
F. Pollution Prevention/Good Housekeeping	
X	F.1 Employee Training Program
	F.2 Inspection and Maintenance Program
	F.3 Municipal Operations Storm Water Control
	F.4 Municipal Operations Waste Disposal
X	F.5 Flood Management/Assess Guidelines
	F.6 Other Municipal Operations Controls

Please note that the most recent version of IEPA's General NPDES Permit No. ILR40 (Permit) expired on March 31, 2014, and that the new version of the Permit has not yet been released to the public. Although it is difficult to accurately predict the changes that IEPA will make to the new version of the Permit, SMC remains committed to performing activities related to the six MCMs described in the most recent version of the Permit.

During Year 13, SMC plans to continue to perform a variety of stormwater management activities, as described in more detail below. In addition to the stormwater management activities described below, SMC will continue to provide general support to Lake County MS4s as they continue to implement their stormwater management programs.

A. Public Education and Outreach

SMC will continue to support Lake County MS4s in the development and implementation of their stormwater management programs by performing activities related to the Public Education and Outreach minimum control measure, as described below.

A.1 Distributed Paper Material

SMC compiles, develops, and distributes throughout Lake County a variety of materials related to stormwater management. SMC has produced a number of pamphlets and brochures related to stormwater management and prepares a quarterly newsletter, "Mainstream," as well as an Annual Report, which highlight successful stormwater management activities conducted throughout Lake County. SMC also prepares project fact sheets that provide information about ongoing and recently completed stormwater management projects. In addition, SMC has developed or collaborated on a number of manuals related to stormwater management, such as "Riparian Areas Management: A Citizen's Guide," "A Citizen's Guide to Maintaining Stormwater Best Management Practices," and the "Streambank Stabilization Manual," and will continue to develop or collaborate on such manuals or manual updates on an as-needed basis.

Measurable Goal(s): Distribute informational materials from "take away" rack at SMC. Upon request, distribute informational materials directly to Lake County MS4s for local distribution.

A.2 Speaking Engagement

SMC provides educational presentations related to IEPA's NPDES Stormwater Program on a regular basis at Municipal Advisory Committee (MAC) meetings. Upon request, SMC will provide educational presentations related to IEPA's NPDES Stormwater Program to Lake County MS4s.

Measurable Goal(s): Provide educational presentations related to IEPA's NPDES Stormwater Program at MAC meetings. Upon request, provide educational presentations related to IEPA's NPDES Stormwater Program (e.g., "The Big Picture: Water Quality, Regulations & NPDES") to Lake County MS4s.

A.3 Public Service Announcement

A public service announcement related to IEPA's NPDES Stormwater Program will be included in SMC's Quarterly Newsletter, "Mainstream," at least once each year. SMC will coordinate with the Lake County Department of Transportation (LCDOT) to post watershed identification signage in watersheds where watershed planning activities have occurred or are occurring.

*Measurable Goal(s): Include public service announcement related to IEPA's NPDES Stormwater Program in its quarterly newsletter, "Mainstream," at least once each year.
Post watershed identification signage in cooperation and collaboration with LCDOT.*

A.4 Community Event

SMC sponsors and co-sponsors educational and technical training workshops on a variety of stormwater management-related topics. Each year, SMC will sponsor or co-sponsor at least one workshop on a topic related to IEPA's NPDES Stormwater Program, such as soil erosion and sediment control, illicit discharge detection and elimination, or stormwater best management practices (BMPs) that can be used to protect and improve water quality.

Measurable Goal(s): Sponsor or co-sponsor workshop on a topic related to IEPA's NPDES Stormwater Program.

A.5 Classroom Education Material

Upon request, SMC will contribute to the development and compilation of material for inclusion in a stormwater education kit that can be distributed to local students and teachers and/or other local stakeholders. Additionally, upon request, SMC will provide information, materials, and training to local students and teachers and/or other local stakeholders interested in conducting storm drain stenciling.

*Measurable Goal(s): Upon request, develop and compile materials for inclusion in a stormwater education kit.
Upon request, provide information, materials, and training to local students and teachers and/or stakeholders interested in conducting storm drain stenciling.*

A.6 Other Public Education

SMC maintains a website that contains a variety of materials and resources related to stormwater management. The website includes webpages such as "National Pollutant Discharge Elimination System Stormwater Program," "Best Management Practices," "Projects," "Publications," "Watershed Management Plans," "Partnerships," and "Advisory Committees." These webpages provide information about IEPA's NPDES Stormwater Program, provide information about stormwater best management practices (BMPs), allow for download of stormwater management-related publications and documents, provide notices of upcoming meetings and ongoing projects, and provide links to a number of other stormwater management-related resources.

Measurable Goal(s): Maintain and update the portion of the SMC website dedicated to IEPA's NPDES Stormwater Program with resources such as model ordinances, case studies, brochures, and links.

B. Public Participation/Involvement

SMC will continue to support Lake County MS4s in the development and implementation of their stormwater management programs by performing activities related to the Public Participation/Involvement minimum control measure, as described below.

B.3 Stakeholder Meeting

SMC is actively involved in watershed planning throughout Lake County. SMC believes that the watershed planning process cannot happen and will not be successful without the input, interest, and commitment of the watershed stakeholders. Watershed stakeholders may include municipalities, townships, drainage districts, homeowner associations, lakes management associations, developers, landowners, and local, county, state, and federal agencies.

*Measurable Goal(s): Provide notice of stakeholder meetings on SMC website.
Track number of watershed committee meetings conducted.
Establish watershed planning committees for each new watershed planning effort.*

B.4 Public Hearing

SMC coordinates and conducts public meetings as well as committee meetings that are open to the public. A monthly Stormwater Management Commission meeting is open to the public and involves the SMC Board of Commissioners, which includes six municipal representatives and six county board members.

The Technical Advisory Committee (TAC) was created in 1992 to assist in the development, review, and revision of the Watershed Development Ordinance (WDO) and the associated administrative policies and procedures. TAC is made up of representatives from the development, environmental, municipal, and consulting engineering fields. TAC meetings are held monthly or on an as-needed basis.

The Municipal Advisory Committee (MAC) is made up of municipal, township, drainage district, consulting firm, and county representatives. MAC has worked to discuss, coordinate, and collaborate on the implementation of IEPA's NPDES Stormwater Program. MAC will continue to meet quarterly or as needed to assist Lake County MS4s with the implementation of IEPA's Stormwater Program.

The Watershed Management Board (WMB) meets annually to make recommendations on stormwater BMP project funding. WMB members include chief municipal elected officials, township supervisors, drainage district chairs, and county board members from each district within each of Lake County's four major watersheds.

*Measurable Goal(s): Provide notice of public meetings on SMC website.
Track number of meetings conducted.*

B.6 Program Coordination

Consistent with Lake County's comprehensive, countywide approach to stormwater management, SMC serves as a Qualifying Local Program (QLP) for all Lake County MS4s. In this role, in 2002, SMC proactively formed the Municipal Advisory Committee (MAC) to provide a forum for representatives of local MS4s, which include municipalities, townships, and drainage districts, to discuss, among other topics, the implementation of IEPA's NPDES Stormwater Program. SMC will continue to facilitate quarterly MAC meetings and will continue to provide general support to Lake County MS4s as they continue to develop and implement their stormwater management programs. SMC will prepare an annual report on its stormwater management activities and will provide guidance to Lake County MS4s in preparing their own annual reports.

*Measurable Goal(s): Track number of MAC meetings conducted.
Prepare annual report on Qualifying Local Program stormwater management activities.
Prepare template for use by Lake County MS4s in creating their own annual reports.*

C. Illicit Discharge Detection and Elimination

SMC will continue to support Lake County MS4s in the development and implementation of their stormwater management programs by performing activities related to the Illicit Discharge Detection and Elimination minimum control measure, as described below. Note, however, that the primary responsibility for the implementation of the Illicit Discharge Detection and Elimination minimum control measure lies with the MS4.

C.2 Regulatory Control Program

SMC provides local MS4s with model and example illicit discharge ordinances that prohibit all non-stormwater discharges, including illegal dumping, to the storm sewer system. Additionally, the WDO includes provisions that prohibit illicit discharges to the storm sewer system during construction (i.e., prior to final site stabilization) on development sites.

*Measurable Goal(s): Provide model and example illicit discharge ordinances to Lake County MS4s.
Continue to administer and enforce the WDO.*

C.10 Other Illicit Discharge Controls

SMC regularly sponsors and co-sponsors educational and technical training workshops on a variety of stormwater management-related topics. Each year, SMC will sponsor or co-sponsor an illicit discharge detection and elimination workshop or other training workshop related to IEPA's NPDES Stormwater Program and track the number of attendees that attend the workshop.

Additionally, as part of its public education and outreach efforts, SMC distributes informational materials throughout Lake County about the hazards associated with illegal discharges and the improper disposal of waste.

Measurable Goal(s): Sponsor or co-sponsor and track the number of attendees at an Illicit Discharge Detection and Elimination workshop or other training workshop related to IEPA's NPDES Stormwater Program. Distribute informational materials about the hazards of illicit discharges and illegal dumping from "take away" rack at SMC and SMC website.

D. Construction Site Runoff Control

Lake County has adopted a countywide Watershed Development Ordinance (WDO) that establishes the minimum stormwater management requirements for development in Lake County, including requirements for construction site runoff control. SMC will continue to support Lake County MS4s in the implementation of the Construction Site Runoff Control minimum control measure by administering and enforcing the WDO and performing other stormwater management activities, as described below. Note, however, that the primary responsibility for the implementation of the Construction Site Runoff Control minimum control measure in certified communities (i.e., communities certified by SMC to administer and enforce the provisions of the WDO) lies with the MS4.

D.1 Regulatory Control Program

The WDO is the regulatory mechanism that requires the use of soil erosion and sediment controls on development sites throughout Lake County. The soil erosion and sediment control provisions of the WDO are included in Article IV, Section B.1.j. of the ordinance. At a minimum, these standards apply to any development project that hydrologically disturbs 5,000 square feet of land or more.

SMC has also created a Designated Erosion Control Inspector (DECI) program. The purpose of the program is to facilitate positive communication between the permit issuing agency, whether such agency be SMC or a certified community, and the permit holder, by creating a single point of contact for the discussion and resolution of site soil erosion and sediment control issues and concerns. Furthermore, the program is intended to improve site conditions, minimize environmental impacts, and educate contractors, developers, and inspectors about the use of soil erosion and sediment control BMPs. It is worth noting that the DECI program was designed to closely mirror the inspection requirements of IEPA's General NPDES Permit No. ILR10.

Measurable Goal(s): Continue to administer and enforce the WDO. Continue to administer the Designated Erosion Control Inspector (DECI) program outlined by the WDO.

D.2 Erosion and Sediment Control BMPs

Article IV, Section B.1.j of the WDO specifies the soil erosion and sediment control measures that must be used in conjunction with any land disturbing activities conducted on a

development site. It specifies the use of a variety of soil erosion and sediment control BMPs, including: minimize soil disturbance; protect adjoining properties from erosion and sedimentation; complete installation of soil erosion and sediment control features prior to commencement of hydrologic disturbance; stabilize disturbed areas within 7 days of active disturbance; avoid disturbance of streams whenever possible; use controls that are appropriate for the size of the tributary drainage area; protect functioning storm sewers from sediment; prevent sediment from being tracked onto adjoining streets; limit earthen embankments to slopes of 3H:1V; identify soil stockpile areas; and, utilize statewide standards and specifications as guidance for soil erosion and sediment control.

SMC has also prepared a Technical Reference Manual (TRM) to accompany the WDO. The TRM is used to guide the creation of development plans that are in compliance with the provisions of the WDO and provides detailed information on the use of soil erosion and sediment control BMPs. It is currently being updated by the Technical Advisory Committee (TAC).

*Measurable Goal(s): Continue to administer and enforce the WDO.
Continue to work on updates to the Technical Reference Manual (TRM) and toward publication of the updated document.*

D.3 Other Waste Control Program

Article IV, Section B.1.j. of the WDO includes provisions related to the control of waste and debris during construction on development sites.

Measurable Goal(s): Continue to administer and enforce the provisions of the WDO related to the control of waste and debris during construction on development sites.

D.4 Site Plan Review Procedures

A community's designated enforcement officer is responsible for reviewing and permitting development plans and for administering and enforcing the provision of the WDO. Within certified communities (i.e., communities certified by SMC to administer and enforce the provisions of the WDO), responsibility for reviewing and permitting development plans and for administering and enforcing the provisions of the WDO lies with the MS4; within non-certified communities, the designated enforcement officer is SMC's chief engineer. All designated enforcement officers must pass an exam in order to qualify to act as such. SMC administers this enforcement officer program, providing training on an as-needed basis to all enforcement officers to assist them in passing the exam, and maintains an up-to-date list identifying each community's designated enforcement officer. In addition to administering the enforcement officer program, SMC periodically reviews each community's WDO administration and enforcement records, using the results of such review to evaluate the performance of certified communities and designated enforcement officers.

SMC has also prepared a Technical Reference Manual (TRM) to accompany the WDO. The TRM is used to guide the creation of development plans that are in compliance with the provisions of the WDO and provides additional guidance on the administration and

enforcement of the ordinance. It is currently being updated by the Technical Advisory Committee (TAC).

*Measurable Goal(s): Administer the Enforcement Officer (EO) program outlined by the WDO.
Maintain an up-to-date list identifying each community's designated enforcement officer.
Periodically review each community's WDO administration and enforcement records.
Continue to work on updates to the Technical Reference Manual (TRM) and toward publication of the updated document.*

D.5 Public Information Handling Procedures

SMC provides a number of opportunities for the receipt and consideration of information submitted by the public. SMC's Citizen Inquiry Response System (CIRS) documents and tracks the resolution of problems and complaints reported by the public. SMC's website provides information on "who to call" for various stormwater-related problems and concerns. An Interagency Coordination Agreement between SMC, the US Army Corps of Engineers, and the Natural Resources Conservation Service specifies that if any of these agencies receive a report of a soil erosion and sediment control issue, they will relay such report to SMC. SMC will then investigate the report and prescribe appropriate corrective actions, sharing the results of such investigation with the property owner and any applicable local, state, or federal agencies. Within certified communities, such investigations are coordinated with the community's designated enforcement officer.

Measurable Goal(s): Document and track the number of soil erosion and sediment control-related complaints received and processed by SMC.

D.6 Site Inspection/Enforcement Procedures

Article VI of the WDO contains both recommended and minimum requirements for the inspection of development sites. Within certified communities, the community's designated enforcement officer is responsible for conducting these inspections; within certified communities, SMC's chief engineer is responsible for conducting these inspections. Per the ordinance, these inspections may be conducted by a community's designated enforcement officer at any stage in the construction process. For major developments, as defined by the WDO, the enforcement officer conducts site inspections, at a minimum, upon completion of installation of soil erosion and sediment controls, prior to the start of any other land disturbing activities, and after final stabilization and landscaping, prior to the removal of soil erosion and sediment controls.

Article VII of the WDO specifies the legal actions that may be taken and the penalties that may be imposed if the provisions of the WDO are violated. If development activities on a development site are not in compliance with the requirements of the WDO, the enforcement officer may issue a stop work order on all development activity on the development site or on the development activities that are in direct violation of the WDO. In addition, failure to

comply with any of the requirements of the WDO constitutes a violation of the WDO, and any person convicted of violating the WDO may be fined.

Measurable Goal(s): Document and track the number of site inspections conducted by SMC.

E. Post-Construction Runoff Control

As described above, Lake County has adopted a countywide Watershed Development Ordinance (WDO) that establishes the minimum stormwater management requirements for development in Lake County, including requirements for post-construction runoff control. SMC will continue to support Lake County MS4s in the implementation of the Post-Construction Runoff Control minimum control measure by administering and enforcing the WDO and performing other stormwater management activities, as described below. Note, however, that the primary responsibility for the implementation of the Post-Construction Runoff Control minimum control measure in certified communities (i.e., communities certified by SMC to administer and enforce the provisions of the WDO) lies with the MS4.

E.2 Regulatory Control Program

The WDO requires all applicants to adopt stormwater management strategies for controlling post-construction stormwater runoff on development sites. As outlined in Article IV, Section B.1 of the WDO, all applicants must adopt stormwater management strategies that minimize increases in stormwater runoff rates, volumes, and pollutant loads from development sites. Proposed stormwater management strategies must address the runoff volume reduction requirements described in Article IV, Section B.1.d. of the WDO and must include appropriate stormwater BMPs to address the other applicable post-construction runoff control requirements of the WDO.

Measurable Goal(s): Continue to administer and enforce the WDO.

E.3 Long Term O&M Procedures

The WDO requires that maintenance plans be developed for all stormwater management systems designed to serve major developments, as defined by the WDO. Such maintenance plans must include: a description of all maintenance tasks; an identification of the party or parties responsible for performing such maintenance tasks; a description of all permanent maintenance easements or access agreements, overland flow paths, and compensatory storage areas; and, a description of dedicated sources of funding for the required maintenance. The WDO also requires that all stormwater management systems be located within a deed or plat restriction (e.g., easement) to ensure that the system remains in place in perpetuity and that access to the system is maintained in perpetuity for inspection and maintenance purposes.

Measurable Goal(s): Continue to administer and enforce the WDO.

E.4 Pre-Construction Review of BMP Designs

As described above, a community's designated enforcement officer is responsible for reviewing and permitting development plans and for administering and enforcing the provisions of the WDO. This includes a review of the stormwater BMPs that will be used to meet the post-construction runoff control requirements of the WDO.

Measurable Goal(s): Continue to administer and enforce the WDO.

E.5 Site Inspections During Construction

As described above, Article VI of the WDO contains both recommended and minimum requirements for the inspection of development sites. Per the ordinance, these inspections may be conducted by a community's designated enforcement officer at any stage in the construction process. For major developments, as defined by the WDO, the enforcement officer conducts site inspections, at a minimum, upon completion of installation of soil erosion and sediment controls, prior to the start of any other land disturbing activities, and after final stabilization and landscaping, prior to the removal of soil erosion and sediment controls.

Measurable Goal(s): Continue to administer and enforce the WDO.

E.6 Post-Construction Inspections

As described above, Article VI of the WDO contains both recommended and minimum requirements for the inspection of development sites. Per the ordinance, these inspections may be conducted by a community's designated enforcement officer at any stage in the construction process, including after final stabilization and landscaping, after the removal of soil erosion and sediment controls. For major developments, as defined by the WDO, the enforcement officer conducts site inspections, at a minimum, upon completion of installation of soil erosion and sediment controls, prior to the start of any other land disturbing activities, and after final stabilization and landscaping, prior to the removal of soil erosion and sediment controls.

Measurable Goal(s): Continue to administer and enforce the WDO.

E.7 Other Post-Construction Runoff Controls

Through the Watershed Management Board (WMB), SMC provides partial funding for flood damage reduction and surface water quality improvement projects. The WMB, which includes representatives from the Lake Michigan, North Branch of the Chicago River, Fox River, and Des Plaines River watersheds, meets annually to review potential projects and to make recommendations on stormwater BMP project funding. Members of the WMB include chief municipal elected officials, township supervisors, drainage district chairmen, and county board members from each district found within each of Lake County's four major watersheds. The goal of the WMB program is to maximize opportunities for local units of government and other groups to have input and influence on the solutions used to address local stormwater management problems. Previous WMB-funded projects have reduced flooding, improved surface water quality, and enhanced existing stormwater management facilities throughout Lake County.

*Measurable Goal(s): Conduct annual WMB meeting.
Contribute funding to flood damage reduction and water quality improvement projects through the WMB.*

F. Pollution Prevention/Good Housekeeping

SMC will continue to support Lake County MS4s in the development and implementation of their stormwater management programs by performing activities related to the Pollution Prevention/Good Housekeeping minimum control measure, as described below. Note, however, that the primary responsibility for the implementation of the Pollution Prevention/Good Housekeeping minimum control measure lies with the MS4.

F.1 Employee Training Program

SMC will assist Lake County MS4s with the development and implementation of their employee training programs by maintaining a list of known employee training resources and opportunities, making available a software-based employee training program, and providing, upon request, technical assistance to local MS4s in developing and implementing their employee training programs. In addition, each year, SMC will sponsor or co-sponsor a training workshop related to pollution prevention/good housekeeping or other training workshop related to IEPA's NPDES Stormwater Program.

*Measurable Goal(s): Maintain a list of known employee training resources and opportunities.
Make available the Excal Visual Storm Watch: Municipal Storm Water Pollution Prevention software-based employee training program.
Sponsor or co-sponsor a training workshop related to pollution prevention/good housekeeping or other training workshop related to IEPA's NPDES Stormwater Program.*

F.5 Flood Management/Assess Guidelines

In working toward meeting its primary goals of flood damage reduction and surface water quality improvement, SMC follows a set of stormwater management policies that were created to define its roles and responsibilities for stormwater management in Lake County. One of these policies is to integrate multi-objective opportunities (e.g., flood damage reduction, surface water quality improvement, environmental enhancement) into SMC-sponsored projects. In accordance with this policy, SMC will evaluate all SMC-sponsored projects multi-objective opportunities.

Measurable Goal(s): Track number of SMC-sponsored projects that are reviewed for multi-objective opportunities.



Lake County Stormwater Management Program Plan (SMPP)

NPDES Phase II – General Permit ILR40



Foreword

Lake County Government is committed to protecting the environmental water quality and natural resources that are prevalent throughout the County. This is achieved through progressive leadership, sound financial management, and environmental responsibility, all of which are part of the overall goal of providing sustainable infrastructure and the highest quality services to Lake County residents.

Pursuant to the National Pollutant Discharge Elimination System (NPDES) Phase II regulations set forth by the Federal Clean Water Act, Lake County is considered a Municipal Separate Storm Sewer System (MS4). As such, the County is required to obtain a Phase II stormwater permit for discharges into waters of the US. The County holds this permit and continuously strives to meet or exceed the stated requirements.

To this end, the County has developed the following Stormwater Management Program Plan (SMPP) to document its MS4 Program for implementing the requirements of the NPDES Phase II permit. The SMPP describes the program, procedures, and practices that have been developed and implemented to achieve the goal of reducing the discharge of pollutants within stormwater runoff. The SMPP documents the departmental responsibilities for developing, implementing, and enforcing the County's MS4 program and its primary control measures.

Lake County is committed to administering the MS4 Program and assuring that each County department responsible for developing and implementing the MS4 Program does its part in preserving our natural resources.

Contents

Section 1 – Overview of the Stormwater Management Program Plan	1- 1
1.1 – Introduction	1-1
1.2 – State & Federal Regulations	1-1
1.3 – Countywide Approach to NPDES Compliance	1-2
1.4 – Organization of the SMPP	1-3
1.5 – Lake County Watersheds	1-4
1.6 – Impaired Waterbodies within Lake County.....	1-6
1.7 – TMDL Waterbodies within Lake County	1-6
Section 2 –Program Management	2-1
2.1 – Program Implementation.....	2-1
2.2 – Lake County Organization	2-1
2.2.1 – Stormwater Coordinator	2-3
2.2.2 – Lake County Division of Transportation.....	2-3
2.2.3 – Lake County Planning, Building and Development Department	2-3
2.2.4 – Lake County Health Department.....	2-4
2.2.5 – Solid Waste Agency of Lake County.....	2-4
2.2.6 – Lake County Public Works Department.....	2-4
2.2.7 – Lake County Finance and Administrative Services.....	2-4
2.3 – Coordination with SMC	2-5
2.4 – Coordination with Consultants.....	2-5
2.5 – Coordination of Contractors.....	2-5
2.6 – Coordination with the Public	2-5
2.7 – Coordination with the IEPA	2-5
2.8 – Coordination with the Development Community.....	2-5
Section 3 – The Program	3- 1
3.1 – Public Education and Outreach	3-1
3.1.1 – Distribution of Paper Materials	3-2
3.1.2 – Speaking Engagements	3-2
3.1.3 – Public Service Announcements.....	3-2
3.1.4 – Community Events/Workshops.....	3-2
3.2 – Public Participation/Involvement	3-3
3.2.1 – Complaints, Suggestions and Requests.....	3-3
3.2.2 – Public Hearings.....	3-3

3.2.3 – Stakeholders Meetings.....	3-3
3.2.4 – Illicit Discharge/Illegal Dumping Hotline	3-4
3.2.5 – LCSMC Municipal Advisory Committee (MAC) and Technical Advisor Committee (TAC)	3-4
3.2.6 – Volunteer Monitoring - Adopt-A-Highway	3-4
3.3 – Illicit Discharge Detection and Elimination.....	3-4
3.3.1 – Regulatory Authority.....	3-5
3.3.1.1 – Watershed Development Ordinance	3-5
3.3.1.2 – Environmental Nuisances Ordinance	3-5
3.3.1.3 – Other Health Department Ordinances	3-5
3.3.2 – Identifying Outfalls and Receiving Waters	3-6
3.3.3 – Illicit Discharge Detection and Elimination Program.....	3-6
3.3.3.1 – Program Planning.....	3-7
3.3.3.1.1 – Staffing.....	3-7
3.3.3.1.2 – Equipment Needs.....	3-8
3.3.3.1.3 – Training.....	3-8
3.3.3.1.4 – Scheduling	3-8
3.3.3.2 – Outfall Inspection Procedure.....	3-8
3.3.3.2.1 – Pre-Screening.....	3-9
3.3.3.2.2 – Outfall Inspection Setup and Precautions	3-9
3.3.3.2.3 – Outfall Inspection	3-10
3.3.3.2.4 – Outfall Assessment and Documentation.....	3-11
3.3.3.2.5 – Daily Closeout	3-12
3.3.3.3 – Follow Up Investigation and Program Evaluation	3-12
3.3.3.3.1 – Outfall Screening Results Review and Assessment.....	3-12
3.3.3.3.2 – Independent Verification	3-12
3.3.3.3.3 – Source Identification.....	3-12
3.3.3.4 – Removal of Illicit Discharges.....	3-14
3.3.3.5 – Program Evaluation.....	3-15
3.4 – Construction Site Runoff Control.....	3-16
3.4.1 – Regulatory Program.....	3-16
3.4.2 – Responsible Parties.....	3-17
3.4.2.1 – Applicant.....	3-17
3.4.2.2 – DECI – Designated Inspectors.....	3-17
3.4.2.3 – Enforcement Officer	3-18
3.4.3 – Minimum Construction Site Practices.....	3-18
3.4.4 – Site Plan Review	3-19
3.4.5 – Site Inspection Procedure	3-19
3.4.6 – Complaints	3-20
3.4.7 – Performance Guarantees	3-20
3.4.8 – Complaints and Violation Notification Procedures.....	3-20
3.4.9 – BMP Reference Information.....	3-20
3.4.10 – Construction Site Waste Control.....	3-21
3.4.11 – Highway Improvement Projects.....	3-21
3.4.12 – County Capital Construction Projects.....	3-22

3.5 – Post Construction Runoff Control.....	3-22
3.5.1 – Regulatory Program	3-22
3.5.2 – Runoff Volume Reduction Hierarchy.....	3-23
3.5.3 – Green Infrastructure.....	3-23
3.5.4 – Long Term Operation and Maintenance.....	3-23
3.5.5 – Site Inspections	3-23
3.5.5.1 – Previously Developed Sites.....	3-24
3.5.5.2 – Shorelines.....	3-24
3.5.5.3 – Streambanks and Stream Bed Sediment Accumulation.....	3-24
3.5.5.4 – Detention/Retention Pond Sediment Accumulation.....	3-24
3.6 – Pollution Prevention / Good Housekeeping.....	3-25
3.6.1 – Inspection and Maintenance Program.....	3-25
3.6.1.1 – Street Sweeping.....	3-25
3.6.1.2 – Detention Basin Maintenance Program.....	3-25
3.6.1.3 – Catch Basins and Storm Sewers.....	3-26
3.6.1.4 – Snow Removal And Ice Control.....	3-26
3.6.1.4.1 – Roadway Ice Control.....	3-26
3.6.1.4.2 – Salt Delivery and Storage	3-26
3.6.1.4.3 – Snow Plowing.....	3-26
3.6.1.4.4 – Facility Control.....	3-26
3.6.1.5 – Vehicle and Equipment Operations.....	3-27
3.6.1.5.1 – Vehicle Fueling	3-27
3.6.1.5.2 – Vehicle Maintenance.....	3-27
3.6.1.6 – Animal Nuisance Control.....	3-27
3.6.1.7 – Waste Management	3-28
3.6.1.7.1 – Spoil Stock Pile.....	3-28
3.6.1.7.2 – Contaminated Soil Management.....	3-28
3.6.1.7.3 – Hazardous Waste	3-28
3.6.1.7.4 – Sanitary Waste	3-28
3.6.1.7.5 – Triple Basins.....	3-28
3.6.1.8 – Water Conservation & Irrigation	3-28
3.6.2 – Spill Response Plan.....	3-29
3.6.3 – Employee Training	3-30
3.6.3.1 – Training Approach.....	3-30
Section 4 – Program and Performance Monitoring, Evaluation and Reporting	4- 1
4.1 – Program Monitoring and Research	4-1
4.2 – Program Evaluation.....	4-2
4.3 – Reporting.....	4-2
Section 5 – References	5- 1

Figures

Figure 1 – Lake County Watersheds.....	1-5
Figure 2 – Lake County Program Organization Chart.....	2-2

Appendices

Appendix A – NPDES Phase II General Permit

Appendix B – Lake County Impaired Water Bodies

Appendix C – Lake County TMDLs

Appendix D – SMPP Tracking Forms

Appendix E – Indirect Illicit Discharge Tracking and Summary Forms

Appendix F – Stormwater Outfall Screening Equipment Checklist

Appendix G – Stormwater Outfall Inspection Data Form

Appendix H – Outfall Inspection Screening Summary Form

Appendix I – Pre-Construction Meeting Form

Appendix J – SE/SC Inspection Form

Appendix K – Sample Maintenance Plans

Appendix L – Detention / Retention Pond Checklist

Appendix M – Spill Response Notice

Section 1

Overview of the Stormwater Management Program Plan

1.1 Introduction

This Stormwater Management Program Plan (SMPP) was developed by Lake County (County) to document the County's program for implementing the requirements of the United States Environmental Protection Agency (USEPA) under the National Pollutant Discharge Elimination System (NPDES) Phase II regulations (Program). Federal regulations require that all Municipal Separate Storm Sewer Systems (MS4s), partially or fully in urbanized areas obtain Phase II stormwater permits for their discharges into receiving waters. Lake County is considered an MS4 within these regulations. The SMPP describes the program, procedures and practices that have been developed and implemented by Lake County to achieve the goal of reducing the discharge of pollutants within stormwater runoff in order to comply with the County's Phase II NPDES MS4 permit (MS4 Permit).

The SMPP describes the primary elements of all Program activities, including the manner in which the County:

- Protects the receiving waters from illicit discharges;
- Manages stormwater quality planning throughout the County;
- Reviews, permits and inspects NPDES construction activity;
- Maintains County facilities and performs day-to-day operations;
- Provides public education and outreach;
- Trains its employees to implement and report program activities; and
- Continually monitors and evaluates the Program.

The SMPP was developed based upon a template provided by the Lake County Stormwater Management Commission, modified to describe the County's unique Program.

1.2 State & Federal Regulations

Federal environmental regulations based on the 1972 Clean Water Act (CWA) require that MS4s, construction sites and industrial activities control polluted stormwater runoff from entering receiving water bodies (including navigable streams and lakes). The NPDES permit process regulates the discharge from these sources based on amendments to the CWA in 1987 and the subsequent 1990 and 1999 regulations by USEPA. In Illinois, USEPA has delegated administration of the Federal NPDES program to the Illinois Environmental Protection Agency (IEPA). On December 20, 1999, IEPA issued a general NPDES Phase II permit for all MS4s in Illinois. The General Permit is included in Appendix A. Per General Permit ILR40, each MS4

was required to submit a Notice of Intent (NOI) to comply with the conditions of the permit by March 10, 2003. The original NOI described the proposed activities and best management practices that occurred over the original 5-year period toward developing a SMPP. At the end of the 5th year (March 1, 2008) the components of the SMPP were required to be implemented. IEPA reissued the ILR40 permit on February 20, 2009 (effective April 1, 2009) with new and modified requirements.

Additionally, all construction projects that disturb greater than 1 acre of total land area are required to obtain an NPDES permit from IEPA prior to the start of construction, under IEPA's General Permit ILR10. Municipalities covered by General Permit ILR40 are automatically covered under General Permit ILR10 thirty days after IEPA receives the NOI from the municipality.

1.3 Countywide Approach to NPDES Compliance

The Lake County Stormwater Management Commission (SMC) provides direction and materials for a countywide approach to NPDES program implementation. SMC is a countywide governmental agency created by county ordinance under the authority of Illinois Revised Statute 55/5-1062. SMC's goals include the reduction of flood damage and water quality degradation. Another purpose of SMC is to assure that new development addresses non-point source pollution, does not increase flood and drainage hazards to others, or create unstable conditions susceptible to erosion. To accomplish this, the SMC works cooperatively with individuals, groups, and units of government as well as serves as the corporate enforcement authority for the Lake County Watershed Development Ordinance (WDO). SMC enforces the WDO in non-certified communities on behalf of the municipality. The municipality is responsible for enforcing the WDO in Certified Communities. A municipality is considered a Certified Community after its petition is approved by SMC. SMC utilizes technical assistance, education programs and watershed planning to increase public awareness of natural resources and the impacts of urbanization on stormwater quality. In addition, SMC provides assistance with problems related to stormwater and identifies effective ways of managing natural resources.

In 2002, SMC formed an Ad Hoc Municipal Advisory Committee (MAC) specifically to advise MS4s on the NPDES Phase II Permit program. Municipalities, townships, drainage districts, consultants and county representatives comprise the MAC. SMC advised and assisted MS4s in preparing NOIs, but is not a permittee as it does not own or operate a storm drain system.

The General Permit allows for MS4s to take credit for activities being performed by a Qualifying Local Program (QLP) toward meeting its permit requirements. SMC is a QLP for MS4s in Lake County. As part of their ongoing services, SMC performs functions related to each of the MS4 Permit's six minimum control measures. However, MS4s are required to provide additional services to address each of the minimum control measures, with the greatest amount of additional effort required in the Illicit Discharge Detection and Elimination (IDDE) and Pollution Prevention/Good Housekeeping categories.

SMC assists the County by:

- Supporting NPDES II presentations to local boards,
- Developing model NOIs,
- Providing countywide drainage system overview and receiving waters maps,
- Providing a general 5-year Best Management Practices (BMP) Plan,

- Developing specific measurable goals and program development tasks,
- Serving as a clearinghouse for all support information and as a liaison to IEPA and USEPA,
- Supporting the MAC,
- Drafting a model Annual Performance Report and specific BMP Measurable Goals for the subsequent years, and
- Providing model Illicit Discharge Ordinance language.

SMC services qualify for credit under all six of the minimum control measures, as noted in the summary below:

1. **Public Education and Outreach:** SMC provides, through its Public Information Coordinator, various training workshops, homeowners workshops, brochures, training manuals, teacher/student education, videos, etc.
2. **Public Participation and Involvement:** SMC coordinates and participates in public meetings and committees, including the MAC, the SMC Board of Commissioners, the Technical Advisory Committee (TAC), citizen watershed planning committees, the Watershed Management Board (WMB), and volunteer support groups.
3. **Illicit Discharge Detection and Elimination:** SMC provides model ordinance language for prohibiting non-stormwater discharges and continuing education on illicit discharge detection and elimination through workshops. The WDO also includes provisions that prohibit illegal discharges to the storm drain system.
4. **Construction Site Runoff Control:** SMC adopted the countywide WDO in 1992, which establishes the minimum stormwater management requirements for development in Lake County. The WDO, which is enforced by SMC as well as by certified communities in the county, establishes standards for construction site runoff control.
5. **Post-Construction Runoff Control:** The WDO establishes standards for post-construction runoff control.
6. **Pollution Prevention / Good Housekeeping:** SMC provides guidance, information, and resources related to employee training to prevent and reduce stormwater pollution from municipal activities.

1.4 Organization of the SMPP

The SMPP provides a program overview and details on the implementation of the following:

- Requirements of the Program
- Lake County watersheds
- Structure of the Program, including County department roles and responsibilities
- BMPs to be implemented for the Program's six minimum control measures:
 - *Public Education and Outreach,*
 - *Public Participation/Involvement,*
 - *Illicit Discharge Detection and Elimination,*

- *Construction Site Runoff Control,*
- *Post-Construction Runoff Control, and*
- *Pollution Prevention/Good Housekeeping.*

The following information is contained within each section:

- Section 1: Overview of the Stormwater Management Program Plan - the format of the SMPP document and the regulations.
- Section 2: Logistics of the SMPP - including the organization, implementation and responsible parties necessary to achieve overall compliance with the SMPP and MS4 Permit. It also identifies how the different County agencies coordinate with each other and the legal authority that the MS4s have to implement the Program.
- Section 3: Stormwater pollutant control measures implemented by the County per the six minimum control measures.
- Section 4: The monitoring, evaluation and reporting procedures associated with the Program.
- Section 5: References used in the SMPP

Appendices include forms, references and exhibits.

1.5 Lake County Watersheds

Lake County is primarily located within the Des Plaines River, Fox River, North Branch of the Chicago River, and Lake Michigan watersheds. There are several tributaries to these receiving waters located within the County. Lakes and other on-stream bodies of water are also considered part of the receiving water system.

The major watersheds and receiving waters are presented in Figure 1.

Des Plaines River Watershed

The Des Plaines River watershed originates in Racine and Kenosha Counties in Wisconsin flowing south into Illinois. The Des Plaines watershed in Lake County drains an area of approximately 202 square miles or 129,577 acres. It is the largest of the county's four major watersheds. The topography of the watershed is dominated by a gently rolling landscape with numerous wet marshy areas. The Lake County portion of the watershed is divided into nine subwatersheds.

The Des Plaines River watershed wholly or predominantly includes the communities of Arlington Heights, Buffalo Grove, Deer Park, Grayslake, Gurnee, Hawthorn Woods, Indian Creek, Kildeer, Libertyville, Lincolnshire, Lindenhurst, Long Grove, Mettawa, Mundelein, Old Mill Creek, Riverwoods, Third Lake, Vernon Hills, Wadsworth and Wheeling. New development has centered on the many lakes in the watershed. Open space areas are concentrated along the Des Plaines River, where the Lake County Forest Preserve District has substantial holdings, which stretch uninterrupted from the Wisconsin-Illinois border into Cook County. Watershed planning activities continue for the entire Des Plaines River watershed; planning sponsors include the Illinois Department of Natural Resources, U.S. Army Corps of Engineers, and Lake, Cook and DuPage Counties.

Fox River Watershed

The Fox River originates about 15 miles northwest of Milwaukee, Wisconsin. The river enters the northwest corner of Lake County in the Chain O'Lakes area and then enters McHenry

County, but reenters Lake County south of Port Barrington. About 163 square miles of Lake County drains to the Fox River. Along the Fox River, from the state line to Algonquin, the terrain is flat and contains many lakes and low-lying wetlands. The upland areas of the watershed include gently sloping topography to steep hilly terrain.

Major tributaries to the Fox River in Lake County include the Chain O'Lakes, Sequoit Creek, Squaw Creek, Mutton Creek, Slocum Lake Drain, Tower Lake Drain and Flint Creek. The northern area around the Chain O'Lakes is substantially developed around the many lakes while the middle of the watershed is experiencing an increase in urbanization. The same can be said for the southern area of the watershed, which includes existing and new development with estate and rural estate development.

The Fox River watershed includes all or portions of the communities of Antioch, Barrington, Barrington Hills, Deer Park, Fox Lake, Fox River Grove, Grayslake, Hainesville, Hawthorn Woods, Island Lake, Lake Barrington, Lake Villa, Lake Zurich, Lakemoor, Mundelein, North Barrington, Port Barrington, Round Lake, Round Lake Beach, Round Lake Heights, Round Lake Park, Tower Lakes, Volo and Wauconda.

North Branch of the Chicago River Watershed

The North Branch of the Chicago River watershed in Lake County extends roughly from Route 132 (Grand Avenue - Waukegan) on the north and continues into Cook County. The western boundary is approximately ½ mile to a mile west of Interstate 94; the eastern boundary follows Green Bay Road. The North Branch watershed is a subwatershed of the larger Chicago River Watershed that is formed from the North and South Branches of the Chicago River. The Chicago River Watershed is a sub-basin of the larger Illinois River Watershed. The North Branch of the Chicago River watershed area covers an area of about 50 square miles in Lake County, and is the most urbanized of the four major Lake County watersheds.

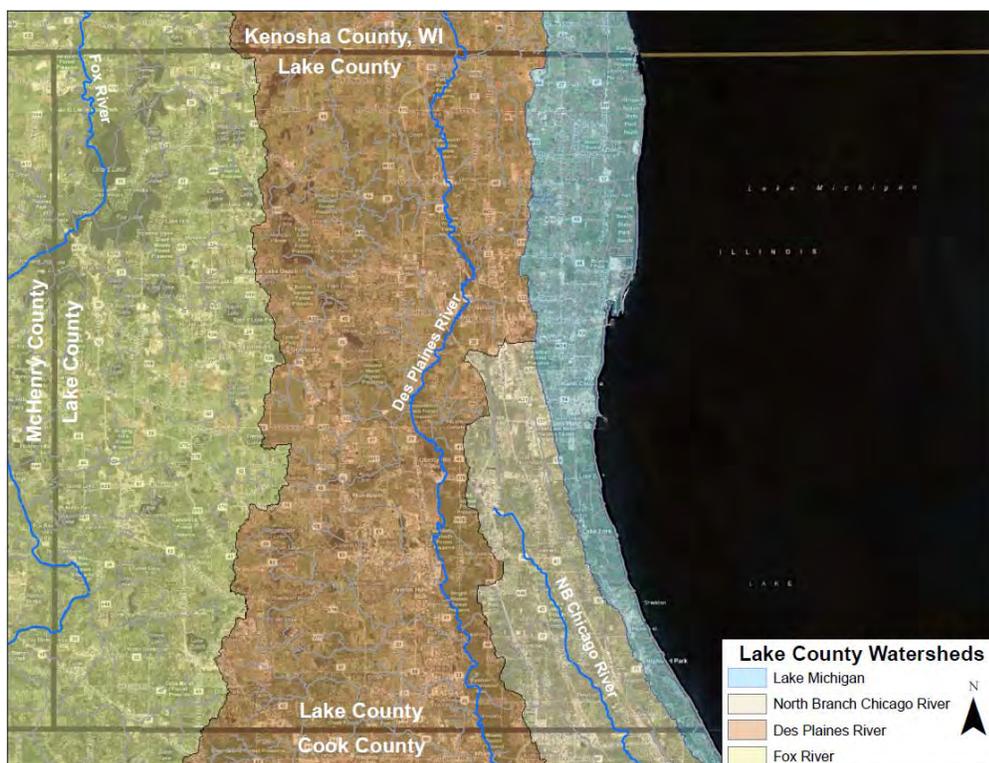


Figure 1 – Lake County Watersheds

There are three main tributaries of the North Branch Chicago River, each of them having their own subwatersheds: the West Fork subwatershed, the Middle Fork subwatershed, and the Skokie River subwatershed. Portions of Gurnee, Park City, Waukegan, North Chicago, Lake Bluff, Green Oaks, Mettawa, Lake Forest, Highwood, Highland Park, Deerfield, Riverwoods, Lincolnshire and Bannockburn make up the North Branch Chicago River watershed.

Lake Michigan Watershed

The Lake Michigan watershed drains 54 square miles of Lake County. Channels in this area generally flow toward the east into Lake Michigan with the western limits at about Green Bay Road. Subwatersheds include Bluff/Ravine, Dead River, Kellogg Creek, Pettibone Creek and Waukegan River.

The topography of the Lake Michigan watershed ranges from gently sloping topography to a steep/ravine bluff system. A coastal beach-ridge plain is located along the lakeshore from the state line south to the Waukegan harbor. The northern third of the watershed has become increasingly suburbanized while the southern third is mostly entirely suburbanized. While the Lake Michigan watershed contains some of the most urbanized portions of the county, it does boast the Illinois Beach State Park and Spring Bluff and Fort Sheridan Forest Preserves with high quality water resources.

Lake County communities located wholly or predominantly in the watershed include Beach Park, Lake Bluff, Lake Forest, Highwood, Highland Park, North Chicago, Winthrop Harbor, Waukegan and Zion.

1.6 Impaired Waterbodies within Lake County

Lake County's MS4 program is implemented to protect and enhance all waters within the County, with particular emphasis on impaired waters. Illinois EPA conducts water quality assessments and produces the State's Integrated Water Quality Report, which contains the "303d list" of impaired water bodies. The conditions and water quality impairments for Lake County waters are contained within the integrated report. The 303d list is updated every few years by Illinois EPA.

A list of the impaired water bodies and their specific impairments within Lake County may be reviewed in Appendix B.

1.7 TMDL Waterbodies within Lake County

Illinois EPA periodically completes Total Maximum Daily Load (TMDL) analyses upon the impaired water bodies within Lake County. A TMDL is a calculation that determines the greatest amount of a given pollutant that a water body can receive without violating water quality standards and designated uses. TMDLs set pollution reduction goals that are necessary to improve the quality of impaired waters.

On water bodies that receive MS4 discharges and a TMDL or other watershed management plan is completed and approved, the County reviews its program to determine whether the TMDL or watershed management plan includes requirements for control of stormwater discharges. If TMDL allocations are not being met, the County adjusts its program elements per the TMDL or watershed management plan within eighteen months of notification by the Agency of the TMDL's approval. Where a TMDL or watershed management plan is approved, the County:

- Determines whether the approved TMDL is for a pollutant likely to be found in stormwater discharges from its system.
- Determines whether the TMDL includes a pollutant wasteload allocation (WLA) or other performance requirements specifically for stormwater discharge from its system.
- Determines whether the TMDL addresses a flow regime likely to occur during periods of stormwater discharge.

After the above determinations have been made and if it is found that the County must implement specific WLA provisions of the TMDL, the County assesses whether the WLAs are being met through implementation of existing stormwater control measures or additional control measures as necessary. The County documents control measures currently being implemented or planned to be implemented within its annual MS4 report, including a schedule of implementation for planned controls. The County also documents the calculations or other evidence that shows that the WLA will be met.

The County implements a monitoring program to evaluate and determine whether the stormwater controls are adequate to meet the WLA and documents the program and its findings within the annual report. If the evaluation shows that additional or modified controls are necessary, the type and schedule for the control additions/revisions is documented within the annual report. These actions are continued until two continuous monitoring cycles show that the WLAs are being met, or that WQ standards are being achieved.

A list of the TMDLs adopted or being developed on Lake County water bodies is provided in Appendix C.

Section 2

Program Management

Section 2 describes the organizational structure of the County with respect to the Program, its coordination between departments, and its coordination with outside agencies and other groups. It presents the roles and responsibilities of the departments involved in implementing the Program.

2.1 Program Implementation

The SMPP includes the tasks that are required to be implemented and/or performed to meet MS4 Permit requirements. It is anticipated that implementation of this SMPP constitutes compliance with the MS4 Permit. The SMPP must be posted on the County's website.

Implemented tasks are documented within tracking forms provided for Program reporting. The tracking forms are organized into three categories (based on the frequency of occurrence): Annual, As-Needed and On-Going. These forms should be printed and completed annually. At the end of the yearly reporting period (March 1 – February 28/29), the forms should be filed to document SMPP related activities. Appendix D includes the related tracking forms.

2.2 Lake County Organization

The Lake County Board is the policy and budget setting authority for the County. The Lake County Administrator's Office is in charge of implementing the Board's policies and oversees the budget. Key responsibilities pertaining to stormwater management include implementing the Watershed Development Ordinance (WDO), the Unified Development Ordinance (UDO), and the SMPP. Additionally, the County Administrator is the name of record for the County's MS4 Permit.

Several County departments work together to implement the Program and this SMPP, including:

- The County Administrator's Office
- The Lake County Division of Transportation (DOT)
- The Lake County Planning, Building and Development Department (PB&D)
- The Lake County Health Department
- The Solid Waste Agency of Lake County (SWALCO)
- The Lake County Public Works Department
- Lake County Finance and Administrative Services (FAS)

Refer to Figure 2 for the County's Program organization chart as it pertains to the SMPP. The Stormwater Coordinator has primary responsibility for managing the overall program.



Figure 2 – Lake County Program Organization Chart

2.2.1 Stormwater Coordinator

The Administration Department (Assistant County Engineer) within DOT serves as the Stormwater Coordinator and is responsible for the implementation of the Program and SMPP. The Stormwater Coordinator has several responsibilities, including:

- Serving as the lead contact for coordination with the SMC, the Illinois Environmental Protection Agency, contractors, the development community and other external regulatory agencies;
- Understanding the requirements of ILR40, ensuring that the SMPP meets the requirements of the permit, and that the County effectively implements the SMPP;
- Ensuring that the County complies with all minimum Watershed Development Ordinance (WDO) provisions;
- Ensuring that the Municipal Facilities comply with all minimum ILR40 permit requirements;
- Being aware when a Municipal Project is required to be authorized under the ILR10 permit. In these cases the Stormwater Coordinator should ensure that the NOI is received by IEPA at least 30 days prior to the start of construction;
- Understanding the role illicit discharges play in the overall NPDES II program. In general, an incidence of non-compliance must be filed with IEPA for illicit discharges exiting an MS4's outfall into a receiving water. Additionally, if the illicit discharge is generated by a construction site, it may be necessary for both the applicant and the MS4 to file the Incidence of Noncompliance (ION) form with IEPA.

2.2.2 Lake County Division of Transportation

Along with serving as the Stormwater Coordinator, the DOT has several other responsibilities in the Program. The department has responsibilities in all six of the minimum control measures of the MS4 Permit. The major role of the department within the SMPP is to work with the SMC to comply with the provisions of the WDO for construction and maintenance activities undertaken within the right-of-ways of the County Highway System. The DOT also has a key role in the Illicit Discharge Detection and Elimination portion of the SMPP by identifying all outlets in their jurisdiction and periodically screening them for potential illegal discharges. The DOT is also responsible for spill control response within the County Highway System right-of-ways and their own facilities, street sweeping and snow/ice control, staying actively involved in construction projects, and maintaining detention basins and storm sewers along the County Highway System. They are also an active participant in community outreach programs.

2.2.3 Lake County Planning, Building and Development Department

The Lake County Planning, Building and Development Department (PB&D) serves a significant role in four of the six minimum control measures of the MS4 permit. The major role of the department is enforcing the WDO and UDO for any site development projects that have a hydrologic disturbance of more than 1,000 square feet in unincorporated portions of the County (including townships). PB&D fulfills this responsibility before, during, and after construction by reviewing site plans and inspecting sites for appropriate and adequate soil erosion and sediment control measures, discussing the requirements with developers, and by issuing violation notices for noncompliant sites. PB&D also enforces the Public Nuisance and Solid Waste Hauling and Recycling Ordinances. Additionally, the department plays an active role in public education and participation, including through its involvement in the Federal Emergency Management Agency's (FEMA) Community Rating System (CRS).

2.2.4 Lake County Health Department

The Lake County Health Department serves a role in all six of the minimum control measures of the MS4 Permit. The major role of the department is within the Illicit Discharge Detection Elimination (IDDE) portion of the program by enforcing the Public Nuisance Ordinance. The ordinance prohibits pollution of any lake or canal by sewage or industrial wastes or any other substance harmful to human beings. Additionally, two other ordinances help achieve the objectives of this portion of the program: the Sewage System Disposal System Ordinance, which mandates effluent limits and monitoring for surface discharge septic systems and minimum setback distances for soil absorption septic systems, and the Regulation of Sewage and Waste Disposal from Boats Ordinance, which controls disposal aboard recreational boats. The department also assists in achieving the objectives of several portions of the program through their water quality monitoring program. Additionally, the Health Department addresses complaint calls pertaining to water quality throughout the County. The department also adheres to the Pollution Prevention / Good Housekeeping portion of the MS4 Permit and is significantly involved with education and outreach programs.

2.2.5 Solid Waste Agency of Lake County

The Solid Waste Agency of Lake County (SWALCO) is involved in several different aspects of the Program, primarily through their enforcement of the Solid Waste Hauling and Recycling Ordinance. The ordinance requires a Construction Material Management Plan for certain construction projects. The plan determines the amount of construction waste that can be recycled. SWALCO teams with PB&D to educate developers on recycling construction waste. They are also a key participant in community outreach and education events, including their household chemical waste collection events. The events allow residents to safely dispose of wastes that might otherwise end up contaminating waterways.

2.2.6 Lake County Public Works Department

The Lake County Public Works Department serves a role in two of the six minimum control measures of the MS4 Permit. Primarily through their Spill Control and Response Plan, the department is responsible for responding to spills at their own facilities. The department works with the DOT, PB&D, and the Health Department in fulfilling the objectives of the Illicit Discharge Detection and Elimination (IDDE) Program and adheres to the Pollution Prevention/Good Housekeeping portion of the MS4 Permit.

2.2.7 Lake County Finance and Administrative Services

Lake County Finance and Administrative Services (FAS) consists of two divisions that play a role in the Program: Construction Management and Facilities Operations. The Construction Management Division administers capital programs for County buildings. They are responsible for identifying projects requiring an NOI. The division provides feedback regarding the soil erosion and sediment control measures selected by the engineer of record. The Construction Management Division is responsible for ensuring that the controls in the plan are implemented onsite.

The Facilities Operations Division is responsible for maintaining implemented soil erosion and sediment control measures, as well as other pollution prevention measures. The division also maintains BMPs for wetlands and retention basins for small developments (considered unregulated wetlands) to protect water quality. The division is responsible for all County buildings, except for Public Works, DOT, and Health Department facilities, and responsible for

adhering to the Pollution Prevention/Good Housekeeping portion of the MS4 Permit for these facilities.

2.3 Coordination with SMC

The County coordinates with SMC on two levels. As a Certified Community under the WDO, the County coordinates with SMC through the Municipal Advisory Committee (MAC) and Technical Advisory Committee (TAC). As an applicant to the Program, the County coordinates with SMC through the Watershed Development Permit application process, as well as through the MAC and TAC. Lake County's Stormwater Coordinator (DOT) is the lead contact for participation in the MAC forums.

2.4 Coordination with Consultants

Lake County may enlist the services of consultants to assist in the implementation of the WDO (including, but not limited to plan review, site inspections and enforcement), and the design of MS4 projects.

2.5 Coordination of Contractors

Lake County may hire contracted services as necessary. The County has a responsibility to hire contractors who are knowledgeable of the applicable requirements of the ILR40 and ILR10 General Permits. The County shall provide appropriate training, or require documentation that appropriate training has been attended.

2.6 Coordination with the Public

Coordination with the public occurs on several levels. The Public Education and Outreach Program is discussed in Section 3.1. The Public Participation and Involvement Program is discussed in Section 3.2. The programs and forums discussed in these two sections allow the public an opportunity to comment on stormwater management issues.

2.7 Coordination with IEPA

The County is required to complete annual reports which describe the status of compliance with the MS4 Permit conditions. The annual report must be posted on the County's website and submitted to IEPA by the first day of June each year. Annual reporting to IEPA should consist of tasks denoted as "implemented" for those that were completed in accordance with this SMPP. Additional information should be provided for areas of enhancement or tasks not completed.

Records regarding the completion and progress of the Program and SMPP commitments must be kept by the County. The task sheets described in Section 2.1 should be updated throughout the year. Completed task sheets should be filed with necessary supporting documentation. The files must be available for review by both IEPA and the general public.

2.8 Coordination with the Development Community

Lake County has a responsibility to assist the development community in understanding when an ILR10 General Permit is required and whether construction sites comply with the ILR10 General Permit and WDO conditions. In general, an Incidence of Non-Compliance (ION) must be filed with IEPA for illicit discharges exiting an MS4's outfall into a receiving water. Additionally,

if the illicit discharge is generated by a construction site, it may be necessary for both the applicant and the MS4 to file the ION form with IEPA.

As a Certified Community, Lake County oversees the development community's management of post-construction stormwater runoff in accordance with ILR40 through administration of the WDO and UDO. Furthermore, the County has a responsibility to inform the development community that they are required to hire contractors which meet the qualifications necessary under the program. Refer to Section 3.4.2 for additional information on qualified personnel.

Section 3

The Program

The Program is developed around the six minimum control measures of the MS4 permit, each of which is aimed at reducing and eliminating stormwater pollution in receiving water bodies. Section 3.1 describes the Program's efforts to educate the public about stormwater pollution and stormwater pollution prevention. The manner in which the County incorporates public participation and involvement into the Program is explained in Section 3.2. Section 3.3 describes the approach to detecting and eliminating illicit discharges. Control of construction and post construction runoff is addressed in Sections 3.4 and 3.5, respectively. Lastly, Section 3.6 describes responsibilities for the care and upkeep of the County's facilities, associated maintenance yards, and County highways to minimize receiving water pollution. This section also describes necessary training for employees on the implementation of the Program and this SMPP.

3.1 Public Education and Outreach

The Public Outreach program includes distributing educational material to the community and conducting outreach activities about the impacts of stormwater discharges on water bodies and the steps that the public can take to reduce pollutants to stormwater runoff.

Lake County, in cooperation with SMC, utilizes a variety of methods to educate and provide outreach to the public about the importance of managing pollutants that potentially could enter the stormwater system. The program includes the following activities, which are discussed in greater detail in this section:

- Distribute information sheets regarding stormwater BMPs, water quality BMPs, and proper hazardous waste use and disposal.
- Organize speaking engagements for groups of interested residents on stormwater related topics.
- Produce and air public service announcements on the local cable access channel focusing on water quality issues.
- Attend/sponsor outreach activities directed at educating the public on improving water quality.
- Coordinate, publicize, and participate in SWALCO events.

The following Lake County departments are responsible for implementing the Public Education and Outreach component of the Program:

- Lake County Administrator's Office – Communications Division
- Planning, Building and Development Department (PB&D)
- Health Department
- Division of Transportation (DOT)
- Solid Waste Agency of Lake County (SWALCO)

3.1.1 Distribution of Paper Materials

Lake County produces its own educational materials and uses materials with permission from other agencies and organizations. The types of materials distributed include:

- The manual “A Citizen’s Guide to Maintaining Stormwater Best Management Practices”
- The manual “Living with Wetlands: A Handbook for Homeowners in Northeastern Illinois”
- Health Department newsletters including “Cattail Chronicles” – a biannual newsletter dedicated to public education on water quality issues specific to Lake County, “Wastewater News” and “Waterlines”
- Health Department publications regarding water quality and best management practices
- PB&D outreach letter to homeowners subject to repeated flooding as part of the Federal Emergency Management Agency’s (FEMA) Community Rating System (CRS)
- PB&D publications regarding erosion control best practices
- PB&D publications regarding general regulatory information as it relates to site development
- PB&D publications regarding site development requirements

Publications are provided in the following manner:

- At take-a-away racks located at the SMC
- On the SMC website
- Distributed to permit applicants
- At outreach events
- Through newsletters

3.1.2 Speaking Engagements

Upon request, Lake County makes employees available for speaking engagements to groups of interested residents on stormwater related topics. The program is administered by the Lake County Communications Division. The speakers are selected based upon their expertise on a requested topic.

3.1.3 Public Service Announcements

Lake County has produced and aired public service announcements (PSAs) on the local cable access channel operated by the County (LCTV) and on the County website. PSAs have focused on citizen participation in preserving stormwater quality. The PSAs are made available for use by other MS4’s in Lake County.

3.1.4 Community Events/Workshops

Lake County participates in community events directed at improving water quality. These events are generally geared towards developers, engineers, municipalities, and enforcement officers. In the past, the County has attended, sponsored, and/or publicized the following events:

- SMC sponsored Designated Erosion Control Inspector (DECI) Workshops

- SWALCO household chemical waste collection events, rain barrel sales
- Snow and ice control workshop, sponsored by the Health Department, DOT, IEPA, and SMC

3.2 Public Participation/Involvement

The Public Participation / Involvement program includes attending and publicizing watershed stakeholder meetings, presenting program information at a public meeting (at least annually), and publicizing IDDE reporting contact numbers. The following Lake County departments are responsible for implementing the Public Participation / Involvement portion of the Program:

- Lake County Administrator’s Office - Lake County Board
- Health Department - Lake County Board of Health
- Division of Transportation (DOT)
- Planning, Building and Development Department (PB&D)
- SMC – Lake County Stormwater Management Commission

3.2.1 Complaints, Suggestions and Requests

Complaint, suggestion, and/or request calls are screened, logged and routed to the appropriate department for action. General program related calls are directed to the Stormwater Coordinator, or designee. Construction activity, illicit discharge, storm sewer, and other related stormwater runoff concerns are directed to PB&D, DOT, the Health Department and/or the Public Works Department. Lake County maintains a website that enables and encourages public contact on these issues.

3.2.2 Public Hearings

The following public meetings are held by Lake County throughout the year, typically covering stormwater quality issues:

- Lake County Board – monthly meetings to conduct the business of Lake County. These meetings are broadcast on local cable television access.
- Lake County Board of Health – monthly meetings to approve the Health Department’s budget, grants, and program initiatives.
- Zoning Board of Appeals – hearings to consider applications for rezoning, conditional use permits, and requests for variation and administrative appeals.
- Regional Planning Commission – meetings held twice per month that cover issues related to land development.
- Lake County Stormwater Management Commission – meetings held monthly on stormwater management.

3.2.3 Stakeholders Meetings

Lake County publicizes and participates in stakeholder meetings throughout the County conducted for ongoing planning and project implementation efforts. The County has participated with the following watershed planning committees and other stakeholder groups:

- Chicago Wilderness Aquatic Task Force
- Barrington Area Council of Governments (BACOG) – Water Quality Committee

- Lake County Framework Plan and Unified Development Ordinance Committees (regarding water supplies and water quality)
- Fremont Township Well Committee
- Indian Creek Watershed Committee
- Bull Creek / Bull's Brook Watershed Committee
- Upper Des Plaines River Watershed Committee
- Flint Creek Watershed Committee
- North Mill Creek Watershed Committee
- North Branch Chicago River Watershed Committee
- Fox River Watershed Committee
- Waukegan River Watershed Committee
- ISD (Onsite Wastewater) Steering Committee
- Management entities for individual lakes in Lake County (Homeowners Associations, Villages, and/or Townships)

3.2.4 Illicit Discharge/Illegal Dumping Hotline

Lake County maintains, operates and publicizes a call-in phone number where parties can contact county staff for environmental concerns. Primary advertisement venues include the website and all related municipal publications. Telephone calls received from residents, other internal departments or other agencies are logged on the Indirect Illicit Discharge Tracking Form (Appendix E). The DOT should transfer information from the tracking form to the Indirect Illicit Discharge Summary Form (Appendix E) monthly. This tracking form should be reviewed with the Stormwater Coordinator annually to determine if trends can be seen and if there are additional outreach efforts needed.

3.2.5 LCSMC Municipal Advisory Committee (MAC) and Technical Advisory Committee (TAC)

Lake County officials from DOT, PB&D, and the Health Department actively serve on the MAC. Officials from DOT and PB&D serve on the TAC. Both the MAC and the TAC are hosted by the Lake County SMC. The TAC meets once a month and the MAC meets once every other month. Both meetings are open to the public.

3.2.6 Volunteer Monitoring - Adopt-A-Highway

Lake County supports Adopt-A-Highway Programs for the County Highway System. The objective of the programs is to improve and promote the image of the entire community by removing litter and debris and reducing potential illicit discharges.

3.3 Illicit Discharge Detection and Elimination

Illicit discharges can contribute considerable pollutant loads to receiving waters. There are two primary situations that constitute illicit discharges: non-stormwater runoff from contaminated sites and the deliberate discharge or dumping of non-stormwater. Illicit discharges can enter the storm sewer system as either an indirect or direct connection. The requirements of an Illicit Discharge Detection and Elimination (IDDE) program include the following:

- Develop a storm sewer system map that shows the locations of all outfalls and the names and locations of all waters that receive discharges from those outfalls.
- Prohibit non-stormwater discharges into the storm sewer system and implement appropriate enforcement procedures and actions.
- Develop and implement a plan to detect and address illicit discharges into the storm sewer system.
- Educate public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste.
- Identify appropriate best management practices (BMPs) and measurable goals.

The following Lake County departments are responsible for the IDDE component of the Program:

- Division of Transportation (DOT)
- Health Department
- Public Works Department
- Solid Waste Agency of Lake County (SWALCO)
- Planning, Building and Development Department (PB&D)

3.3.1 Regulatory Authority

Effective implementation of an IDDE program requires adequate legal authority to remove illicit discharges and prohibit future illicit discharges. This regulatory authority is achieved through adoption of the Lake County Watershed Development Ordinance (WDO) and the Unified Development Ordinance (UDO). Additionally, IEPA has regulatory authority to control pollutant discharges and can take the necessary steps to correct or remove an inappropriate discharge over and above the MS4 jurisdiction.

3.3.1.1 Watershed Development Ordinance

Several provisions of the Lake County Watershed Development Ordinance (WDO) prohibit illicit discharges as part of the development process. These provisions are only applicable for regulated development activities as defined by the WDO. Regulated developments are required to meet the soil erosion and sediment control standards of the WDO. Furthermore, the WDO requires that the applicant prohibit illicit discharges into the stormwater management system generated during the development process.

The WDO allows Lake County to require inspection deposits, performance bonds, and to adopt/enforce violation procedures. These tools assist in achieving compliant construction sites. These items are detailed further in Sections 3.4 and 3.5.

3.3.1.2 Public Nuisance Ordinance

The Public Nuisance Ordinance prohibits the pollution of any well, cistern, spring, underground water stream, lake, canal, or body of water by sewage or industrial wastes, or other substance harmful to human beings. Additionally, the ordinance prevents accumulation of waste and harmful materials that otherwise could enter the storm sewer system.

3.3.1.3 Other Health Department Ordinances

Two other Health Department Ordinances help achieve the objectives of the IDDE program. The Sewage System Disposal System Ordinance mandates effluent limits and monitoring for

surface discharge septic systems and minimum setback distances for soil absorption septic systems. The Regulation of Sewage and Waste Disposal from Boats Ordinance contains regulations to control disposal from recreational boats.

3.3.2 Identifying Outfalls and Receiving Waters

An outfall is the point where a municipal separate storm sewer discharges into receiving water. Open conveyances connecting two municipal storm sewers, or pipes, tunnels, or other conveyances which connect segments of the same stream or other receiving waters are not considered outfalls.

Regulated systems include the conveyance or system of conveyances including roads with drainage systems, municipal streets, catch basins, gutters, ditches, swales, manmade channels or storm sewers.

An outfall inventory was completed by DOT staff. All storm sewers along the Lake County Highway System have been previously mapped and outfalls identified. All outfalls were initially inspected by SMC staff. The SMC staff used a GPS receiver to document the spatial coordinates of all outfalls. This data was given to the DOT and is now stored in a GIS database. This data can be used to help determine the extent of discharged dry weather flows, the possible sources of the dry weather flows, and the particular water bodies these flows may be affecting. The outfall locations have been numbered to facilitate detection and tracking of identified illicit discharges. The outfall data can be obtained from DOT.

The outfall data is revised as needed to incorporate permitted outfalls associated with new developments and to trace illicit discharges as identified through complaint investigations.

3.3.3 Illicit Discharge Detection and Elimination Program

Illicit discharges may occur due to indirect or direct connections. Indirect connections can be caused from groundwater seepage, spills, dumping, outdoor washing activities, or non-target irrigation from landscaping. Direct connections enter through direct piping connections to the storm sewer system. Both exist regardless of whether or not a stormwater event (e.g. rain or melting snow) is occurring; therefore, they are most easily detected during dry-weather periods. Inspection of stormwater outfalls during dry-weather conditions reveals whether non-stormwater flows exist. If non-stormwater flows are observed, they can be screened and tested to determine whether pollutants are present. If the presence of pollutants is indicated, identifying the source of the discharge can begin. Once the source is identified, it can then be corrected. An illicit discharge program consists of three principal components: 1) program planning, 2) outfall screening, and 3) follow-up investigation and program evaluation.

1. **Program Planning** involves the office work, planning, and organization required to conduct the subsequent outfall screening and follow-up investigative activities of the program. Program planning identifies the regulatory authority to remove illicit discharges and the identification of the outfalls and receiving waters in the municipality. Program planning for the direct connection portion of the overall program also includes the identification of the staffing and equipment needed to conduct the outfall screening, and scheduling of the outfall screening activities

2. **Outfall Screening** consists of pre-screening to determine whether dry-weather flows are present and outfall inspection which includes field testing and grab samples to determine whether pollutants are present in any observed dry-weather flows

3. ***Follow-Up Investigation and Program Evaluation*** are the steps necessary to determine the source of any identified pollutant flows and eliminate them. The major follow-up investigation and program evaluation components include:

- Reviewing and assessing outfall inspection results,
- Internal coordination,
- Conducting detailed storm sewer investigations to identify pollutant sources (*tracing*),
- Exercising the appropriate legal means to achieve enforcement of the program objective (*removal of pollutants at the source*), and evaluating the program to determine whether subsequent screening activities are necessary.

It is noted that not all dry-weather flows are considered inappropriate discharges. Under certain conditions, the following discharges are not considered inappropriate:

- Water line flushing,
- Landscaping irrigation,
- Diverted stream flows,
- Rising groundwaters,
- Uncontaminated groundwater infiltration,
- Uncontaminated pumped groundwater,
- Discharges from potable water sources,
- Flows from foundation drains,
- Air conditioning condensation,
- Irrigation water,
- Springs,
- Water from crawl spaces,
- Lawn watering,
- Individual car washing,
- Flows from riparian habitats and wetlands,
- Dechlorinated swimming pool water, and
- Street wash water.

3.3.3.1 Program Planning

The program planning component is primarily office work related to assembling the necessary information and equipment for efficiently conducting outfall-screening activities. This component of the program addresses the items in the following subsections.

3.3.3.1.1 Staffing

Personnel for an outfall inspection screening program are required for program administration, conducting outfall screening, and any follow-up investigations. Typically, a two-member crew is required for the outfall screening and follow-up portions of the program.

3.3.3.1.2 Equipment Needs

General field equipment and specialized outfall screening equipment are required for IDDE programs. The method of collecting and managing inspection screening data is driven by available technology. A complete list of recommend equipment and supplies is found on Stormwater Outfall Screening Equipment Checklist (Appendix F). Field Crews carry basic safety items, such as cell phones, surgical gloves, and first aid kits.

3.3.3.1.3 Training

Applicable personnel shall thoroughly read and understand the objectives of the IDDE subsections of this manual. Applicable field personnel shall have completed a standard training session, and accompany a supervisor on at least two outfall inspections to learn the use of the Stormwater Outfall Inspection Data Form (Appendix G) and the use of sampling equipment and test kits. As a training exercise, new personnel should independently conduct outfall screening activities until two outfall screening data forms are accurate and consistent with the supervisor investigator's forms.

3.3.3.1.4 Scheduling

Scheduling for pre-screening or outfall inspections depends on staff availability and weather. Pre-screening generally takes place during the late summer or fall months, ideally in August, September, or October, although other summer or fall months may be acceptable, depending on weather conditions. This time period is generally warm, which improves field efficiency as well as reliability and consistency of field testing. This time period is also more likely to have extended dry periods with little or no precipitation, which is required for the inspection activities.

In order to ensure that samples collected are representative of dry-weather flows, pre-screening and follow-up inspections are conducted after a dry-weather period of 72 hours. A period of 72 hours is selected to allow local detention facilities to drain and local groundwater flows to recede after precipitation events. However, some judgment may be exercised in evaluating the 72 hour period for sampling. For example, if very light rain or drizzle occurred and no runoff was experienced, it is likely that dry-weather conditions could exist and outfall inspection could be conducted.

3.3.3.2 Outfall Inspection Procedure

The identification of potential illicit discharge locations is primarily a two part process, pre-screening and follow-up inspections. Pre-screening is performed by a rapid inspection of all outfalls in a pre-determined area, such as along a receiving water. Follow-up inspections are required for those pipes found to have dry weather flow. Once probable illicit discharges are found, the sources of illicit discharges are identified and corrected per the removal procedure of Section 3.3.3.4. Outfall inspection consists of the following tasks:

- Pre-Screening
- Outfall Inspection Setup,
- Outfall Inspection,
- Outfall Assessment and Documentation, and
- Daily Closeout.

3.3.3.2.1 Pre-Screening

Pre-screening consists of a rapid inspection of outfalls during dry weather flow conditions. During pre-screening outfalls are rapidly inspected, after a dry-weather period a period of at least 72 hours. Outfalls observed to have dry weather flow are documented along with the quantity of flow (such as trickle, moderate or substantial). Additionally, outfalls that are partially or fully submerged should be documented for follow-up inspection. Outfalls with dry weather flows shall be scheduled for an outfall inspection. The initial screening of the outlets along the Lake County Highway System was completed by SMC staff (in association with DOT) in August/September 2009.

3.3.3.2.2 Outfall Inspection Setup and Precautions

In this step, an attempt is made to visualize the outfall locations and anticipate any potential problems that could affect the screening activities – in particular, identifying any safety issues (e.g., access to outfall, traffic, etc.). Before leaving an outfall inspection location, field crews must ensure that all necessary equipment is available, operable, and calibrated (as appropriate).

Safety is the primary consideration while inspecting upstream sampling locations. Latex gloves are to be worn while collecting and handling samples. A first aid kit is to be included in each vehicle to treat minor injuries. Obtain medical help for major injuries as soon as possible. All injuries, minor and major, are to be reported to appropriate persons.

Access to Private Property

In some cases, it may be necessary for personnel to enter or cross private property to investigate discovered illicit discharges. A form letter should be prepared that includes a short description of the project, the purpose of the access to the property, and the name of a project contact person with a telephone number. An attempt should be made to contact each home or business owner for permission. Personnel shall have identification indicating that they are County employees. If the owner is not present, a letter should be left at the premises to facilitate a return inspection. If permission to access property is denied, a public official should then contact the owner at a later date. All access by personnel onto private property shall be consistent with Health Department and PB&D regulatory authority.

Confrontational situations with citizens are avoided. Personnel should be coached on appropriate responses to questions from citizens. If a field crew feels uncomfortable or threatened, they should remove themselves from the situation and report the incident to their supervisor.

Traffic

All traffic control measures are to be in accordance with the requirements of the Lake County Traffic Control Plan as set forth by the DOT. DOT personnel generally work on streets only during the hours of 8 a.m. to 2 p.m. except in emergency situations. All field crews are required to wear Personal Protection Equipment (PPE) in accordance with Standard Operating Procedures set forth by the DOT.

Confined Space Entry

Confined space entry for this program would include climbing into or inserting one's head into a pipe, manhole, or catch basin. In general, do not cross the vertical plane defining an outfall pipe or the horizontal plane defining a manhole, unless properly prepared for confined space entry. In no case shall field crew members who are untrained and/or unequipped for confined

space entry attempt to enter confined spaces. Confined space entry shall be conducted only by trained personnel with appropriate rescue and monitoring equipment.

Other Hazards

- Access – avoid steep slopes, dense brush and deep water. Report unsafe locations; do not try to access these sites.
- Becoming Stuck – avoid wading where bottom sediments are easily disturbed or depths are unknown.
- Strong Gas / Solvent Odor – do not select manhole for sampling where strong odor is present.
- Bodily Harm from Manhole Covers – use manhole hook and watch for pinch points.
- Slipping – wear proper foot gear and use rope if warranted.
- Falls – use extended sample collection device; do not cross horizontal or vertical plane at end of outfall.
- Heat and Dehydration – intake adequate water; avoid excessive exertion on hot days.
- Sunburn – apply sunscreen and wear appropriate clothing.
- Poisonous Plants / Animals – identify and avoid.
- Vicious Dogs – avoid; use animal repellent if necessary.
- Water Bodies – wear flotation devices.
- Ticks – check entire body at the end of each day.
- Mosquitoes – apply repellent.

Test Kit Analysis Safety

In general, safety procedures established by the USEPA Industrial User Inspection and Sampling Manual for POTWs and related IEPA publications are used. The following are general guidelines.

1. Appropriate gloves (latex or rubber) are worn at all times when handling samples or conducting test kit analyses. Other appropriate Personal Protection Equipment (PPE) is also worn, as required.
2. Copies of Material Safety Data Sheets (MSDS) are maintained with all test kits. Be familiar with instructions provided in the MSDSs.
3. Always conduct test kit analyses in a well-ventilated area.
4. Wash hands thoroughly with soap and water at every opportunity.

3.3.3.2.3 Outfall Inspection

An outfall inspection is required for outfalls determined to have dry weather flow, or with submerged outlets, based on the pre-screening efforts. Upon arriving at an outfall, the field crew inspects the outfall by approaching the outfall on foot to a proximity that allows visual observations to be made.

Outfalls are assessed to determine which one of the three following conditions applies:

1. The outfall is dry or damp with no observed flow,

2. Flowing discharges are observed from the outfall, or
3. The outfall is partially or completely submerged with no observed flow or is inaccessible.

Scenario 1: No Observed Flow. Under Scenario 1, the field crew should photograph the outfall and complete applicable sections of the Stormwater Outfall Inspection Data Form (Appendix G).

Scenario 2: Observed Flow. Under Scenario 2, the field crew photographs the outfall and complete applicable sections of the Stormwater Outfall Inspection Data Form (Appendix G). The intent is to gather additional information to determine if an illicit discharge is present. The need for on-site testing is determined and grab samples are obtained for laboratory analysis based on the flow chart guidance. Testing results are then used to identify potential sources.

The initial testing results are not intended to document the event for future removal and/or enforcement actions. If the preliminary test results identify a potential illicit discharge an independent laboratory shall be contracted to test an additional sample prior to initiating removal procedures.

Scenario 3: Submerged or Inaccessible Outfall. Under Scenario 3, complete available information from Sections 1, 2, 3 and 7 of the Stormwater Outfall Inspection Data Form (Appendix G) if standing water is present in an outfall or if it is inaccessible. Add appropriate comments in the “Remarks” section of the data form. Locating an upstream sampling point may be required if any of the following conditions exist at an outfall:

- The outfall discharge is submerged or partially submerged due to backwater conditions,
- Site access and safety considerations prevent sample collection,
- The outfall is from a facility providing water quality treatment (for example, detention basin outlet), or
- Other special considerations.

Upstream sampling locations are determined using DOT storm sewer data. Manholes, catch basins, or culvert crossings can be used for upstream sampling locations. Reasonable efforts are made to locate upstream sampling points that are accessible and exhibit flow. If inaccessible, problems are resolved in the office with appropriate supervisory personnel.

3.3.3.2.4 Outfall Assessment and Documentation

The Stormwater Outfall Inspection Data Form (Appendix G) is to be completed for all outfall screening and grab sampling activities. All completed forms must be dated, legible, and contain accurate documentation of each outfall inspection. A separate data form must be completed for each outfall. Once completed, these data forms are considered accountable documents and are maintained as part of the County files. In addition to standard information, the data form is used to record other information that is noted at the time the outfall inspection is conducted (e.g. observations of dead or dying plants, fish kills, algal blooms, construction activities, and other activities that might provide information regarding the potential for illicit connections or inappropriate discharges).

3.3.3.2.5 Daily Closeout

Disposal and Clean-up

Test waste items must be properly disposed of. Before leaving any field inspection site, the area is checked to ensure that all equipment has been cleaned, collected, and stored.

- Grab sample (uncontaminated) – dispose of on-site
- Grab sample (contaminated) – place in liquid waste container on-site; final disposal via sanitary sewer
- Test kit ampoule – use ampoule containers on-site; dispose container as a hazardous waste
- Paper towels / latex gloves – use trash bags on site; final disposal via municipal garbage

Office Closeout

In the office, copies of completed data forms are filed. Outfall screening scheduling and completion forms are updated and the next screening day's activities are planned. Problems locating outfalls are discussed with appropriate supervisory personnel so that alternate sampling locations can be identified. Data are compiled from the Stormwater Outfall Inspection Data Form (Appendix G) onto the Outfall Inspection Screening Summary Form (Appendix H) as new outfalls are discovered.

3.3.3.3 Follow Up Investigation and Program Evaluation

Follow up investigation is required for all outfalls with positive indicators for pollutant discharges. The outfall assessment results are reviewed to determine the magnitude of the dry-weather pollution problem and to determine the necessary steps to identify and remove the sources of any detected pollutants.

3.3.3.3.1 Outfall Screening Results Review and Assessment

Detailed investigations of the storm sewer system may be required upstream of the outfalls to locate sources of illicit discharges or improper disposal. The need for detailed investigations is based on evaluation of the data from the initial outfall screening. This element of the program serves to detect and remove pollutant sources. This is accomplished by reviewing the Outfall Inspection Screening Summary Form (Appendix H) to determine if there are outfalls that require a follow up investigation, target sewer system areas for detailed investigation and then conducting intensive field investigations upstream of the polluted outfall to identify potential sources.

3.3.3.3.2 Independent Verification

If the initial outfall assessment identifies potential illicit discharges (through either the on-site or off-site testing procedures), additional sampling is required. The results of the inspection and testing should be discussed with the Stormwater Coordinator. Coordination with the Health Department to take and test an additional sample and verify preliminary findings should occur.

3.3.3.3.3 Source Identification

Follow up investigation is required for all outfalls with positive indicators for pollutant discharges during the pre-screening efforts. The procedure for detailed storm sewer investigation and source identification has three major components: 1) mapping and evaluation, 2) storm sewer investigation, and 3) tracing.

Mapping and Evaluation

For each outfall to be investigated, a large-scale working map should be obtained (digitally or in paper form) that includes the entire upstream storm sewer network, outfall locations and parcel boundaries indicated. This map should be based on information from the DOT storm sewer data. Land use information is evaluated to determine the types of residential, commercial, and industrial areas that might contribute the type of pollution identified at the outfall.

If the contributing area is determined to be non-residential, the available industrial/business information should also be reviewed. The pre-treatment inspection, performed by the Public Works Department or Waste Water Treatment Plant, typically indicates chemicals located on-site at each business. The business type and on-site chemicals are logged into the Industrial/Business Inventory. The Inventory is screened for probable pollutant matches. Business types include:

- Assembly,
- Automotive,
- Bank-Loans,
- Car Wash,
- Church,
- Contractor,
- Food Processing (Pet, Candy),
- Government/School,
- Grocery Store,
- Health Club/Gym,
- Landscaping/Nursery,
- Laundromat/Dry Cleaning,
- Manufacturing,
- Meat Packing,
- Medical/Dental/Pharmaceutical,
- Office,
- Printing/Photography,
- Recreations/Park District,
- Residential (Single and Multi-Family),
- Restaurants/Bars,
- Retail,
- Salon/Barber Shop,
- Utility, and
- Warehouse/Distribution.

Storm Sewer Investigation

After conducting the mapping evaluation, a manhole-by-manhole inspection is conducted to pinpoint the location of the inappropriate discharge into the storm sewer / conveyance system. This inspection requires a field crew to revisit the outfall where the polluted dry-weather discharge was detected. The field crew should be equipped with the same testing and safety equipment and follow similar procedures as used during the outfall inspection.

After confirming that dry-weather flow is present at the outfall /manhole, the field crew continues moving to the next upstream manhole or access point to investigate for dry weather flow. In cases where more than one source of dry-weather discharge enters a manhole, the field crew records this information on the screening form and then tracks each source separately. All sources are tracked upstream, manhole-by-manhole, until the dry-weather discharge is no longer detected. Finally, the last manhole where dry-weather flow is present is identified and potential sources to that manhole are accessed. The field crew should also determine whether there has been a significant change in the flow rate between manholes. If the flow rate appears to have changed between two manholes in the system, the illicit connection likely occurs between the two manholes. Changes in the concentration of pollutant parameters could also aid in confirming the presence of an illicit connection between the two manholes.

Tracing

Once the manhole inspection has identified the reach area between two manholes suspected of containing an inappropriate discharge, testing may be necessary. If there is only one possible source to this section of the storm sewer system in the area, source identification and follow-up for corrective action may be straightforward. Multiple sources, or non-definitive sources, may require additional evaluation and testing in order to identify the contributing source. The method of testing must be approved by the management staff prior to testing. Potential testing methods include fluorometric dye testing, smoke testing, and/or remote video inspections. Once identified, the contributing source is logged.

3.3.3.4 Removal of Illicit Discharges

Removal of illicit discharge connections is required at all identified contributing sources. Eight steps are taken to definitively identify and remove an inappropriate discharge to the storm sewer system. These steps are as follows:

- Step 1. Have an outside laboratory service take a grab sample and test for the illicit discharge at the manhole located immediately downstream of the suspected discharge connection.
- Step 2: The Stormwater Coordinator will decide the appropriate County agency and personnel to be involved in the subsequent steps to remove the illicit discharge. An internal meeting will be held to discuss inspection and testing results and remedial procedures.
- Step 3: The appropriate agency shall send a notification letter to the owner/operator of the property/site suspected of discharging a pollutant. The letter should request that the owner/operator describe the activities on the site and the possible sources of non-stormwater discharges including information regarding the use and storage of hazardous substances, chemical storage practices, materials handling and disposal practices, storage tanks, types of permits, and pollution prevention plans.

- Step 4: Arrange a meeting for an inspection of the property with the appropriate agency and the owner/operator of the property where the pollution source is suspected. Most illicit connections and improper disposal can probably be detected during this step. Notify the site owner/operator of the problem and instruct them to take corrective measures.
- Step 5: Conduct additional tests as necessary if the initial site inspection is not successful in identifying the source of the problem. The appropriate agency is responsible for determining the appropriate testing measure to pinpoint the source.
- Step 6: If the owner/operator does not voluntarily initiate corrective action, the appropriate agency issues a notification of noncompliance. The notification includes a description of the required action(s) and a time frame in which to assess the problem and take corrective action. Upon notification of noncompliance, the owner can be subject to any penalties stipulated in the applicable agency's ordinance.
- Step 7: Conduct follow-up inspections after stipulated time frame has elapsed to determine whether corrective actions have been implemented to: 1) remove the illicit connection or 2) eliminate the improper disposal practice.
- Step 8: If corrective actions have been completed (i.e., the illicit discharge has been eliminated) the appropriate agency sends a notification of compliance letter to the owner/operator of the property/site suspected of discharging a pollutant.
- If corrective actions have not been completed an additional internal meeting with appropriate personnel is held to determine appropriate steps to obtain compliance. Appropriate actions may include monetary or other penalties.

3.3.3.5 Program Evaluation

The results of the screening program are reviewed to examine whether any trends can be identified that relate the incidence of dry-weather flow observations to the age or land use of a developed area. Experience gained from the program indicates a lower chance of observing polluted dry-weather flows in residential and newer development areas, while older and industrial land use areas have a higher incidence of observed dry-weather flows. Screening results are examined to determine whether any such obvious conclusions can be made. If so, these conclusions may guide future outfall screening activities.

Outfalls with positive indicators of potential pollution are investigated to identify upstream pollutant sources. Identified illicit direct connections must be eliminated. However, new sources may appear in the future as a result of mistaken cross connections from redevelopment, new-development or remodeling. Indirect or subtle discharges such as flash dumping are difficult to trace to their sources and can only be remedied through public education and reporting. Therefore, it is expected that to some degree they will continue although at a reduced magnitude and frequency. Although the outfall screening program will be successful in identifying and eliminating most pollutants in dry-weather discharges, the continued existence of dry-weather flows and associated pollutants will require an ongoing commitment to continue the outfall screening program.

The inspection screening will determine the effectiveness of the program on a long-term basis and show ongoing improvement through a reduced number of outfalls having positive indicators of potential pollutants. It is logical to assume that after several years of screening, the majority of the dry-weather pollution sources will be eliminated.

3.4 Construction Site Runoff Control

The goal of the Lake County Watershed Development Ordinance (WDO) is to ensure that new development does not increase existing stormwater problems or create new ones. The WDO establishes countywide standards for runoff maintenance, detention sites, soil erosion and sediment control, water quality, wetlands, and floodplains. These provisions are only applicable for regulated development activities as defined by the WDO. Applicants that have a hydrologic disturbance greater than 1-acre are also required to seek coverage under the statewide construction general permit by filing a Notice of Intent (NOI) with IEPA.

The WDO is implemented primarily at the local level. Lake County is a Certified Community, which allows it to implement the review, permitting, inspection, and enforcement provisions of the WDO within its own jurisdiction. The County designates an Enforcement Officer, and this person is responsible for the administration and enforcement of the WDO. The County has created an Inspection and Violation Notification Procedure to ensure compliance with the WDO. Additionally, as an applicant to the Program, the County must also ensure all County projects (e.g., DOT highway work, FAS county facility projects) adhere to all applicable regulations, including those set forth in the WDO and UDO.

The following Lake County departments are responsible for the Construction Site Runoff Control component of the Program:

- Lake County Administrator's Office
- Division of Transportation (DOT)
- Planning, Building and Development Department (PB&D)
- Health Department
- Solid Waste Agency of Lake County (SWALCO)
- Finance and Administrative Services (FAS)

3.4.1 Regulatory Program

The WDO has been incorporated into the Unified Development Ordinance (UDO) by Lake County and serves as the regulatory mechanism to require erosion and sediment controls for construction activities in unincorporated Lake County (including townships). At a minimum, these standards apply to any development that has a hydrologic disturbance of 1,000 square feet or more. Applicants are directed to PB&D (or DOT for highway work, FAS for county facility projects) for information pertaining to the permitting process. When the PB&D concurs that the applicable provisions of the UDO and WDO have been addressed, a permit is issued. Each permit lists any additional conditions that are applicable to the development. For projects along the County Highway System the SMC ensures that the WDO has been followed and issues permits accordingly. New County facilities adhere to the permitting procedures and requirements of the applicable local permitting authority.

Ordinance provisions include but are not limited, to the following:

- Grading, soil erosion and sediment control plan. The plan must:
 - *Prevent discharge of sediment from the site through the implementation of soil erosion control practices, primarily, and sediment control secondarily, and*
 - *Protect receiving waters, natural areas and adjacent properties from damage which may result from the proposed grading.*
- Waste control;
- Runoff volume reduction hierarchy and water quality;
- Established inspection duties for the applicant and procedures for inspections;
- Record keeping and reporting procedures;
- Performance guarantees on applicable developments
- Enforcement measures to achieve compliance; and
- Maintenance guarantees for applicable developments.

The Lake County Technical Reference Manual and the Illinois Urban Manual 2002, or as amended, include detailed guidance on selection and implementation on related best management practices.

As part of the permit review process, applicants that hydrologically disturb greater than 1-acre are also required to seek coverage under the statewide construction general permit by filing a Notice of Intent (NOI) with IEPA. During construction, applicants are required to submit to IEPA Incidence of Noncompliance (ION) forms, as necessary. After the site is substantially stabilized, the applicant is required to submit a Notice of Termination (NOT).

3.4.2 Responsible Parties

3.4.2.1 Applicant

The applicant is ultimately responsible for ensuring compliant soil erosion and sediment control measures on-site during construction. General contractors, sub-contractors and other hired employees of the applicant can assist the applicant in maintaining a compliant site; however the applicant remains the responsible party. The applicant is also responsible for obtaining all other required state and federal permits, including an NOI with IEPA and upholding all permit conditions (including completing inspection logs).

3.4.2.2 DECI – Designated Inspectors

The purpose of the Designated Erosion Control Inspector (DECI) program is to facilitate positive communication between the County and the permit holder by creating a single point of contact for soil erosion/sediment control issues, with the idea that it is easier to prevent soil erosion and sediment control problems than it is to correct them after they have occurred. Further, the program is intended to improve site conditions, minimize environmental impacts, and educate contractors/developers/inspectors about proper soil erosion/sediment control Best Management Practices.

The applicant is required to hire or employ a DECI if one of the following conditions is met:

- Development with 10 acres or more of hydrologic disturbance.
- Development with 1 acre or more of hydrologic disturbance **and** regulatory floodplain **or** wetlands on site or on adjoining properties.

- At the Enforcement Officer's discretion.

Note that the DOT employs a DECI on all County Highway construction projects.

The DECI can work for the permittee's contractor, subcontractor, consultant, etc, and does not have to be a direct employee of the permittee. SMC keeps a list of DECIs that have been designated.

The DECI has the responsibility to conduct inspections as required, document inspections, keep inspections and project plans available on site, report noncompliance issues promptly, recommend soil erosion/sediment control measures. Assuming the DECI is competently completing these steps, the DECI is considered to meet the requirements of the program. Ultimately, liability for a development in noncompliance may fall to the owner, the applicant, the contractor, the developer, the DECI, or anyone else involved as determined on a case by case basis.

Sites that do not require a DECI may still require a designated inspector under the NPDES II permit process. Significant efforts have been made to minimize overlap between the two programs. Currently all sites with greater than 1-acre or more of hydrologic disturbance require a permit from IEPA and a designated inspector (which is more stringent than the DECI requirements). A designated inspector, under the IEPA program, does not need to be a DECI recognized by SMC; however a DECI can fulfill both rolls. The site inspection logs can typically meet the permit conditions of both the WDO and IEPA.

3.4.2.3 Enforcement Officer

The EO is responsible for administration and enforcement of the provisions of the WDO. Additionally, the EO is responsible for performing inspections and monitoring the development. Review and inspection efforts can be performed by personnel under his/her direct supervision. A full description of the EO responsibilities is included in Appendix E of the WDO. The EO follows established procedures for notifying applicants of deficiencies and obtaining site compliance (i.e. enforcement).

It is also both the right and the responsibility of the EO to ensure that all incidences of non-compliance received from a DECI are resolved. Furthermore it is the EO's right and responsibility to notify the SMC if a DECI listed by SMC is not adequately performing the DECI responsibilities. SMC may remove a DECI from the approved DECI list; however a DECI may be removed from a development by the Enforcement Officer at their sole discretion.

3.4.3 Minimum Construction Site Practices

A site plan is required to comply with minimum prescribed practice requirements set forth in the WDO. The WDO also allows for the County to require additional measures, above and beyond minimum control measures, to prevent the discharge of pollutants from construction sites. Design and implementation guidance is available in the Lake County Technical Reference Manual (TRM) and other reference materials identified in Section 5. Some minimum control measures include the following:

- Construction site sequencing and phasing,
- Preservation of existing vegetation and natural resources (through the runoff volume reduction hierarchy provisions),
- Stormwater conveyance systems (including concentrated flows, diversions, etc.),

- Stockpile management,
- Soil erosion control measures (including blanket and seeding),
- Stabilized construction entrances/exits and haul routes,
- Sediment Control (including silt fence, inlet/outlet protection, ditch checks, sediment traps, sediment basins etc.),
- Wind and Dust control measures,
- Non-stormwater management (including dewatering practices, waste management practices, spill prevention and control practices etc.),
- Construction Buffers, and
- Construction Details.

3.4.4 Site Plan Review

PB&D requires a Site Development Permit for sites that meet the minimum requirements of the UDO. As part of the permit review process, the agency conducts detailed reviews of site plans for compliance with minimum soil erosion and sediment control measures. Comments are provided to the applicant on any plan deficiencies and/or recommended plan enhancements. The plan review also assists in identifying other approvals that the applicant may be required to obtain. After PB&D concurs that the applicable provisions of the UDO and WDO have been addressed, a permit is issued. The permit lists any additional conditions that are applicable for the development, including providing prior notification of the pre-construction meeting to the County. The County's attendance at the pre-construction meeting shall be made a condition of the permit for all major developments. The applicant is required to post the permit at the construction site. SMC enforces the WDO for all public road development that takes place in Lake County including County Highway projects. County facility projects are regulated by SMC or the certified community having jurisdiction including the review and approval of site plans and issuance of permits.

3.4.5 Site Inspection Procedure

Representatives of Lake County are authorized to enter upon any land or water to inspect development activity and to verify the existing conditions of a development site that is under permit review.

The County may inspect site development at any stage in the construction process. The County inspects critical construction sites monthly or after rain events greater than 0.5 inches. Additional recommended inspection intervals are listed below. Construction plans approved by the EO shall be maintained at the site during progress of the work.

1. Upon completion of installation of sediment and runoff control measures (including perimeter controls and diversions), prior to proceeding with any other earth disturbance or grading,
2. After stripping and clearing,
3. After rough grading,
4. After final grading,
5. After seeding and landscaping deadlines,

6. After every seven (7) calendar days or storm event with greater than 0.5-inches of rainfall, and
7. After final stabilization and landscaping, prior to removal of sediment controls.

Site Inspection Process:

The site inspection process listed below is a general procedure followed by all County agencies. Additions to the general procedure are noted.

- The County attends the pre-construction meeting on applicable development sites. PB&D conducts pre-construction meetings for sites that have larger areas of disturbance, contain detention basin construction, have more complex natural resource concerns, or are anticipated to be problematic during construction. During the pre-construction meeting, the Pre-Construction Meeting Form (Appendix I) is filled out by the County attendee. PB&D fills out and issues the Pre-Construction Requirement Form (Appendix I). It is also recommended that the inspector request to see the SWPP and IEPA NOI for applicable construction sites.
- The applicant notifies the County when initial sediment and runoff control measures have been installed.
- The County inspects the initial sediment and runoff control measures and authorizes the start of general construction.
- The County inspects the stormwater management system and authorizes additional site improvement activities.
- The County performs site inspections at the recommended intervals and completes the SE/SC Inspection Form (Appendix J; note that PB&D has a separate form that is filled out via a computer program).
- For sites that exceed the WDO thresholds per Art. IV, Section B.1.j.2. a DECI is required. Refer to Section 3.4.2.2 for additional information regarding the program.
- The County requires as-built documentation of the stormwater management system prior to final site stabilization for applicable projects. Tags of the seed mixes are kept by the developer for inspection and approval. Upon approval of the as-builts, the applicant shall permanently stabilize the site.

3.4.6 Complaints

The County receives complaint calls regarding a development, either during the review or construction phase. Both site design and construction related calls are directed to PB&D and logged for follow up. Site design comments are handled on a case by case basis. Construction related calls are typically addressed by performing a site inspection.

3.4.7 Performance Guarantees

Details regarding performance guarantees are discussed in Article 8 and 10 of the UDO for PB&D projects, and the Access Control Ordinance for DOT projects.

3.4.8 Complaints and Violation Notification Procedures

Refer to the PB&D, Building and Engineering Division, guidance document on complaints and violation procedures.

3.4.9 BMP Reference Information

Reference information is available from, but is not limited to, the following sources:

- Native Plant Guide,
- Lake County SMC's Technical Reference Manual,
- Illinois Urban Manual,
- SMC's
 - *Soil Erosion and Sediment Checklist,*
 - *Soil erosion and sediment control notes,*
 - *Typical construction sequencing,*
- Construction details are available from the DOT, PB&D, and SMC website,
- Chicago Metropolitan Agency for Planning (previously Northeastern Illinois Planning Commission) Course Manuals,
- IDOT manuals,
- Center for Watershed Protection documents, and
- IEPA and USEPA publications.

3.4.10 Construction Site Waste Control

The WDO includes several provisions that address illicit discharges generated by construction sites. The applicant is required to prohibit the dumping, depositing, dropping, throwing, discarding or leaving of litter and construction material and all other illicit discharges from entering the stormwater management system.

The Solid Waste Hauling and Recycling Ordinance lists provisions for controlling construction waste. An intergovernmental agreement between PB&D and SWALCO was developed to inform and educate developers of subdivisions and commercial projects of the ordinance and how it pertains to construction waste. Applicants are informed of the program during the building permit application process. Thresholds for inclusion in the program, which include the submission of a Construction Material Management Plan, are as follows:

- Any proposed subdivision containing 5 or more lots (with 5 or more new homes)
- Any non-residential development, including additions, consisting of new floor area in the amount of 10,000 square feet or more.

3.4.11 Highway Improvement Projects

Highway improvement projects shall follow IDOT Standard Specifications and applicable provisions of the WDO. Lake County DOT holds pre-construction meetings with the contractor to review site requirements and the soil erosion and sediment control plan for all highway improvement projects. Appropriate erosion control measures are specified in the plan in accordance with best management practices. SMC staff conducts site inspections on permitted public road development projects in accordance with WDO provisions. DOT is responsible for management of the site and the activities of the contractor(s) on highway projects. Project sites with any deficiencies as compared to the approved soil erosion and sediment control plan may be issued violation notices by the SMC inspector; it is the responsibility of the DOT staff to have the contractor bring the site into compliance by correcting any deficiencies. Refer to DOT documents regarding inspection procedures and complaints and violation notification procedures.

3.4.12 County Capital Construction Projects

The Construction Management Division, within the FAS, is responsible for ensuring that capital construction projects adhere to the WDO. FAS is responsible for identifying capital construction projects that require an NOI. Additionally, they review site plans to ensure adequate soil and erosion control measures are in place and that the stormwater pollution prevention plan (SWPPP) is adhered to. FAS is also responsible for hiring DECIs to inspect their sites.

3.5 Post Construction Runoff Control

Lake County complies with NDPES permit requirements by incorporating ordinance and BMP standards to minimize the discharge of pollutants for new development projects. As a Certified Community, the County enforces this portion of the Program by performing post-construction site inspections on developments throughout unincorporated Lake County. As an applicant, the County is responsible for the inspection of its own facilities, including the County Highway System, for compliance with this portion of the Program.

This section describes how compliance with stormwater discharge permit requirements for long-term post-construction practices that protect water quality and control runoff flow is achieved.

This SMPP creates and references extensive policies and procedures for regulating design and construction activities for protecting receiving waters. The design and construction site practices selected and implemented by the responsible party for a given site are expected to meet BMP measures described in the Lake County Technical Reference Manual and IEPA's Program recommendations. All proposed permanent stormwater treatment practices must be reviewed and approved by the Enforcement Officer.

The following Lake County departments are responsible for the Post Construction Runoff Control component of the Program:

- Lake County Administrator's Office
- Division of Transportation (DOT)
- Planning, Building and Development Department (PB&D)
- Health Department
- Finance and Administrative Services (FAS)

3.5.1 Regulatory Program

The WDO includes numerous performance standards on grading, stormwater, and soil erosion/sediment control that must be met by all parties undertaking construction. These standards apply to any new development or redevelopment resulting in over 0.5 acres of new impervious area. The Lake County Technical Reference Manual is a guidance tool that describes BMP and implementation procedures for enforcing the WDO. In unincorporated Lake County, the WDO has been incorporated into the UDO and is enforced by PB&D; the SMC enforces the WDO for all County highway and facility projects.

The applicant must develop a stormwater management strategy that minimizes the increase in runoff volumes and rates and addresses the water quality treatment requirements of the ordinance. The proposed drainage plan must use the runoff reduction hierarchy in the

ordinance and implement BMPs as required. The ordinance also requires the use of buffers when adjacent to existing water bodies.

3.5.2 Runoff Volume Reduction Hierarchy

The WDO includes performance standards which require that the site plan include a combination of structural and/or non-structural BMPs that will reduce the discharge of pollutants and the volume and velocity of storm water flow to the maximum extent practicable. The County ensures that the development plan addresses these provisions during the plan review process.

3.5.3 Sustainable Infrastructure

Each permittee should adopt strategies that incorporate storm water infiltration, reuse and evapotranspiration of storm water into the project to the maximum extent practicable. Site plan design and review should encourage that the development plan incorporates sustainable infrastructure or low impact design techniques when possible. Types of techniques include green roofs, rain gardens, rain barrels, bioswales, permeable piping, dry wells and permeable pavement.

3.5.4 Long Term Operation and Maintenance

The WDO requires that a maintenance plan be prepared for all stormwater management system components for major developments (as defined in the ordinance). The maintenance plan must include: maintenance tasks, the party responsible, a description of all permanent public or private access maintenance easements, overland flowpaths, and compensatory storage areas, and a description of dedicated sources of funding for the required maintenance.

The SMPP includes two long term maintenance plans. These sample maintenance plans are included in Appendix K.

- The first plan is recommended for existing detention and stormwater management facilities, whether publicly or privately maintained. The intent of this sample plan is to provide guidance for the maintenance of facilities that do not have an approved plan. If an existing facility already has an adequate plan, this document would supersede the sample plan. Attempts should be made to provide the sample maintenance plan to pre-WDO sites with stormwater management facilities.
- The second plan is provided to applicants during the permit review period. This plan should be reviewed and enhanced by the applicant to reflect the sites specific design. Receipt of the signed and recorded maintenance plan is required prior to issuance of the WDP or listed as a permit condition.

The PB&D requires long term maintenance plans as part of their permitting process. After a site has been developed, the responsibility of enforcing the plan shifts to the owner. PB&D will conduct site inspections to enforce the long term plan if a complaint is filed or if a severe failure is observed by staff during regular work activity. DOT is preparing a long term maintenance plan to be used at their facilities.

3.5.5 Site Inspections

The inspection program for the County's general facilities is discussed in detail in Section 3.6.1. The inspection procedure for site inspections related to construction activities is discussed in detail in Section 3.4.5. This section focuses on post-construction inspections of previously developed sites, streambanks / shorelines, streambeds, and detention / retention ponds.

Inspections are performed on an as-needed basis, typically when complaints are filed to the applicable agency.

3.5.5.1 Previously Developed Sites

The County inspects existing properties with stormwater management facilities on an as-needed basis. These facilities are typically owned by the Homeowners Association or private owner; therefore, the responsibility of post-construction runoff control shifts away from the County. Inspections are performed when a complaint is filed or when staff observes a severe failure during regular work activity. Inspections are completed based on the follow criteria:

- Previously accepted developments are inspected with respect to the approved maintenance plan. A letter indicating the maintenance activity highlights, deficiencies or additional enhancements to the plan should be provided to the responsible party.
- For older developments that do not have a maintenance plan, the County inspects facilities with respect to the sample existing facilities maintenance plan. A letter indicating the maintenance activity highlights and deficiencies should be provided to the responsible party. The sample maintenance plan is provided with the letter and the responsible party is encouraged to implement an annual maintenance program.

3.5.5.2 Shorelines

Detention basin shorelines are inspected on an as-needed basis. Inspections should be performed in the spring and/or fall, depending upon weather conditions. Basin locations are listed on the Detention/Retention Pond Checklist (Appendix L). Observed erosion, seeding/re-seeding or slope stabilization needs are documented. Documented deficiencies should be reported to the appropriate agency to evaluate and determine appropriate remediation activities. Remedial actions might include notifying the property owner or including maintenance activities in the County's work program.

New developments are required to provide a maintenance plan for constructed detention/retention facilities. The recorded maintenance plan for developments permitted through the Lake County Watershed Development Ordinance (WDO) is used, if available, for shoreline areas. Typical BMP for maintenance of these areas are similar to those for a construction site. SMC's streambank/shoreline stabilization manual is used as a starting point in choosing the appropriate BMP for remediation activities.

3.5.5.3 Streambanks and Stream Bed Sediment Accumulation

Streambanks of receiving waters are inspected for erosion and stream beds are inspected for sediment plumes on an as-needed basis. Inspections should be performed in the spring and/or fall, depending upon weather conditions. Observed erosion and/or sediment accumulation is documented. Documented deficiencies should be reported to the appropriate agency to evaluate and determine appropriate remediation activities. Remedial actions might include notifying the property owner or including maintenance activities in the County's work program.

3.5.5.4 Detention/Retention Pond Sediment Accumulation

The County ensures that new detention/retention ponds are over excavated during construction to provide for future sediment accumulation. The developer is responsible for ensuring that the design grade is established prior to County's acceptance of the pond. Pond information, including the design permanent pool pond depths, is added to the Detention/Retention Pond Checklist (Appendix L) upon acceptance of the pond.

Sediment accumulation for detention basins is inspected on an as-needed basis, though the DOT has a proactive procedure in place to inspect detention basins, inlets, and outlets that are part of the County Highway System. Observed depths are logged onto the Detention/Retention Pond Checklist (Appendix L). If the inspected pond depth is found to be 2 feet or less from the design depth (i.e. shallower than the design permanent pool depth) this information should be reported to the applicable agency to evaluate and determine appropriate remediation activities.

3.6 Pollution Prevention / Good Housekeeping

The County is responsible for the implementation of an operation and maintenance program to reduce the discharge of pollutants from municipal operations. This section describes how compliance with permit requirements is achieved by incorporating pollution prevention and good housekeeping to stormwater quality management. On-going education and training is provided to ensure that all of its employees have the knowledge and skills necessary to perform their functions effectively and efficiently.

The following Lake County departments are responsible for the Pollution Prevention / Good Housekeeping component of the Program:

- Division of Transportation (DOT)
- Health Department
- Public Works Department
- Finance and Administrative Services (FAS)

3.6.1 Inspection and Maintenance Program

The following sections detail the areas encompassed by the Inspection and Maintenance Program.

3.6.1.1 Street Sweeping

Street sweeping operations are performed to reduce the amount of pollution that accumulates on roads that have the potential to reach waterways as runoff. All curb and gutter lane miles that are part of the County Highway System are cleaned on a rotating basis. Waste collected is disposed of in drying beds for solid waste disposal through a Memorandum of Understanding with the Public Works Department. Additional details, including sweeping frequency, schedule, and waste disposal, are recorded as a performance measure in the Annual Facility Inspection Report.

3.6.1.2 Detention Basin Maintenance Program

The DOT has a program in place to inventory all County detention basins, including wetland basins, and detention basin features, such as outlet structures and emergency overflow spillways. The program calls for the basins to be inspected on a semi-annual basis and to perform any necessary maintenance to ensure that they are operating to maximize water quality benefits and detention storage. Maintenance may also include prescriptive burns on basins that incorporate prairie landscapes and critical preventative maintenance on wetlands. Refer to the FAS Facilities and Operations Division and DOT operation and maintenance plan(s) for additional details including inspection schedule, inspection checklist, inspection staff, and record-keeping procedures.

3.6.1.3 Catch Basins and Storm Sewers

The DOT's goal is to annually inspect 5 percent of the Lake County Highway System's storm sewer network and catch basins, and clean as needed. Catch basins are cleaned using the County's vacuum truck and waste obtained is disposed of in drying beds for solid waste disposal through a Memorandum of Understanding with the Public Works Department. Locations of cleaned catch basins are tracked. Catch basins found to have structural deficiencies are reported.

3.6.1.4 Snow Removal and Ice Control

During snow removal and ice control activities, salt, de-icing chemicals, abrasives and snow melt may pollute stormwater runoff. To address these potential pollutants, the following procedures for the "winter season" (November 15 through April 15) are implemented.

3.6.1.4.1 Roadway Ice Control

The minimal amount of salt, de-icing chemicals and additives necessary for effective control are to be used. Prior to November 15, preparation work to obtain seasonal readiness is completed. These tasks include: inspecting and reconditioning of spreaders and spinners, install these items onto snow removal vehicles, performing test operations, calibrating distribution rates per National Salt Institution Application Guidelines, and conducting better driver training. The completion of these preparatory tasks helps to ensure that only the necessary level of salt is applied.

DOT employs liquid deicer applications to reduce the amount of salt applied. Bridge decks are treated with liquids 2-3 times per week. This activity virtually eliminates the need to deploy trucks to apply salt during a frost event.

Snow plow trucks apply a blend of liquids to salt as it is being dispensed from the truck. The adopted name for the blend of liquids is Supermix. It consists of 80% salt brine, 10% non-chloride deicer, and 10% calcium chloride. The percentages of this mix change as the weather conditions change. The liquid lowers the freezing point of water, controls the salt bounce off the road, and reduces the amount of salt required to treat the road.

3.6.1.4.2 Salt Delivery and Storage

Steps are taken to ensure that the delivery, storage and distribution of salt does not pollute stormwater runoff from DOT facilities. Delivered salt is unloaded into one of two salt domes owned by the County. The salt is loaded by conveyors to control gradation, prevent lumping and minimize potential illicit runoff. Additional procedures for salt delivery and storage are documented in the DOT's annual Snow and Ice Control Plan.

3.6.1.4.3 Snow Plowing

Snow plowing activities push snow off of the pavement and onto the parkways. This reduces the amount of salt, chemical additives, abrasives or other pollutants that go directly into the storm sewer system. When deemed necessary, the DOT hauls accumulated snow to designated stockpile locations. These locations are asphalt surface areas. Snow blowing, plowing or dumping into drainageways is not allowed. Once the snow has melted, the stockpile areas are cleaned with a street sweeper removing any debris deposited.

3.6.1.4.4 Facility Control

DOT, the Health Department, and the Public Works Department are responsible for snow and ice control at their own facilities. FAS contracts out snow and ice control responsibilities for

their facilities. DOT uses smaller pickup trucks with plows and push buckets on a loader for snow and ice control at their facilities. Salt and liquids are applied as needed to the parking areas and drives leading to the parking lots.

3.6.1.5 Vehicle and Equipment Operations

DOT operates the central fleet maintenance facility for all Lake County department vehicles and equipment. DOT also operates a satellite fleet maintenance facility several days a week as a convenience for drivers / operators that work in the vicinity. Vehicle and equipment maintenance practices are performed to minimize or eliminate the discharge of pollutants to the stormwater system and receiving waters.

3.6.1.5.1 Vehicle Fueling

DOT maintains a fueling facility at the main DOT campus. The facility has two 10,000-gallon underground gasoline tanks and two 10,000-gallon underground diesel tanks. There are four gasoline and four diesel dispensers with breakaway nozzles. There are two emergency shut-offs located at the facility.

3.6.1.5.2 Vehicle Maintenance

Vehicle maintenance procedures and practices are designed to minimize or eliminate the discharge of petroleum based pollutants to the stormwater management system, including receiving waters. This section discusses proper handling and disposal of vehicle maintenance by-products such as waste oil, antifreeze, batteries and tires.

Waste Oil

All waste oil products are held in storage tanks. The product is collected by an outside vendor for recycling.

Antifreeze

All used antifreeze / coolant products are held in a storage tank and periodically collected by an outside vendor for recycling.

Batteries

All vehicle batteries are returned to the original supplier at the time of restocking. All used batteries are stored outside in an enclosed cabinet.

Tires

Tires are stored outside in a bin and are disposed of through a local recycler on an as-needed basis.

Other

Air conditioning related work is performed by certified DOT technicians. All Freon is recycled onsite. Freon use and information regarding vehicle HVAC system repairs are recorded and stored in the electronic maintenance program "Faster".

3.6.1.6 Animal Nuisance Control

The DOT, upon receiving notification, collects animal carcasses from right-of-way areas. The carcasses are placed in a designated waste dumpster located on the DOT main campus where they are periodically picked up and disposed of by a licensed waste disposal company.

3.6.1.7 Waste Management

Waste Management consists of implementing procedural and structural practices for handling, storing and disposing of wastes generated by a maintenance activity. This helps prevent the release of waste materials into the stormwater management system including receiving waters. Waste management practices include removal of materials, such as asphalt and concrete maintenance by-products, excess earth excavation, contaminated soil, hazardous wastes, sanitary waste, and material from within triple basins.

3.6.1.7.1 Spoil Stock Pile

The spoil stock pile is located on the DOT campus; the Public Works Department campus also contains a spoil stock pile for their operations. Asphalt and concrete maintenance by-products and excess earth excavation materials are temporarily stored in the stock pile. Attempts are made to recycle asphalt and concrete products prior to storage in the spoil stock pile. Surface runoff passes through a silt fence and is routed through a detention / water quality basin.

3.6.1.7.2 Contaminated Soil Management

Contaminated soil/sediment generated during an emergency response or identified during construction activities is collected or managed for treatment or disposal by a licensed contractor. Attempts are made to avoid stockpiling of the contaminated soil. If temporary stock piling is necessary, the stockpile is placed on an impermeable liner. Additionally, BMP (presented in the SMC's Technical Reference Manual or the Illinois Urban Manual) are used to protect the downslope of the stockpiled area for erosion downstream. Construction access is located on the upstream side of the temporary stock pile.

3.6.1.7.3 Hazardous Waste

Hazardous wastes are stored in sealed containers constructed of compatible material and labeled. The containers are located in non-flammable storage cabinets or on a containment pallet. These items include paint, aerosol cans, gasoline, solvents and other hazardous wastes. Refer to Section 3.6.1.5 for vehicle related hazardous wastes. Paint brushes and equipment used for water and oil-based paints are cleaned within the designated cleaning area. Associated waste and other cleaning fluids are contained within an enclosed tank. The tank is maintained by a private licensed special waste company.

3.6.1.7.4 Sanitary Waste

Sanitary waste is discharged into a sanitary sewer or is managed by a licensed waste hauler.

3.6.1.7.5 Triple Basins

Floor drains in the garage bay floor area of maintenance facilities are directed to a sanitary sewer via an underground triple basin. Triple Basins are vacuumed out and completely cleaned as needed. Vacuumed out material is transported to the wastewater treatment station to air-dry on a protected impervious surface. The dried material is then transported to a landfill.

3.6.1.8 Water Conservation & Irrigation

Water conservation practices minimize water use and help to avoid erosion and/or the transport of pollutants into the stormwater management system. During periods of dry weather, a sprinkling/irrigation schedule is enforced. Maintenance activities (performed by the staff or its contractors) preserve water by utilizing vacuum recovery as opposed to water based cleaning when practicable. Additionally, the water main replacement program decreases the

possibility for water main leaks. In the event that a water main leak occurs, the leaking section is valved off as soon as possible and then repaired.

3.6.2 Spill Response Plan

Spill prevention and control procedures are implemented wherever non-hazardous chemicals and/or hazardous substances are stored or used. These procedures and practices are implemented to prevent and control spills in a manner that minimizes or prevents discharge to the stormwater management system and receiving waters. Refer to the County's Spill Control Plan. The following general guidelines are implemented, when cleanup activities and safety are not compromised, regardless of the location of the spill:

- Cover and protect spills from stormwater run-on and rainfall, until they are removed,
- Dry cleanup methods are used whenever possible,
- Dispose of used cleanup materials, contaminated materials and recovered spill material in accordance with the Hazardous Waste Management practices or the Solid Waste Management practices of this plan,
- Contaminated water used for cleaning and decontamination shall not be allowed to enter the stormwater management system,
- Keep waste storage areas clean, well organized and equipped with appropriate cleanup supplies, and
- Maintain perimeter controls, containment structures, covers and liners to ensure proper function.

Non-Hazardous Spills/Dumping

Non-hazardous spills are typically consistent with an illicit discharge of household material(s) into the street or stormwater management system. Upon notification or observance of a non-hazardous illicit discharge, appropriate County personnel (as directed by the Stormwater Coordinator) implement the following procedure:

- Sand bag the receiving inlet to prevent additional discharge into the storm sewer system, as necessary. It may be necessary to sand bag the next downstream inlet.
- Check structures (immediate and downstream). If possible, materials are to be vacuumed out. The structure(s) are then jetted to dilute and flush the remaining unrecoverable illicit discharge.
- Clean up may consist of applying "oil dry" or sand and then sweeping up the remnant material.
- After containment and cleanup activities have been performed, the on-site personnel fill out the Spill Response Notice (Appendix M) and distributes to adjoining residences/businesses. In residential areas, a door hanger should be provided to residences on both sides of the spill and on both sides of the street.
- Personnel document the location, type of spill and action taken on the Indirect Illicit Discharge Tracking Form (Appendix E).
- The on-site personnel provide the tracking form to their supervisor. The supervisor, or his designee, takes the information from the form and transfers it to the Indirect Illicit Discharge Summary Form (Appendix E). If a person is observed causing an illicit discharge, PB&D is notified and appropriate citations are issued.

Non-hazardous spills that occur at County facilities are handled as outlined in the County's Spill Control Plan.

Hazardous Spills

Upon notification or observance of a hazardous illicit discharge, the procedures documented in the County's Spill Control Plan shall be followed. The Lake County Risk Management Department provides an environmental consultant to cleanup and dispose of waste material from a hazardous spill or release.

3.6.3 Employee Training

The County provides education and training to its employees to ensure that they have the knowledge and skills necessary to perform their functions effectively and efficiently. The purpose of the Employee Stormwater Training Program is to teach employees that implement the Program about the following:

- Stormwater characteristics and water quality issues;
- The roles and responsibilities of the various Departments, and individuals within these Departments, regarding implementation of the SMPP to consistently achieve Permit compliance;
- Activities and practices that are or could be sources of stormwater pollution and non-stormwater discharges;
- Managing and maintaining green infrastructure and low impact design features; and,
- Use of the SMPP and available guidance materials to select and implement best management practices.

3.6.3.1 Training Approach

The County's training approach is geared towards employees maintaining their professional registrations and certifications. Training is available through seminars, webinars offered through various agencies, and new product / procedure demonstrations offered through SMC.

Employees are encouraged to attend relevant training sessions offered by the QLP and other entities on topics related to the goals/objectives of the SMPP. Additionally, the County will develop employee training programs with curricula and materials tailored to specific functional groups. The materials focus on stormwater pollution prevention measures and practices involved in routine activities carried out by the various functional groups. Training materials primarily focus on revisions to the various programs that were in place prior to the acceptance of the SMPP.

Digital and hard copies of the training materials will be kept and shared with applicable new employees as part of their job introduction. Revisions/enhancements to the SMPP will be approved by the Stormwater Coordinator and then shared with applicable employees. The Stormwater Coordinator will monitor the potential need for overall refresher material distributions and offer additional training as necessary.

Employees are encouraged to share information with other employees via email or other formats. Information may include:

- Updates and news which might enhance pollution control activities,
- Feedback from field implementation of best management practices, or
- New product information.

Section 4

Program and Performance Monitoring, Evaluation and Reporting

The SMPP represents an organized approach to achieving compliance with the requirements of the NPDES Phase II program for both private and public activities within the County. Land development, redevelopment and transportation improvement projects were required to comply with the provisions of the WDO prior to acceptance of the SMPP. Additionally, the County had numerous written and unwritten procedures for various tasks. This SMPP documents and organizes the previously existing procedures and incorporates the objectives of the WDO to create one cohesive program addressing pre-development, construction, post-development activities and municipal operations.

This section describes how the County will monitor and evaluate the proposed stormwater pollution prevention plan based on the above stated objective. As part of the stormwater management program, the County:

- *Reviews its activities,*
- *Inspects its facilities,*
- *Oversees, guides, and trains its personnel, and*
- *Evaluates the allocation of resources available to implement stormwater quality efforts.*

This section describes how program monitoring, evaluation and reporting are performed.

4.1 Program Monitoring and Research

Currently, water quality sampling/monitoring is not required under the NPDES Phase II program. Therefore, monitoring efforts focus on qualitative, not quantitative examination of stormwater practices. Future efforts may involve collecting information on the characterization of discharges from outfalls, identifying other sources of pollutants, characterizing the receiving waters, sampling construction site discharges, or identifying the performance of existing and potential enhanced stormwater pollution control measures. The County will comply with future federal and state mandates.

The Stormwater Coordinator will monitor research conducted by others regarding the effectiveness of various alternative stormwater practices, procedures and technologies. The County will continue to seek innovative stormwater practices and technologies. Information and guidance obtained through the MAC meetings and other sources will be incorporated into this SMPP as practical. This information will be used to provide insight into how the program may need to evolve

4.2 Program Evaluation

Program evaluation is performed on an annual basis. The primary mechanism for evaluating the program and ensuring that staff has adequate knowledge is supervision by responsible department managers. Management support tasks include observing and evaluating design, construction, and field personnel as they implement the requirements of the SMPP on both municipal and private projects, and maintenance personnel as they conduct their assigned activities.

The following questions / topics are discussed annually among the Stormwater Coordinator, Department Managers, and staff.

- Are proper stormwater management practices integrated into planning, designing and constructing for both County and private projects?
- Are efforts to incorporate stormwater practices into maintenance activities effective and efficient?
- Is the training program sufficient?
- Is the SMPP sufficient?
- Are the procedures for implementing the SMPP adequate?

Any program elements in need of modification and agreed upon by the Department Managers will be incorporated into the Program, and the applicable sections of the SMPP will be revised.

4.3 Reporting

The Stormwater Coordinator prepares an annual report of Program activities and performance each year. Each department with Program responsibilities provides the information necessary for producing the report to the Stormwater Coordinator. By June 1 of each Program year, the annual report is submitted to IEPA to meet the reporting requirements of the County's MS4 Permit.

For any spill, release, or other noncompliance that may endanger health or the environment, an oral report to IEPA is required within 24 hours, followed by a written report within 5 days. Specific reporting requirements are contained within the MS4 Permit Standard Conditions.

For any event that may result in remediation requirements, including any spill, release, or any noncompliance that may endanger health, the environment, or damage to property, or any type of potential claim to a third party or employee, please notify Lake County Risk Management immediately at (847) 377-2241 or risk@lakecountyl.gov.

Section 5

References

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- Illinois Environmental Protection Agency. (2011). *Illinois Integrated Water Quality Report and Section 303(d) List – 2010*. Final Draft.
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- Lake County Board. (2005). *Solid Waste Hauling and Recycling Ordinance*.
- Lake County Board of Health. (1960). *Regulation of Sewage and Waste Disposal from Boats*.
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- Lake County Department of Planning, Building and Development. *Inspections Procedures – Building and Engineering Division*.
- Lake County Division of Transportation. (2011). *Snow and Ice Control Plan*.
- Lake County Stormwater Management Commission. *Stormwater Management Program Plan Template*.

DES PLAINES RIVER WATERSHED WORKGROUP AGREEMENT

This "Agreement" is made by and among the North Shore Water Reclamation District, various Illinois Municipal Corporations, the County of Lake, Illinois, other Units of Local Government, Not-for-Profit Corporations, and Private Parties (collectively, the "Parties").

Recitals

The Parties have individually and collectively determined that the Des Plaines River Watershed "Watershed", generally described in the map attached as Exhibit B, which is made a part of this Agreement by this reference, may be in need of water quality improvements, and they have further determined that it would be beneficial to enter into a cooperative agreement by forming the Des Plaines River Watershed Workgroup "DRWW" through this Agreement to provide for the collection of data that would assist in identifying issues that impact local and regional water quality within the Watershed

The scope of the work the Parties intend to perform under this Agreement is limited in nature as to provide for the collection of water quality data. The Parties, through the DRWW, intend to jointly perform (or to contract with others for the performance of) the following type of work, which shall be referred to as the "Intended Work": collecting water quality data and assisting in identifying potential water quality impairments based on the collected water quality data.

The Parties have determined that the DRWW would consolidate the limited resources of the Parties and limit duplication of work. After consideration of planning, fiscal, and other issues involving water quality and affecting this matter, each of the Parties has determined that it is in the interests of its citizens, representative groups, and of the general public welfare that this Agreement be executed and implemented.

To achieve the aforementioned goals and objectives, the Parties may rely upon the powers and authority granted to them, individually and collectively, pursuant to the Intergovernmental Cooperation Act, 5 ILCS 220/1 et seq.; Article VII, Section 10 of the 1970 Constitution of the State of Illinois; the Local Land Resource Management Planning Act, 50 ILCS 805/1 et seq.; the Illinois Drainage Act, 70 ILCS 605/1 et seq.; and other statutory authority, including without limitation 55 ILCS 5/5-1062 et seq., providing authority to the Stormwater Management Commission; the Environmental Protection Act, 415 ILCS 5 et seq.; The Green Infrastructure for Clean Water Act, 415 ILCS 56/1 et seq.; and other applicable law.

In light of the foregoing, the Parties now agree as follows:

1. Incorporation of Recitals.
 - A. The recitals to this Agreement are incorporated by this reference.
2. Bylaws; Membership; Officers and Executive Board.
 - A. Membership in the DRWW shall be governed by the DRWW bylaws, which are attached to and made a part of this Agreement as Exhibit D.
 - B. Officers of the DRWW shall be governed by the DRWW bylaws, and chosen through the process set forth in the bylaws.
 - C. The Executive Board shall be constituted as set forth in the DRWW bylaws.
3. Funding.
 - A. To provide a source of funds to commence the Intended Work each Party agrees to contribute its proportionate share of the costs associated with the Intended Work, in accordance with the schedule of dues shown on Exhibit C, which is attached to and made a part of this Agreement by this reference and as described further in Paragraph 4.C. below. No party shall be required to provide any funds in excess of the dues that have been approved for any given fiscal year of that party and shall not be deemed to be obligated or legally required to appropriate and/or pay any dues for future fiscal years. The DRWW shall have no power or authority to incur any debt or obligation on behalf of a Party beyond the dues actually paid by the Party.
 - B. To make substantive progress on the Intended Work, the Parties must proceed expeditiously and

accordingly deem it advisable to authorize their officers, employees and representatives to cooperate with each other.

- C. Where not otherwise provided by in-kind contributions of a Party (i.e. services that a Party provides by using its own staff and equipment without reimbursement from the DRWW), the DRWW may, after approval by its Executive Board, engage the professional or other related services deemed necessary to accomplish the Intended Work.
- D. The DRWW may obtain, by and through its Executive Board, services to perform the Intended Work by engaging the services of professional (herein referred to collectively as "Watershed-Related Services") as are necessary to make substantive progress on the collection of data and identification of impairments to water quality. The Intended Work may be adjusted by mutual agreement of the Parties from time to time.
- E. The DRWW shall have no authority to hire employees or create a paid staff to manage the affairs of the DRWW. The DRWW shall have no authority to use funds of the DRWW to pay any per diem, food, lodging, entertainment, travel or educational expenses of the employees or officers of the members of the DRWW including the members of the DRWW Executive Board. Each Party shall be solely responsible for all employee benefits, wage and disability payments, pension and workers' compensation claims of the personnel who participate in the DRWW.

4. Cost Sharing for the Intended Work.

- A. Professional Related Services. The Parties agree that: (i) the DRWW, through its Executive Board, may engage professional services and other services to perform various aspects of the Intended Work and, with consultation and advice from the DRWW Committees, may engage water quality monitoring, planning, engineering, management, and financial service professionals or others to perform the Intended Work; (ii) the results of the Intended Work will be of common and mutual interest among the Parties, and such Intended Work, to the greatest measure reasonably achievable, shall be undertaken to advance the common interest of the Parties and not in a manner adverse to any of the Parties; and (iii) the DRWW shall share with, and seek input from, the Parties, per the DRWW Bylaws, in connection with the Intended Work.
- B. Payment. Subject to the terms of this Agreement, the DRWW will pay all costs relating to the Intended Work.
- C. Sharing of Cost Responsibilities; Dues, Revenues and Expenses. The Parties agree that they shall share the costs associated with the Intended Work based upon the dues collected per the DRWW bylaws. To that end, each Party shall deliver the dues shown on Exhibit C as its share of the costs of Intended Work to the DRWW annually (on or about June 1 for existing members, per the terms of the DRWW annual invoice sent prior to that date; or, for new members, the current dues amount adopted under the process set forth in the DRWW bylaws). The dues shall be held in a dedicated financial fund (the "DRWW Fund," described below) for dues, revenues and expenses related to the Intended Work. The amount of dues from each respective Party shall be as originally determined and shown on Exhibit C, which shall be annually reviewed and may be adjusted in accordance with the DRWW bylaws, through which the dues amounts shall be approved by a simple majority of the votes cast.
- D. DRWW Fund. A fund (known as an "agency fund") shall be established and maintained within the County of Lake's financial system as a separate, special fund for the exclusive use and purposes of the DRWW. This fund shall include the necessary expense and revenue accounts matching the type of goods and services paid for, and the revenue sources received.

All contracts for the Intended Work shall be let by using the procedures set forth in the County of Lake's Purchasing Ordinance, as that ordinance is amended from time to time. The Administrative Agent, described below, shall manage the process under the Purchasing Ordinance for the DRWW.

- E. Accounting. The DRWW shall provide to the Parties: (i) a quarterly report of revenues and expenditures from all DRWW financial accounts for all activities related to the Intended Work; (ii) a

year-end statement of revenues and expenditures; and (iii) an annual audit. The Intended Work shall be financially executed per DRWW bylaws.

- F. No Liability of the DRWW. The Parties agree that the DRWW shall not be liable to the other Parties, or to any individual Party, for any claim or damage of any kind whatsoever relating to the Intended Work. Each Party agrees to assume liability for its respective personnel assigned to the DRWW, as well as for vehicles and equipment provided by the Party. The Party shall be solely liable for any employee or officer of the Party which participates in the activities of the DRWW. If an injury is caused, in whole or in part, by a Party's personnel the Party shall bear the liability or obligation to indemnify and hold harmless all other members of the DRWW. "Personnel" shall include any officer or elected official of a Party.
 - G. Coordination of the Intended Work. To effectively coordinate the various elements of the Intended Work, the Parties agree that certain aspects should be allocated to various Committees, which will consist of officials or personnel of various Parties. Committee representation shall be by appointment in accordance with the DRWW bylaws, and will include at least the following:
 - i. Monitoring Committee: The Monitoring Committee shall oversee the monitoring program of the Workgroup and make appropriate recommendations for program revisions to the Executive Board.
 - ii. Lakes Committee: The Lakes Committee shall assist in identifying lakes tributary to the Des Plaines River that impact the water quality of the Des Plaines River and make appropriate recommendations for program revisions to the Executive Board.
 - iii. Impairments Committee: The Impairments Committee shall oversee the identification of impairments to water quality for the Workgroup and make appropriate recommendations for program revisions to the Executive Board.
 - H. Administrative Agent. The DRWW shall utilize the Lake County Stormwater Management Commission as its administrative agent for entering into contracts, making payments, as directed by the Executive Board, receiving dues or other grants or revenue, and for providing the financial accounting and reports required by this Agreement, or as directed by the Executive Board.
 - I. Freedom of Information; Open Meetings. The Parties agree that the DRWW shall be deemed to be governed by the requirements of the Illinois Open Meetings Act and the Illinois Freedom of Information Act and will conduct the affairs of the DRWW accord to said Acts.
 - J. Receipt of Other Funds. The DRWW is authorized to accept or receive any contributions, donations, and gifts from private individuals or entities, to carry out the purposes of this Agreement.
- 5. Representation and Cooperation. Each of the Parties represents that the persons executing this agreement on behalf of such Party is duly authorized to do so. The Parties agree that no Party shall have the right to compel any other Party to enter into any agreement that is not mutually acceptable. The Parties agree to meet and confer to discuss any disputes over the terms of this Agreement.
 - 6. Entire Understanding; Amendment. This Agreement contains the entire understanding of the Parties and the DRWW regarding cost-sharing obligations with respect to the Intended Work, Watershed-Related Services, and all other agreements, understandings, representations, and statements, if any, whether oral or written, are merged herein. The Parties agree that this Agreement, including the attached bylaws, may be amended only by a super majority of the DRWW Executive Board, and any such amendment will be deemed accepted by the signatories to this Agreement unless they submit a notice of termination, as set forth below, within 30 days of the amendment's effective date. (Unless otherwise specified, an amendment's effective date will ordinarily occur on the date the Executive Board approves the amendment).
 - 7. DRWW Formation Date, Execution by Parties, Agreement Effective Date and Renewal. The DRWW was officially formed as of the initial adoption of the DRWW bylaws, August 26, 2014, and this Agreement shall

be considered effective as of that date. This Agreement shall be executed by authorized representatives of the Parties, and each Party's membership shall become effective upon completion of the following three actions: (i) the Party signs this Agreement; (ii) the Party transmits a copy to the address listed under "Notices," below; (iii) the Party pays the dues contained in Exhibit C, as those dues may be amended from year to year. This Agreement may be executed in counterparts. This Agreement shall be in full force and effect as of August 26, 2014, and as to each Party shall automatically renew annually upon payment of the Party's annual dues and may continue for an indefinite time until dissolution of the DRWW occurs, in accordance with Paragraph 9 and the DRWW bylaws. This Agreement may be amended by a resolution approved by a super-majority of the DRWW Executive Board.

8. Termination by Individual Parties. A Party to this Agreement may give notice of termination and officially end its membership through 45 days' prior written notice to the addresses specified below under the section for Notices. Any terminating Party shall be responsible for its proportionate share of the costs of Intended Work that has been approved by the Executive Board prior to the date the termination notice is received. A Party shall have no financial liability beyond the current year for which dues have been paid.
9. Dissolution and Return of Remaining Funds. Upon dissolution of the DRWW pursuant to the DRWW bylaws, and only to the extent that any funds remain after payment of all costs related to completion of the Intended Work, the remaining Parties shall be reimbursed from the remaining funds in the same proportion as their respective contributions. The DRWW shall deliver such remaining funds to the Parties within 90 days after the dissolution of the DRWW, unless otherwise agreed by the Parties.
10. Notices. All notices to the DRWW under this Agreement shall be sent to:

Des Plaines River Watershed Workgroup
Attn: President
500 W. Winchester Road, Suite 201
Libertyville, IL 60048

With a copy to:
North Shore Water Reclamation District
Attn: Executive Director
14770 W. Wm. Koepsel Drive
Gurnee, IL 60031

[SIGNATURES ON THE FOLLOWING PAGE - EXHIBIT A]

Exhibit A

Des Plaines River Watershed Workgroup Agreement

— SIGNATURE PAGE —

IN WITNESS WHEREOF, pursuant to proper authority duly granted, the Party signing below agrees to join the Des Plaines River Watershed Workgroup and be bound by the terms of this Agreement.

<p>_____</p> <p>Member Organization (or Self)</p> <p>_____</p> <p>Authorized Signature</p> <p>_____</p> <p>Print Name</p> <p>_____</p> <p>Date</p>	<p>ATTEST:</p> <p>_____</p> <p>Signature</p> <p>_____</p> <p>Print Name</p> <p>_____</p> <p>Date</p>
<p>Contact Information:</p> <p>Address: _____</p> <p>_____</p> <p>Telephone: _____</p> <p>Facsimile: _____</p> <p>Email: _____</p>	

EXHIBIT B

EXHIBIT B

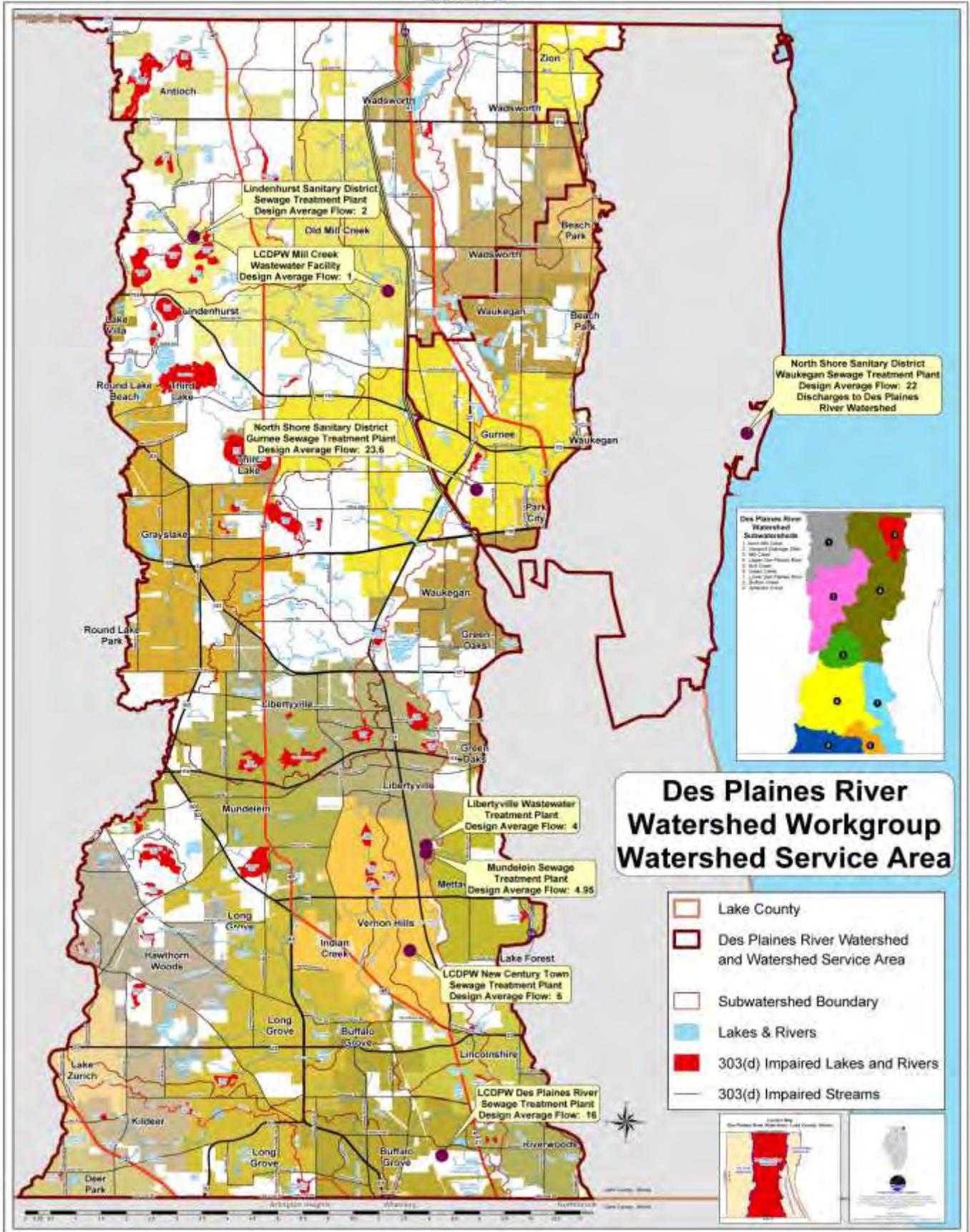


EXHIBIT C

**Des Plaines River Watershed Workgroup
Executive Board Approved Dues
August 26, 2014**

Name	Area within the Des Plaines River Watershed (acres)	Design Average Flow (MGD)	Entity Dues
Antioch	1742		\$ 1,559
Beach Park	1221		\$ 1,152
Buffalo Grove	4515		\$ 3,722
Deer Park	1188		\$ 1,127
Deerfield	40		\$ 231
Grayslake	6520		\$ 5,286
Green Oaks	746		\$ 782
Gurnee	8379		\$ 6,736
Hainesville	1		\$ 201
Hawthorn Woods	3469		\$ 2,906
Indian Creek	171		\$ 333
Kildeer	2689		\$ 2,297
Lake County	29560	24.1	\$ 83,621
Lake County Forest Preserve District	16334		\$ 12,941
Lake Forest	107		\$ 283
Lake Villa	191		\$ 349
Lake Zurich	1812		\$ 1,613
Libertyville	5601	4	\$ 14,488
Lincolnshire	2111		\$ 1,847
Lindenhurst	2865	2	\$ 7,595
Long Grove	7759		\$ 6,252
Mettawa	1599		\$ 1,447
Mundelein	5848	4.95	\$ 17,037
North Shore Sanitary District	0	45.6	\$ 83,126
Northbrook	2		\$ 202
Old Mill Creek	6298		\$ 5,112
Park City	253		\$ 397
Riverwoods	1395		\$ 1,288
Round Lake Beach	400		\$ 512
Round Lake Park	36		\$ 228
Third Lake	516		\$ 602
Vernon Hills	5025		\$ 4,120
Wadsworth	5182		\$ 4,242
Waukegan	3215		\$ 2,708
Zion	1273		\$ 1,193
Associate Members			\$200
Individual Members			\$100

Updated annually according to the DRWW bylaws.

EXHIBIT D

BYLAWS OF THE DES PLAINES RIVER WATERSHED WORKGROUP (Revised - 05/15/15)

ARTICLE I - Name

The name of this organization is the Des Plaines River Watershed Workgroup of Lake County, hereinafter referred to as "DRWW" or the "Workgroup."

ARTICLE II - Mission, Goal and Objectives

Section 1. Mission. The mission of the Workgroup is to bring together a diverse coalition of stakeholders to work together to preserve and enhance water quality in the Des Plaines River and its tributaries within Lake County, Illinois.

Section 2. Goal. The goal of the Workgroup is to improve water quality in the Des Plaines River and its tributaries through monitoring, project and best practices implementation, and education and outreach that will achieve attainment of water quality standards and designated uses for the watershed.

Section 3. Objectives. The objectives of the Workgroup are:

- a. Develop and implement a watershed-based plan.
- b. Develop and implement a comprehensive monitoring program that will include chemical, physical and biological components to accurately identify the quality of the river ecosystems as well as stressors associated with non-attainment of water quality standards and designated uses.
- c. Identify point and nonpoint source pollution issues and develop and implement short-term and long-term strategies to address these issues.
- d. Develop and implement long-term viable management strategies that accurately address water quality problems identified by the monitoring program.
- e. Develop and maintain appropriate water quality models of the watersheds to assess attainment of these objectives.

ARTICLE III - Membership

Section 1. Membership in the Workgroup shall be classified as an Agency Member, an Associate Member, or an Individual Member.

Section 2. Agency Member – Any public agency holding an NPDES permit for a discharge into the Des Plaines River and its tributaries, either from a publicly owned treatment works or from a public separate storm sewer system, and the Lake County Forest Preserve District. An Agency Member shall be entitled to between four and eighteen votes at Workgroup meetings, based on dues paid according to the following tiers:

Dues Range	Number of Votes
\$100-9,999	4 votes
\$10,000-19,999	6 votes
\$20,000-29,999	8 votes
\$30,000-39,999	10 votes
\$40,000-49,999	12 votes
\$50,000-59,999	14 votes
\$60,000-69,999	16 votes
\$70,000-79,999	18 votes plus 2 votes for each additional \$9,999

Section 3. Associate Member – An agency, organization or company interested in the mission and objectives of the Workgroup that is not eligible for membership as an Agency member. An Associate Member shall be entitled to two votes at Workgroup meetings.

Section 4. Individual Member - An individual interested in the mission, goals, and objectives of the Workgroup who is not eligible for membership as an Agency Member or Associate Member. An Individual Member is entitled to one vote at Workgroup meetings.

Section 5. Admission to any membership category will be determined by the Executive Board. Upon receipt of a written request for admission, the Executive Board may approve said membership which will become effective upon payment of the appropriate dues and will remain in effect as long as the member remains in good standing with the Workgroup.

Section 6. Each Agency and Associate Member shall designate one or more Authorized Delegate(s) to cast its votes at Workgroup meetings. The Authorized Delegate(s) may be any designated employee of the Agency or representative of an Associate Member.

ARTICLE IV - Dues and Fiscal Year

Section 1. Annual dues are due on or before June 1 of each year. If a member fails to pay dues by August 1 or reach an agreement regarding the terms of dues with the Executive Board, the member's voting rights will be suspended.

Section 2. The annual dues for all members shall be set each year by recommendation of the Executive Board to the membership and approval by the membership at the Annual Meeting. Annual dues may consist of fees or approved in-kind services such as the provision of stream monitoring or other services by members to the Workgroup or a combination of fees and services, as determined by the Executive Board.

Section 3. Any member may withdraw from membership in the Workgroup by advising the President of its intent to do so.

Section 4. The fiscal year of the Workgroup shall commence on May 1 and conclude on the last day of April of the following calendar year.

ARTICLE V - Officers and Executive Board

Section 1. Officers. Workgroup officers shall include a President, Vice President, Treasurer, and Secretary. All officers must be the Authorized Delegate of an Agency Member.

Section 2. Executive Board. The Workgroup shall be governed by an Executive Board comprised of the four officers and the chairpersons of the three standing committees – Monitoring Committee, Impairments Committee, and Lakes Committee. Each member of the Executive Board shall be entitled to discuss and vote on matters coming before the Board. The immediate past president of the Workgroup shall be an ex-officio, nonvoting member of the Executive Board. A meeting of the Executive Board may be called upon a minimum ten days written notice by either the President or three members of the Executive Board. Four members of the Executive Board present at any meeting thereof shall constitute a quorum. A simple majority vote of a quorum shall control the policies and actions of the Executive Board.

Section 3. The President shall have general supervision of the affairs of the Workgroup and the Executive Board, shall preside at their respective meetings, and have the responsibility of overseeing contracts.

Section 4. The Vice President shall act in the absence of the President.

Section 5. The Treasurer, or his designee, shall receive and deposit all Workgroup monies, pay all bills approved by the Executive Board, and be responsible for all banking and reporting requirements to state and federal agencies.

Section 6. The Secretary, or his designee, shall maintain the records of the Workgroup, keep and distribute minutes and records of attendance of all meetings, and distribute all Workgroup notices and make a report to the membership of all such activities at the Annual Meeting.

Section 7. The President shall serve as the principal spokesperson for the Workgroup and shall represent DRWW in discussions of mutual concern with governmental agencies or associations.

Section 8. The Executive Board shall have the authority to enter into contracts and make payments for products and services reflected in the annual budget and to enter into agreements for grant funding for Workgroup purposes.

Section 9. Together the President and the Treasurer shall have the authority to make payments up to \$5,000 for goods and services that have been approved by the Executive Board.

Section 10. Workgroup actions shall be decided by consensus at Workgroup meetings whenever feasible. The Executive Board may authorize expenditures less than \$10,000 which are an emergency and cannot be delayed for review at a Workgroup meeting.

ARTICLE VI - Elections and Terms of Office

Section 1. The Executive Board shall nominate individuals for the offices of President, Vice President, Treasurer, and Secretary positions. The Executive Board shall attempt to nominate individuals as officers who represent a cross section of Workgroup members. Prior to January 1 of each year, the President shall send to the membership a complete list of officer nominees and a copy of the proposed budget and proposed dues for the next fiscal year.

Section 2. Petition(s) presenting additional nominees for Workgroup officers may be submitted to the Executive Board by Workgroup members no later than December 1 of each year. A petition must contain the signatures of Workgroup members representing a minimum of three Agency Members and each nominee's signature.

Section 3. Election of Workgroup officers shall occur during the Annual Meeting each year. Only the names of the individuals who have been nominated according to the procedures described herein will be considered, and no nominations shall be permitted from the floor.

Section 4. The President, Vice President, Treasurer, and Secretary shall be elected to two year terms, beginning at the close of each Annual Meeting.

Section 5. No one shall be eligible to serve as President until he or she has been a member of the Executive Board for one year, except the first year of the Workgroup.

Section 6. Board members may resign by submitting a letter to the President. If a Board Member's employment or group representation changes, their representation on the Board shall be reviewed by the Executive Committee. Vacancies shall be filled by appointment of the Executive Board until a successor is duly elected at the next Annual Meeting.

Section 7. The first election of the Executive Board shall take place at the next meeting after the bylaws have been adopted. Nominations for positions on the Executive Board shall be submitted to the Leadership Committee as described in Section 2.

ARTICLE VII - Workgroup Meetings

Section 1. Workgroup meetings shall be held as needed but at least quarterly. Notice of Workgroup meetings and proposed meeting agendas will be provided to all Workgroup members at least seven days prior to the meeting.

Section 2. An Annual Meeting of DRWW shall be held each February at a time and location to be determined by the Executive Board.

Section 3. Special Meetings of Workgroup members may be called by the President or the Executive Board or upon the written request of Workgroup members representing 25% addressed to the President or Executive Board.

Section 4. All meetings of the Workgroup shall be held within the watershed.

Section 5. Each Authorized Delegate and Individual member of the Workgroup shall be entitled to vote at Workgroup meetings.

Section 6. In the event an Authorized Delegate or Individual Member is unable to attend any Workgroup meeting, said member may designate, in writing, a proxy to cast the Member's vote(s) at a Workgroup meeting.

Section 7. At any Workgroup meeting, the presence of Workgroup members representing 25%, either in person or by proxy, shall constitute a quorum. A simple majority vote of a quorum of the Workgroup shall control the policies and actions of the Workgroup.

Section 8. The Workgroup shall maintain an informal atmosphere to ensure maximum participation of all members. However, to insure orderly procedure, Robert's Rules of Order may be invoked at any DRWW meetings.

ARTICLE VIII - Committees

Section 1. The Workgroup shall have three standing committees – Monitoring Committee, Impairments Committee, Lakes Committee. The Executive Board may appoint such other committees as are necessary.

Section 2. The Monitoring Committee shall oversee the monitoring program of the Workgroup and make appropriate recommendations for program revisions to the Executive Board.

Section 3. The Impairments Committee shall oversee the impairments program of the Workgroup and make appropriate recommendations for program revisions to the Executive Board.

Section 4. The Lakes Committee shall assist in identifying lakes tributary to the Des Plaines River that impact the water quality of the Des Plaines River and make appropriate recommendations for program revisions to the Executive Board.

Section 5. The President shall appoint the chairperson for all DRWW committees. The President shall attempt to appoint individuals as committee chairpersons who represent a cross section of Workgroup members. Each committee chairperson shall submit to the President a list of committee members. DRWW committee members may include any Workgroup member.

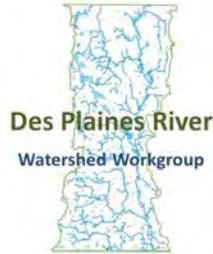
Section 6. The term of office of the chairperson of any DRWW committee shall be one year.

ARTICLE IX - Amendments

Any revision to the Bylaws shall be submitted to the Executive Board for their review. After the review by the Executive Board, it shall be submitted to the membership for a 30 day review and comment period. Any revision is effective after the comment and review period and with approval of a super-majority at a following Executive Board meeting.

Article X - DISSOLUTION

A motion to dissolve the Workgroup may be made by any Authorized Delegate at a regularly scheduled meeting at which a quorum is present. Upon receiving a proper second to the motion, the President shall defer action on the motion until the next regularly scheduled meeting of the Workgroup. All members shall be notified by mail of the pending motion to dissolve. At the next regularly scheduled meeting, the President shall, after discussion, call for a roll call vote on the motion to dissolve, which shall require the affirmative vote of 2/3 of all Workgroup member votes.



DES PLAINES RIVER WATERSHED WORKGROUP

REQUEST FOR PROPOSALS

From: Joe Robinson, Director of Laboratory Services, North Shore Water Reclamation District and Chair, Des Plaines River Watershed Workgroup

Date: May 18, 2015

Subject: Des Plaines River Watershed Water and Sediment Chemistry Monitoring

Submission Deadline: 4:00 P.M. May 29, 2015

Submission Location: Electronic Submissions are accepted at:
acline@geosyntec.com
Subject: DRWW Water and Sediment Chemistry Request for Proposals

Or provide your proposal to:
DRWW Water and Sediment Chemistry Request for Proposals
Andrea Cline
Geosyntec Consultants
1420 Kensington Road, Suite 103
Oak Brook, Illinois 60523

Project Manager: Andrea Cline
(630) 203-3366
acline@geosyntec.com

Section I. Introduction

The DRWW is a voluntary, dues paying organization with a mission to bring together a diverse coalition of stakeholders to work together to improve water quality in the Des Plaines River and its tributaries in a cost effective manner to meet Clean Water Act (CWA) requirements. DRWW membership consists of Municipal Separate Storm Sewer Systems (MS4s), Publically Owned Treatment Works (POTWs), environmental advocacy groups, consultants, and other interested parties within the Des Plaines River watershed in Lake County, Illinois.

Segments of the Des Plaines River and tributaries are identified by the Illinois Environmental Protection Agency (Illinois EPA) as not meeting their designated uses, or being impaired for certain pollutants including but not limited to: arsenic, chlorides, dissolved oxygen, fecal coliform, iron, manganese, mercury, methoxychlor, polychlorinated biphenyls (PCBs), total phosphorus, and total suspended solids (TSS). The Illinois EPA and Department of Agriculture published their Illinois Nutrient Loss Reduction Strategy on November 25, 2014 to address elevated levels of nitrogen and phosphorus in Illinois rivers and lakes. National Pollutant Discharge Elimination System (NPDES) permittees have seen the effect of

the Illinois Nutrient Loss Reduction Strategy through a reduction in allowable phosphorous which requires costly plant upgrades, requirement to study nutrient reduction further, and wet weather sampling. However, it is unclear to the DRWW that nutrient reduction is the limiting factor and the source of the problem. To that end, the DRWW is undertaking a comprehensive bioassessment monitoring program to identify the causes and sources of local waters not meeting CWA standards, which will allow for further problem and project identification with the ultimate goal of removing all water bodies in the watershed from the 303d list and meeting CWA standards.

The Des Plaines River Watershed Workgroup (DRWW) is seeking a qualified consultant to collect and process water column and sediment chemistry monitoring samples within the service area. The group has selected approximately 45 sampling locations within the Des Plaines River watershed in Lake County, Illinois at which to conduct biological, chemical, and physical monitoring including sampling of fish and macroinvertebrates, habitat, and water and sediment chemistry. This Request for Proposals seeks a qualified contractor to fulfill the sampling and processing obligations for water and sediment chemistry sampling under a tiered site design throughout the watershed.

The project area (see Figure 1) consists of the Des Plaines River watershed, covering approximately 200 square miles within Lake County, Illinois. The primary tributaries to the main stem Des Plaines River are: North Mill Creek, Mill Creek, Newport Drainage Ditch, Bull Creek, Indian Creek, Buffalo Creek, and Aptakasic Creek. There are 33 municipalities, 12 townships, and two drainage districts that lie wholly or partially within the watershed. There are 8 Publically Owned Treatment Works (POTWs) that discharge approximately 80 million gallons a day of treated wastewater to the Des Plaines River within the service area. The majority of riverine dams have been removed or are in the process of being removed.

This Request for Proposals (RFP) provides additional information about the project, instructions for the preparation and submittal of a proposal to the DRWW, and information about the selection process that will be used for this project.

Section II. Project Description

A. Background

The DRWW will gather biological, chemical, and habitat data in order to assess the current status and associated causes and sources of impairment to the rivers and streams within the watershed. This will include the collection of fish, macroinvertebrates, and habitat assessments; **the adaptation of the Quality Assurance Program Plan; the collection of water column and sediment chemistry data; and the compilation, interpretation and assessment of data collected in a final report.** These final tasks are covered under this RFP, while the collection of fish, macroinvertebrates, and habitat data, will be completed under another RFP.

The DRWW determined that additional data need to be collected in the watershed to support a thorough watershed planning effort and to better determine the stressors to the aquatic system. The DRWW envisions this becoming part of a long term water quality monitoring program that will foster the development and evaluation of implementation projects that address identified stressors and will aid in restoring water quality within the watershed.

It is the goal of the DRWW this data be available for use by the Illinois EPA, the Illinois Department of Natural Resources, local decision makers, and all other interested parties. Therefore it is essential that the data collected is accurate, precise, cost-effective, and has low variability, making the results of the assessments comparable.

A QAPP was created by adapting the Illinois EPA approved QAPP for bioassessment sampling for the DuPage River Salt Creek Workgroup and the Lower DuPage River Watershed Coalition. The adapted QAPP was revised and submitted to Illinois EPA for approval. The DRWW received comments for revisions. As a part of this project, it is expected that the contracted firm will undertake the further revision and approval by Illinois EPA of the water and sediment chemistry sampling portion of the QAPP and that all sampling will be conducted under this QAPP (included in Appendix A).

The final report should detail methods, analysis and results of the data collection effort and should provide an interpretation of water chemistry data to detail current status of the watershed and identification of causes and sources of stress and impairment. It should also provide recommendations for potential restoration projects.

B. Scope of Services

The services to be provided include, but are not limited to:

Task 1 - Quality Assurance Protection Plan

The Project QAPP will be updated based upon any monitoring plan modifications and submitted to the DRWW within 28 days following contract approval. The QAPP must be approved by Illinois EPA before data collection can begin. A draft QAPP was submitted to Illinois EPA and is included in Appendix A. Please note methods and quantitation limits are provided in the QAPP.

Task 2 - Tier 1 Water and Sediment Chemistry Sampling

Water and sediment chemistry sampling of 11 stream stations located on the mainstem Des Plaines River and Mill Creek for will occur monthly from May through September and in November and March (seven times per year) for all demand, nutrient, and bacteria parameters; annually under low flow conditions for water column metals, water organics, and once every three years concurrent with the bioassessment for sediment metals and sediment organics. For the first sampling/contract year, no sampling will take place in May nor will sediment sampling be conducted.

Task 3 - Tier 2 Water and Sediment Chemistry Sampling

Sampling of ten stream stations located on the Des Plaines and tributary streams within the watershed for water and sediment chemistry will occur monthly from May through September and in November and March (seven times per year) for the majority of demand, nutrient, and bacteria parameters; annually under low flow conditions for water column metals, water organics, and once every three years concurrent with the bioassessment for sediment metals and sediment organics. For the first sampling/contract year, no sampling will take place in May nor will sediment sampling be conducted.

Task 4 - Tier 3 Water and Sediment Chemistry Sampling

Sampling of 24 stream stations located on the Des Plaines and tributary streams within the watershed for water and sediment chemistry will occur monthly from May through September and in November and March (seven times per year) for the majority of demand, nutrient, and bacteria parameters and once every three years concurrent with the bioassessment for sediment metals and sediment organics. For this first sampling/contract year, no sampling will take place in May nor will sediment sampling be conducted.

Task 5 - Laboratory and Field Analysis

All laboratory and field analyses are specified in Table 2. Any deviations from these specifications will be mutually agreed upon by DRWW and the contracted firm and included within the revised QAPP submitted under Task 1.

Task 6 - Project Management and Data Analysis

Validated water quality data will be provided electronically to the DRWW within ten weeks of sample collection and ultimately appended to the project database. In addition, an annual data submittal, will be provided within 2 months of the final field event. This report will be provided electronically and as a hard copy, with chain-of-custody forms and laboratory reports attached.

Project management reports will consist of monthly progress reports highlighting work accomplished, work planned for the upcoming month, and any issues and proposed resolution. The contractor will attend up to two meetings with the DRWW at locations within the project area during the course of the project.

Task 7 - Water and Sediment Chemistry Quality Sampling Report

The contractor will submit annual project water quality data reports to the DRWW. The contractor will meet with the DRWW prior to submittal of the annual data submittal to ensure that the DRWW's reporting needs are met and that this report provides valuable insight into the quality of the targeted water resources. Interpretative water statistics, such as long-term central tendencies, will be based on all available data within the database, including past data collection efforts.

Figure 1: Water Quality Sampling Locations

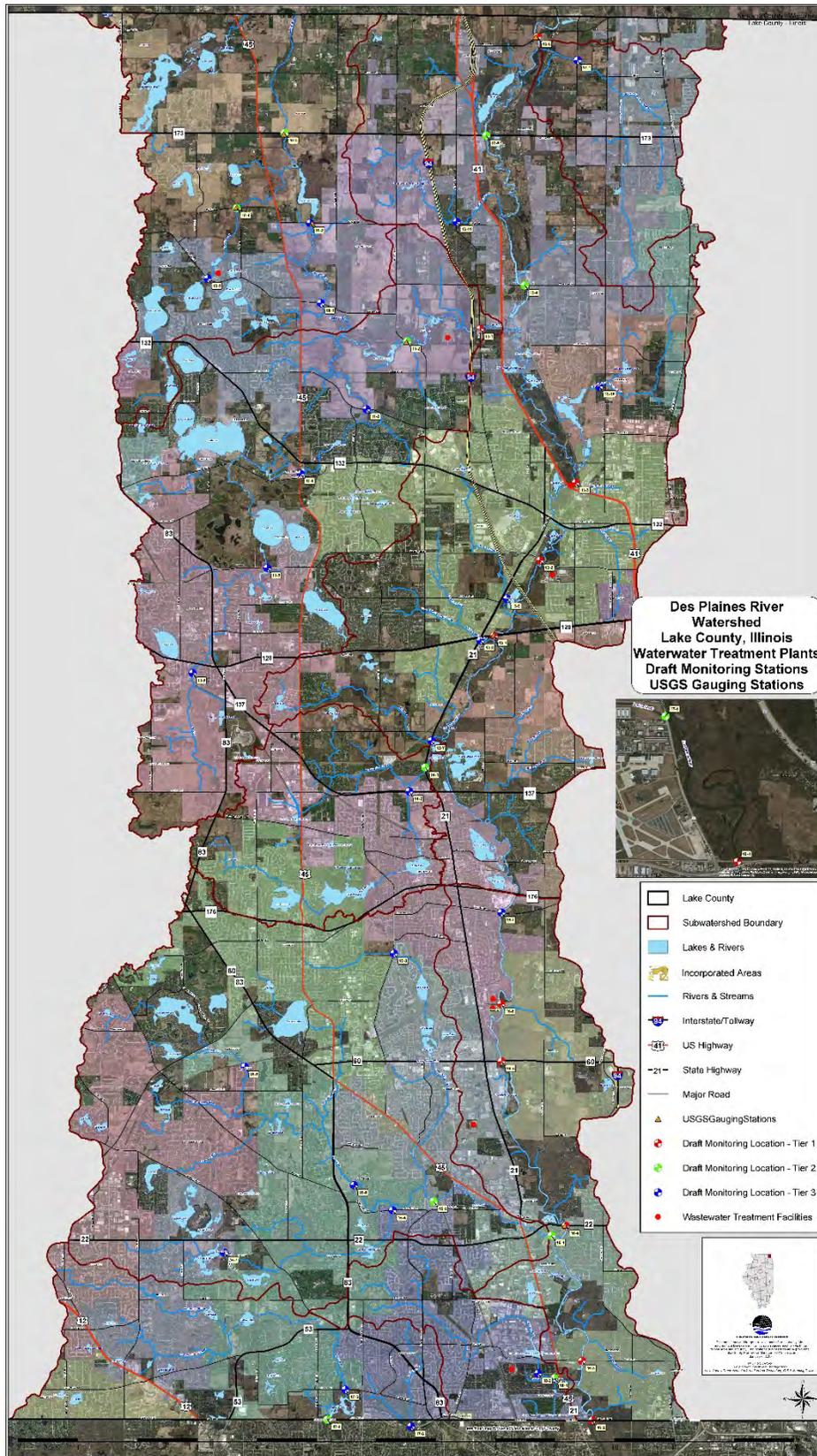


Table 1: Water Quality Sampling Locations

Des Plaines River Sample Locations	Street	Station ID	Bioassessment		
			Tier Designation		
Upper Des Plaines	Russell Rd	13-6	1		
	Highway 173	13-5			3
	Wadsworth Rd	13-4		2	
	Above Highway 41	13-3	1		
	McClure Ave	13-2	1		
	Highway 120	13-1	1		
Lower Des Plaines	Rockland Rd	16-7			3
	CN Railroad	16-6	1		
	Highway 60	16-5	1		
	Half Day Rd	16-4	1		
	Deerfield Rd	16-3	1		
	Lake Cook Rd	16-2	1		
Upper Des Plaines Tributaries	Willow Rd	16-1	1		
	Bull's Brook @ Route 21	13-8			3
	Belvidere Rd Tributary @ Highway 21 and 120	13-9			3
	Stoneroller @ Lake Carina	13-10			3
	Suburban Country Club Tributary @ Shirley Dr	13-11			3
	Slocum Corners Creek @ Mill Creek Rd	13-12			3
Newport	Newport Drainage Ditch @ Kilbourne Ave	12-1			3
North Mill	Milburn Rd	10-1			3
	Kelly Rd	10-2			3
	Route 173	10-3		2	
	Miller Rd	10-4		2	
	Grass Lake Rd	10-5			3
Mill Creek	Dilley's Rd	11-1	1		
	Hunt Club Rd	11-2		2	
	Stearns School Rd	11-3			3
	Route 45	11-4			3
	Washington St	11-5			3
	Wick St	11-6			3
Bull Creek	Bull Creek @ Route 21	14-1		2	
	Route 137	14-2			3
Indian Creek	Marriot Lincolnshire Grounds	15-1		2	
	Sullivan Wood Preserve, North of Creek View Dr	15-2		2	
	Butterfield	15-3			3
	Port Clinton Rd @ Kildeer Creek	15-4			3
	Oak Wood Rd	15-5			3
	Washitay Ave	15-6			3
	Salem Lake Dr	15-7			3
Aptakisic	Pekara Rd	18-2			3
	Aspen Rd	18-1		2	
Buffalo Creek	Lake Cook Rd @ Farington Ditch	17-2			3
	Checker	17-3			3
	Lake Cook Rd @ Buffalo Creek Tributary A	17-4		2	
	Route 21	17-1		2	
	Total		11	10	24

Table 2: Water Quality Sampling Parameters

Parameter	DRWW Frequency	Tier 1	Tier 2	Tier 3
Demand		Number of Sample Events		
Chloride	monthly May-Sept, Nov, Mar	7	7	7
Conductivity	monthly May-Sept, Nov, Mar	7	7	7
pH	monthly May-Sept, Nov, Mar	7	7	7
TOC	monthly May-Sept, Nov, Mar	7	0	0
Sulfate	monthly May-Sept, Nov, Mar	7	0	0
TSS	monthly May-Sept, Nov, Mar	7	7	0
Volatile Suspended Solids	monthly May-Sept, Nov, Mar	7	7	0
DO	monthly May-Sept, Nov, Mar	7	7	7
Temperature	monthly May-Sept, Nov, Mar	7	7	7
Turbidity	monthly May-Sept, Nov, Mar	7	7	7
Metals				
Total Hardness	annually under low flow conditions	1	1	0
Iron	annually under low flow conditions	1	0	0
Sodium	annually under low flow conditions	1	0	0
Arsenic	annually under low flow conditions	1	0	0
Manganese	annually under low flow conditions	1	1	0
Mercury	annually under low flow conditions	1	0	0
Copper	annually under low flow conditions	1	0	0
Nickel	annually under low flow conditions	1	0	0
Zinc	annually under low flow conditions	1	0	0
Nutrients				
Ammonia	monthly May-Sept, Nov, Mar	7	7	0
Total Nitrates (NO ₂ + NO ₃)	monthly May-Sept, Nov, Mar	7	7	7
TKN	monthly May-Sept, Nov, Mar	7	7	0
Total phosphorus	monthly May-Sept, Nov, Mar	7	7	7
Dissolved reactive phosphorus	monthly May-Sept, Nov, Mar	7	7	0
Bacteria				
E. coli	monthly May-Sept, Nov, Mar	7	7	7
Water Organics				
PCBs	annually under low flow conditions	1	0	0
Pesticides	annually under low flow conditions	1	0	0
Methoxychlor	annually under low flow conditions	1	0	0
PNAs	annually under low flow conditions	1	0	0
VOCs	annually under low flow conditions	1	0	0
Sediment Metals				
Aluminum	concurrent w/ bioassessment	1	1	1
Arsenic	concurrent w/ bioassessment	1	1	1
Barium	concurrent w/ bioassessment	1	1	1
Beryllium	concurrent w/ bioassessment	1	1	1
Boron	concurrent w/ bioassessment	1	1	1
Cadmium	concurrent w/ bioassessment	1	1	1
Chromium	concurrent w/ bioassessment	1	1	1
Cobalt	concurrent w/ bioassessment	1	1	1

Table 2 (cont.): Water Quality Sampling Parameters

Parameter	DRWW Frequency	Tier 1	Tier 2	Tier 3
Sediment Metals		Number of Sample Events		
Copper	concurrent w/ bioassessment	1	1	1
Fluoride	concurrent w/ bioassessment	1	1	1
Iron	concurrent w/ bioassessment	1	1	1
Lead	concurrent w/ bioassessment	1	1	1
Manganese	concurrent w/ bioassessment	1	1	1
Mercury	concurrent w/ bioassessment	1	1	1
Nickel	concurrent w/ bioassessment	1	1	1
Potassium	concurrent w/ bioassessment	1	1	1
Silver	concurrent w/ bioassessment	1	1	1
Sodium	concurrent w/ bioassessment	1	1	1
Strontium	concurrent w/ bioassessment	1	1	1
Vanadium	concurrent w/ bioassessment	1	1	1
Zinc	concurrent w/ bioassessment	1	1	1
Sediment Organics				
PCBs	concurrent w/ bioassessment	1	1	1
Pesticides	concurrent w/ bioassessment	1	1	1
Methoxychlor	concurrent w/ bioassessment	1	1	1
PNAs	concurrent w/ bioassessment	1	1	1
VOCs	concurrent w/ bioassessment	1	1	1
TKN	concurrent w/ bioassessment	1	1	1
Phosphorus	concurrent w/ bioassessment	1	1	1
Cyanide	concurrent w/ bioassessment	1	1	1
Herbicides (2, 4, D, 2,4,5 TP)	concurrent w/ bioassessment	1	1	1
Phenols	concurrent w/ bioassessment	1	1	1

C. Timeline

Sampling typically will occur monthly May through September, and in November and March, as shown in Table 2. The bioassessment sampling will begin in 2016, so no sampling that is to be collected concurrently with the bioassessment will be collected during 2015. In addition, because of the timing of the RFP, no samples will be collected in May of this year. The contract for water and sediment chemistry monitoring will end April 2016, with an option for renewal based on performance and cost.

The DRWW expects to award the contract in June 2015.

Section III. Submittal Instructions

In response to this RFP, respondents shall submit focused, detailed proposals for the project. Proposals shall address the following topics and shall generally be organized as outlined below:

A. Project Understanding and Approach

Illustrate your firm’s understanding and approach regarding the scope of services to be provided. This shall include but is not limited to:

- i. A flow diagram and written narrative showing your firm’s understanding of the sequence of events, tasks, and milestones associated with the work, including a thorough description of

- your familiarity of the watershed, goals and objectives of the monitoring plan and how the water and sediment chemistry fits in with the overall goals of the DRWW, and pollutants of concern. The firm shall describe strengths and skill acquired from past studies with water bodies that are similar to that described in the specifications. The firm shall also describe its knowledge of the watershed and strengths and skills developed from past work in the DRWW service area.
- ii. Project schedule, indicating major milestones and task durations.
 - iii. Describe all assumptions and exclusions.
 - iv. Discuss your current workload and ability to perform this project.
 - v. Present your understanding of the management and quality assurance / quality control (QA/QC) requirements of this project. This shall include but is not limited to the ability to manage and coordinate the project, including communications between the DRWW and its consultants. Provide an example of a Quality Assurance Project Plan prepared by your firm for another project. This example may be a separate document and does not count toward the overall page count. Also, include an organization chart depicting your team's organization structure. Include sub-consultants to be utilized.
 - vi. The proposal will describe the procedures to ensure that defensible and quality data are collected and reported. The proposal shall clearly define how samples will be taken at all sites defined herein.
 - vii. Provide the name and qualifications of the testing laboratory to be used.

B. Project Experience and References

Provide a list of a minimum of three similar projects that your firm has worked on in the past five years. Highlight your firm's specific ability to meet this scope of services. Each reference should include the following information.

- i. Name and location of the project.
- ii. Project manager's name and address.
- iii. Indicate if your firm was the prime contractor or a subcontractor. If the work was done as a sub, furnish the name and address of the prime contractor.
- iv. Dates of contract performance.
- v. Value of work completed by your firm.
- vi. Scope of work completed by your firm.
- vii. Contact names, addresses, and phone numbers of project references (a minimum of one contact must be provided for each project).
- viii. Narrative describing the project, equipment and software used and data delivery method, any unique or special conditions under which the work was performed, and any unusual findings resulting from your work.

C. Project Team

Provide individual resumes of key members of the staff to be assigned to this project and his/her associated firm. Provide an overall listing showing their names, years of experience, and the number of years they have been employed by your firm. This should include, at a minimum, the following personnel as applicable:

- i. Project Manager
- ii. Water Quality Scientist(s) or Engineer(s)
- iii. Data Specialist(s)

- iv. Field Sampling Personnel
- v. Other resumes maybe included as may be appropriate.

The Project Manager must be an employee of the proposing firm.

D. Project Fee

Proposed “not to exceed” project fee, including staff billing rates and an estimate of the number of hours that each personnel assigned to the project team will spend on each task and on the project as a whole. Proposed project fees should be itemized by task included in proposed scope of services.

E. Project Schedule

Proposed project schedule, organized by the tasks included in proposed scope of services including all outcomes and outputs and proposed deadlines.

Section IV. Consultant Selection Process

Additional information about the consultant selection process for this project is provided below:

Step 1: Interested Parties Prepare and Submit Proposals. Interested parties prepare and submit to the DRWW proposals for the project in response to this RFP in accordance with the instructions set forth herein.

Step 2: Selection Committee Evaluates Proposals. Proposals prepared in accordance with the instructions set forth in this RFP and received by the submittal deadline set forth herein will be evaluated by the selection committee consisting of DRWW members. Proposals will be evaluated according to the following criteria and scoring system:

Evaluation Criteria

Section A: Project Understanding and Approach	35 points
Demonstrate project understanding, approach, schedule, ability and experience in developing QAPPs, and ability to complete scope of services as described within the RFP.	
Section B: Project Experience and References	25 points
Applicant’s work on similar projects and references.	
Section C: Project Team	25 points
Project team’s experience and qualifications; laboratory certification.	
Section D: Project Fee	10 points
Section E: Project Schedule	5 points

Step 3: Consultant Selection. A contract will be negotiated with the firm that can best complete the project, as determined by the results of the evaluation process. The DRWW anticipates that a contract award will be recommended to the Executive Board at the June meeting.

Section V. Additional Information

All questions regarding this RFP should be submitted electronically to the DRWW project manager via the e-mail address provided herein no later than 12:00 PM on Friday, May 22, 2015. Any interpretations or clarifications considered necessary by the DRWW in response to such questions will be issued in the form of a "Questions and Answers" document mailed, e-mailed, or otherwise delivered to all parties known by the DRWW to have received the RFP. Questions received after the deadline may not be answered, as all "Questions and Answers" documents to be issued by the DRWW will be issued at least 48 hours prior to the submittal deadline in order to provide all interested individuals and firms ample time to incorporate such information into their proposals.

Except for the submittal of questions to the DRWW project manager, in accordance with the procedures outlined in this RFP, interested individuals and firms shall refrain from contacting other members of the DRWW regarding this RFP or the consultant selection process for this project.

Requests for Clarification & Additional Information/Interviews

During the proposal evaluation process, consultants may be asked to clarify their proposals, provide additional information, and/or interview with the DRWW to further describe the contents of their proposals. If interviews are to be conducted, the DRWW project manager will contact each individual or firm to be interviewed to arrange such an interview. Consultants invited to interview are expected to send their project manager to the interview; other project team members are welcome to attend. Consultants should not send individuals who do not work for them and/or are not included on the project team to an interview without advance authorization by the DRWW project manager.

Disclaimer

This RFP is solely a request for information. It does not represent a contract offer from the DRWW nor does it confer any rights or responsibilities onto any individual or firm that provides the requested information. The DRWW shall not under any circumstances be responsible for any costs incurred by any individual or firm preparing and/or submitting a response to this RFP.

Right of Rejection

The DRWW reserves the right to reject any and all proposals received in response to this RFP, should such course of action be determined to be in the best interest of the project. SMC is not obligated to enter into a contract on the basis of any proposal submitted in response to this RFP and may cancel this consultant selection process at any time if such course of action be determined to be in the best interest of the project.

Appendix A:

Surface Water Sample Collection SOP

COLLECTION OF STREAM WATER SAMPLES

These methods allow for the collection of grab samples utilizing a high density polyethylene (HDPE) bucket or wide mouth HDPE or glass bottle. This standard operating procedure document (SOP) has been developed to maintain consistent data collection procedures and to ensure the quality of the data collected.

1.0 FIELD EQUIPMENT

The following equipment listed is necessary for sampling procedures.

1. 1-gallon HDPE bucket, nylon rope
2. Distilled or reagent-grade deionized water
3. Sample bottles (provided by Suburban Laboratories, Inc.):
 - a. One 1000 mL HDPE with H₂SO₄ preservative for NH₃-N, TKN and Total Nitrates
 - b. One 1000 mL HDPE unpreserved bottle for BOD, TSS, TDS, Chloride, Sulfate
 - c. One 1000 mL HDPE bottle with HNO₃ preservative for Metals, (including Phosphorous and Mercury)
 - d. Two 1000 mL amber glass bottles unpreserved for Pesticides, PCBs and PNAs
 - e. Three 40 mL VOA vials with HCl preservative for VOCs
4. Disposable gloves
5. Cooler and ice
6. Antibacterial soap
7. Sharpie markers and labels
8. Field books/log sheets/chain of custody
9. Portable pH meter
10. Sampling pole

2.0 PREPARATION

Before samples are collected, sample bottles should be labeled correctly with sampling point, sampling I.D. number, the sampler's initials, and a space for the date and time to be filled in later. Sample bottle lids should also be labeled to prevent contamination between samples.

Coolers and samples bottles should be inspected before samples are collected. If dirt, residual chemicals, or any other types of contaminants are present, the sample bottle should be discarded. The coolers should be washed with mild soap and wiped down if any contaminants are present.

Sampling buckets shall be scrubbed with a solution of soap and water. Make sure the cleaning detergent is free of phosphates (orthophosphate sample).

The sampler's hands should be washed with antibacterial soap prior to sampling events. Disposable gloves will be worn during sample collection, and special care should be taken to avoid touching the inner surface of sample lids or bottles.

3.0 PROCEDURE

Sample bottles should be kept closed until they are filled. At each sample collection site, the sampler will wear a new pair of gloves for decontamination and a new pair for sample collection.

If samples are taken from a bridge, collect the sample from the upstream side of the structure unless otherwise noted in site description maps.

When sample during precipitation events, the sample bucket shall be covered at all times with a lid.

A log-sheet/chain of custody should be maintained during sampling and should include the following information:

- a. Date and time of sample
- b. Signature of collector and transporter
- c. Signature of person who relinquished the sample to lab
- d. Weather conditions during sampling (i.e., air temperature; cloudy, rain, snow)
- e. Time
- f. Sample storage temperature upon receipt in lab
- g. Visual observation of sample
- h. Field measurements such as pH

3.1 Sample Collection HDPE Bucket or Wide Mouth Bottle

The bucket shall be inspected to ensure that it is in good condition. The nylon rope attached should not be frayed or torn.

3.1.1 Decontamination

The bucket and wide mouth bottle must be cleaned before samples are collected and between sampling sites. The equipment shall be cleaned with phosphate-free detergent and blank water. Blank water should be deionized water. The equipment should be scrubbed with detergent and deionized water before the rinsing steps below are followed. Alternatively, a new bottle may be used for each sample.

Step 1 – Blank Water Rinse

- Rinse the inside of the bucket or wide mouth bottle by swirling with blank water.
- Discard the remaining blank water.
- Repeat Step 1.

3.2 Sample Collection Procedure

The stream depth will determine the equipment to be used to collect the sample. To reduce the chance of disturbing the substrate/sediment the following protocols will be followed. Samples may be collected from the bridge with a bucket if the depth is at least twice the height of the bucket. At shallower depths the field technician will use a sampling poll with a wide mouth bottle at the end. As a last resort, the field technician will wade into stream and collect the sample, standing downstream of the collection point so as not to collect kicked up sediment.

Step 1a – River Rinse and Field Measurements from Bucket

- Lower the bucket into the stream and fill.
- Discard the contents.

Step 1b – River Rinse Wide Mouth Bottle

- River rinse by filling the bottle with river water.
- Discard the remaining contents.

Step 2 – Sample Collection - Bucket

- Lower the bucket to mid-depth at center of flow, do not disturb bottom sediment.

Step 2b – Sample Collection - Pole

- Lower the sample bottle attached to the sampling pole to mid-depth at center of flow, do not disturb bottom sediment.

Step 3 – Fill Sample Bottles

Fill each sample bottle. Over filling of sample bottles with preservative should be avoided to prevent loss of preservative.

3.3 Field Measurements

Sample pH must be measured on site within 15 minutes of collection. Follow the laboratory and manufacturer's instructions for calibrating, cleaning and using the pH meter. The pH results shall be recorded on the log-sheet/chain of custody.

4.0 SAMPLE HANDLING, TRANSPORTATION, QUALITY ASSURANCE, AND BLANKS

All samples are placed in a cooler with ice after labeling. Samples are to be transported to the laboratory within the prescribed holding times. All samples will be taken to Suburban Laboratory, Inc.

4.1 Quality Assurance

Field blank and duplicates shall be collected. The laboratory shall adhere to their Quality Assurance Plan Revision 8 for samples received in the lab. Quality control limits and frequency of field quality control samples is specified at the end of this SOP.

4.2 Duplicate Samples

Duplicate samples are to be filled from the same round of stream water. Duplicate samples will be taken for all parameters once per month.

4.3 Field Blank

Sample bottles should be filled with blank water from unopened blank water containers. One field blank should be performed for VOCs and Metals including Phosphorous and Mercury once per year.

5.0 CHAIN OF CUSTODY

Chain of Custody forms must be filled out and accompany all samples to their laboratory. An example is attached.

	Method	MDL/Reporting Limit	Quantitation Limit
<u>Demand</u>			
BOD	5210B, SM18th Ed.	2 mg/l	2 mg/l
Chloride	325.2, EPA	0.5 mg/l	1 mg/l
Conductivity	2510B, SM18th Ed.	2 µmhos/cm	14 µmhos/cm
pH	4500-H B, SM18th Ed.	N/A	N/A
Sulfate	375.4, EPA	1 mg/l	10 mg/l
TDS	2540C, SM18th Ed.	10 mg/l	40 mg/l
TSS	2540D, SM18th Ed.	0.2 mg/l	1 mg/l
<u>Metals</u>			
Total Hardness	2340B, SM18th Ed.	0.05 mg/l	0.15 mg/l
Mercury	245.1, EPA	0.0002 mg/l	0.0005 mg/l
Cadmium	200.8, EPA	0.0001 mg/l	0.0001 mg/l
Calcium	200.8, EPA	0.02 mg/l	0.04 mg/l
Copper	200.8, EPA	0.0005 mg/l	0.0005 mg/l
Iron	200.8, EPA	0.005 mg/l	0.005 mg/l
Lead	200.8, EPA	0.0001 mg/l	0.0002 mg/l
Magnesium	200.8, EPA	0.005 mg/l	0.0061 mg/l
Zinc	200.8, EPA	0.007 mg/l	0.016 mg/l
<u>Nutrients</u>			
Ammonia	4500 NH3 D, SM18th Ed.	0.1 mg/l	0.5 mg/l
Total Nitrates (NO2 + NO3)	352.1, EPA	0.05 mg/l	0.1 mg/l
TKN	4500 NH3 C, SM18th Ed.	0.124 mg/l	0.5 mg/l
Phosphorous	200.8, EPA	0.02 mg/l	0.02 mg/l
<u>Water Organics</u>			
PCBs	8082, EPA	0.1 ug/l	0.1 ug/l
Pesticides	8081, EPA	0.025 ug/l	0.1 ug/l
PNAs	8270, EPA	0.1 ug/l	0.1 ug/l
VOCs	8260, EPA	1.0 ug/l	1.0 ug/l
<u>Sediment Metals</u>			
Mercury	7471A, EPA	0.02 mg/l	0.083 mg/l
Arsenic	6010B, EPA	1.15 mg/l	5 mg/l
Barium	6010B, EPA	0.125 mg/l	0.25 mg/l
Cadmium	6010B, EPA	0.075 mg/l	0.25 mg/l
Chromium	6010B, EPA	0.06 mg/l	0.25 mg/l
Copper	6010B, EPA	0.15 mg/l	0.25 mg/l
Iron	6010B, EPA	0.625 mg/l	1.25 mg/l
Lead	6010B, EPA	0.6 mg/l	1.25 mg/l
Manganese	6010B, EPA	0.625 mg/l	1.25 mg/l
Nickel	6010B, EPA	0.235 mg/l	1.25 mg/l
Potassium	6010B, EPA	2.5 mg/l	25 mg/l
Silver	6010B, EPA	0.06 mg/l	0.25 mg/l
Zinc	6010B, EPA	0.075 mg/l	1.25 mg/l
<u>Sediment Organics</u>			
PCBs	8082, EPA	16.7 ug/l	16.7 ug/l
Pesticides	8081, EPA	0.833 ug/l	16 ug/l
PNAs	8270, EPA	40 ug/l	40 ug/l
VOCs	8260, EPA	1.0 ug/l	1.0 ug/l

	<u>Precision and Accuracy</u>		<u>Frequency Requirements</u>		
	Accuracy (% Recovery)	Precision (RPD)	Field Blank	Field Duplicate	Holding Time
<u>Demand</u>					
BOD	71-117%	20%	N/A	1 monthly	48 Hours
Chloride	80-120%	20%	N/A	1 monthly	28 Days
Conductivity	80-120%	20%	N/A	1 monthly	28 Days
pH	N/A	20%	N/A	1 monthly	15 Minutes
Sulfate	80-120%	20%	N/A	1 monthly	28 Days
TDS	N/A	20%	N/A	1 monthly	7 Days
TSS	N/A	20%	N/A	1 monthly	7 Days
<u>Metals</u>					
Total Hardness	80-120%	20%	N/A	1 monthly	6 Months
Mercury	80-120%	20%	1 annually	1 monthly	28 Days
Cadmium	80-120%	20%	1 annually	1 monthly	6 Months
Calcium	80-120%	20%	1 annually	1 monthly	6 Months
Copper	80-120%	20%	1 annually	1 monthly	6 Months
Iron	80-120%	20%	1 annually	1 monthly	6 Months
Lead	80-120%	20%	1 annually	1 monthly	6 Months
Magnesium	80-120%	20%	1 annually	1 monthly	6 Months
Zinc	80-120%	20%	1 annually	1 monthly	6 Months
<u>Nutrients</u>					
Ammonia	80-120%	20%	N/A	1 monthly	28 Days
Total Nitrates (NO ₂ + NO ₃)	80-120%	20%	N/A	1 monthly	28 Days
TKN	80-120%	20%	N/A	1 monthly	28 Days
Phosphorous	80-120%	20%	1 annually	1 monthly	28 Days
<u>Water Organics</u>					
PCBs	50-140%	20%	N/A	1 monthly	7/40 Days
Pesticides	50-140%	20%	N/A	1 monthly	7/40 Days
PNAs	50-140%	20%	N/A	1 monthly	7/40 Days
VOCs	70-130%	20%	1 annually	1 monthly	14 Days
<u>Sediment Metals</u>					
Mercury	80-120%	20%	1 annually	1 monthly	28 Days
Arsenic	80-120%	20%	1 annually	1 monthly	6 Months
Barium	80-120%	20%	1 annually	1 monthly	6 Months
Cadmium	80-120%	20%	1 annually	1 monthly	6 Months
Chromium	80-120%	20%	1 annually	1 monthly	6 Months
Copper	80-120%	20%	1 annually	1 monthly	6 Months
Iron	80-120%	20%	1 annually	1 monthly	6 Months
Lead	80-120%	20%	1 annually	1 monthly	6 Months
Manganese	80-120%	20%	1 annually	1 monthly	6 Months
Nickel	80-120%	20%	1 annually	1 monthly	6 Months
Potassium	80-120%	20%	1 annually	1 monthly	6 Months
Silver	80-120%	20%	1 annually	1 monthly	6 Months
Zinc	80-120%	20%	1 annually	1 monthly	6 Months
<u>Sediment Organics</u>					
PCBs	50-140%	20%	N/A	1 monthly	14 Days
Pesticides	50-140%	20%	N/A	1 monthly	14 Days
PNAs	50-140%	20%	N/A	1 monthly	14 Days
VOCs	70-130%	20%	1 annually	1 monthly	14 Days