

City of Highwood

Illicit Discharge Detection and Elimination (IDDE) Program



Prepared for:

City of Highwood
17 Highwood Avenue
Highwood, IL 60040

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1. INTRODUCTION

1.1 Overview

The City of Highwood (City) is an operator of a Municipal Separate Storm Sewer System (MS4), as defined by the Illinois Environmental Protection Agency's (IEPA) National Pollution Discharge Elimination System (NPDES) Phase II program. The City has applied for and obtained coverage under the IEPA's General NPDES Permit for Discharges from Small Municipal Separate Storm Sewer Systems. A copy of the City's Notice of Intent (NOI) and IEPA General NPDES Permit No. ILR40 are provided in Appendix 1.

A central requirement of the NPDES Phase II Permit is the development, implementation, and enforcement of a program to detect and eliminate illicit discharges to the MS4. To meet these requirements and maintain compliance with the permit conditions, the City has partnered with Lake County (County) as a Qualifying Local Program and developed the following comprehensive Illicit Discharge Detection and Elimination (IDDE) program.

1.2 Objectives

The purpose of the IDDE program is to identify, implement, and evaluate Best Management Practices (BMP) and other procedures that will prevent or reduce the release of pollutants from illicit discharges to the MS4. As required by the NPDES permit conditions, the IDDE program will:

- *Develop, implement and enforce a program to detect and eliminate illicit connections or discharges into the permittee's small MS4;*
- *Develop, if not already completed, a storm sewer system map, showing the location of all outfalls and the names and location of all waters that receive discharges from those outfalls. Existing permittees renewing coverage under this permit shall update their storm sewer system map to include any modifications to the sewer system;*
- *To the extent allowable under state or local law, prohibit, through ordinance, or other regulatory mechanism, non-storm water discharges into the permittee's storm sewer system and implement appropriate enforcement procedures and actions, including enforceable requirements for the prompt reporting to the MS4 of all releases, spills and other unpermitted discharges to the separate storm sewer system, and a program to respond to such reports in a timely manner;*
- *Develop and implement a plan to detect and address non-storm water discharges, including illegal dumping, to the system;*
- *Inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste and the requirements and mechanisms for reporting such discharges;*



- *Address the categories of non-storm water discharges listed in Section I.B.2 only if you identify them as significant contributor of pollutants to your small MS4 (discharges or flows from firefighting activities are excluded from the effective prohibition against non-storm water and need only be addressed where they are identified as significant sources of pollutants to waters of the United States);*
- *Define appropriate BMPs for this minimum control measure and measurable goals for each BMP. These measurable goals must ensure the reduction of all of the pollutants of concern in your storm water discharges to the maximum extent practicable;*
- *Conduct periodic inspections of the storm sewer outfalls in dry weather conditions for detection of non-storm water discharges and illegal dumping. The permittee may establish a prioritization plan for inspection of outfalls, placing priority on outfalls with the greatest potential for non-storm water discharges. Major/high priority outfalls shall be inspected at least annually; and*
- *Provide an annual evaluation of illicit discharge detection and elimination BMPs and measurable goals. Report on this evaluation in the Annual Report pursuant to Part V.C.1.*

Given these objectives, the IDDE will accomplish the following:

- Define illicit discharges and provide relevant examples;
- Provide detailed mapping of the location of all stormwater outfalls and receiving waters;
- Detail the ordinances and other regulatory mechanisms that prohibit illicit discharges to the MS4 and allow appropriate enforcement procedures to detect, prevent, or eliminate these types of releases;
- Outline the IDDE Personnel and their responsibilities;
- Describe BMPs, including policies and procedures used by the City and County to detect and eliminate illicit discharges or other pollutants;
- Detail the testing procedures and results of all sampling activities;
- Detail the results and other data related to outfall inspection activities;
- Provide pertinent documentation related to the NPDES General Permit including the NOI and Annual Facility Inspection Report;
- Provide detailed information for operators that hold current permits from the IEPA to discharge to the City's MS4; and



- Provide a resource for City staff and regulators regarding inspection, training, enforcement, and recordkeeping procedures for the IDDE program.

The IDDE program will be reviewed annually during the City's Annual Facility Inspection as required by the NPDES Phase II Permit. A copy will be kept for public viewing on the City website (cityofhighwood.com) and in City Hall, located at 17 Highwood Avenue, Highwood, IL 60040. A copy of the most recent Annual Facility Inspection Report is provided in Appendix 2.

1.3 Background

The City of Highwood (located in Lake County) encompasses an area of approximately 0.72 square miles (462 acres), with an estimated population of 5,324 residents. The City is an established community with a wide variety of residential, commercial, industrial, and other land uses. A City Map, Zoning Map, and Land Use Plan are included as Exhibits 1, 2, and 3, respectively. Per the ordinances and regulations of Lake County, the City is responsible for the inspection, enforcement, and execution of the IDDE program. The City's storm sewer system connects into existing storm sewers at the City limits which ultimately outfall to the Skokie River (to the west of the City) and Lake Michigan (to the east of the City). There are no outfalls that discharge directly to receiving waters located within the City. There are 5 identified discharge locations that drain to a tributary to Lake Michigan. An Storm Sewer & Discharge Location Map is provided as Exhibit 4.

1.4 Definition of Illicit Discharge

An illicit discharge is defined by the Environmental Protection Agency (EPA) as:

any discharge to a municipal separate storm sewer that is not composed entirely of storm water except discharges pursuant to a NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer) and discharges resulting from fire fighting activities.

The Illinois Environmental Protection Agency (IEPA) General Permit No. ILR40 for Discharges from Small Municipal Separate Storm Sewer Systems further authorizes the following additional discharges, provided that they have been determined not to be substantial contributors of pollutants:

- *Water line and fire hydrant flushing,*
- *Landscape irrigation water,*
- *Rising ground waters,*
- *Ground water infiltration,*
- *Pumped ground water,*
- *Discharges from potable water sources (excluding wastewater discharges from water supply treatment plants),*
- *Foundation drains,*
- *Air conditioning condensation,*



- *Irrigation water (except for wastewater irrigation),*
- *Springs,*
- *Water from crawl space pumps,*
- *Footing drains,*
- *Storm sewer cleaning water,*
- *Water from individual residential car washing,*
- *Routine external building washdown which does not use detergents,*
- *Flows from riparian habitats and wetlands,*
- *Dechlorinated pH neutral swimming pool discharges,*
- *Residual street wash water,*
- *Discharges or flows from fire fighting activities,*
- *Dechlorinated water reservoir discharges, and*
- *Pavement washwaters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed).*

Additional information regarding the permitted discharges can be found in the IEPA General NPDES Permit No. ILR40 included in Appendix 1.

1.5 Examples of Illicit Discharges

As previously mentioned, illicit discharges are releases that are not composed entirely of stormwater that come in many forms and from various sources. Residents dumping grass clippings into the creek behind their home, neighbors pouring used oil down a storm drain, or a gasoline spill at the filling station are all examples of illicit discharges. The City is responsible for preventing these types of activities through education and outreach; as well as responding, tracing, and eliminating any reported illicit discharges. Figures 1 through 5 show examples of illicit discharges:



Figure 1: Example of Illicit Discharge – Commercial Carwash Draining to the MS4



Figure 2: Example of Illicit Discharge – Surcharging Sanitary Sewer Manhole

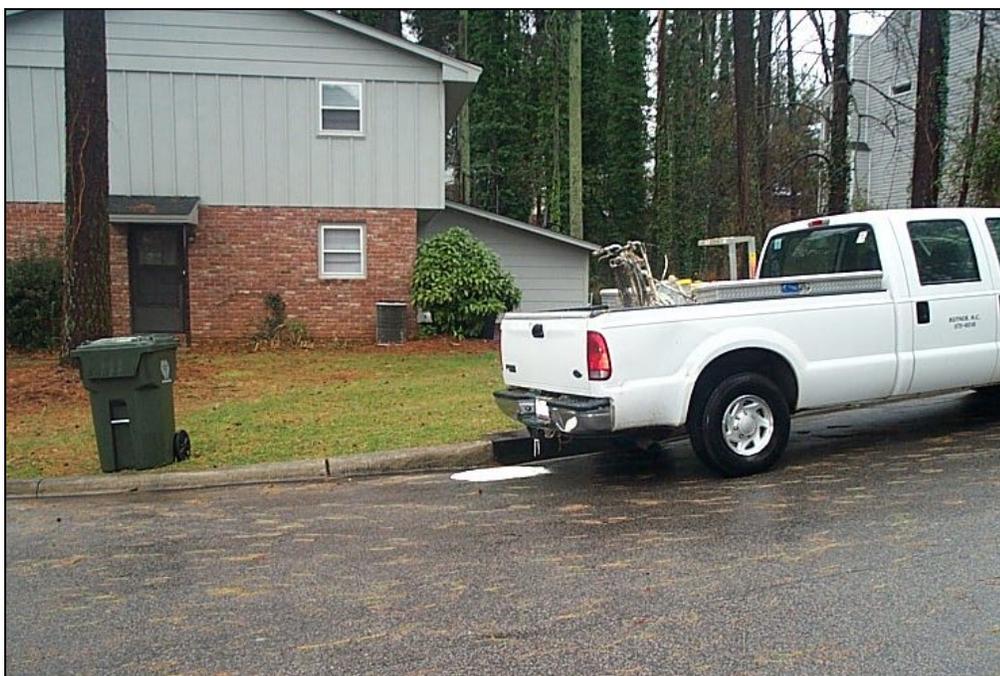


Figure 3: Example of Illicit Discharge – Spilling or Dumping of Paint down Stormwater Inlet



Figure 4: Example of Illicit Discharge – Leaking Commercial Dumpster



Figure 5: Example of Illicit Discharge – Spilling or Dumping of Motor Oil



2. IDDE PROGRAM DESCRIPTION

2.1 Ordinances

As previously mentioned, the City falls under the regulatory authority of the Stormwater Management Commission (SMC) in Lake County, which has ordinances that prohibit the discharge of non-stormwater flows into the MS4. Additionally, the City has separate regulations that also prohibit these types of discharges. A copy of the applicable portion of the City's Municipal Code is provided in Appendix 3. Within Lake County, the City is responsible for the inspection and enforcement of the ordinance. All ordinances include enforcement procedures such as fines to encourage compliance.

2.2 IDDE Personnel

All aspects of the City's IDDE program are managed and staffed by the qualified and trained professionals listed below.

<i>Name</i>	<i>Title</i>	<i>Phone Number</i>	<i>Email Address</i>
Michael Burke	City Stormwater Enforcement Officer	847-823-0500	michaelburke@cbbel.com
Jack Harding	Public Works Director	847-432-1924	Jharding2@cityofhighwood.org

Provided below are brief descriptions of each person's responsibilities as they relate to the IDDE program:

- Michael Burke is in charge of the overall implementation of the IDDE program.
- Jack Harding is in charge of sewer maintenance and general monitoring of the storm sewer system.

2.3 Detection and Elimination

The City has taken a proactive approach to the detection and elimination of illicit discharges. This approach includes periodic inspection of outfalls and sampling and testing if illicit discharges are detected, employee training, public education, and program assessment and evaluation. The City regularly performs activities aimed at preventing or reducing the release of pollutants by capturing them before they can be collected by stormwater runoff and discharged to the MS4.

2.4 Reporting Procedures

The City Public Works Department is responsible for the investigation of all reported illicit discharges. Exceptions occur only when the potential for a situation involving the discharge of hazardous waste exists. In these instances, the IEPA or another appropriate agency is contacted for assistance. The telephone number and email contact information for the City of Highwood Public Works Department is readily available on the City's website



(cityofhighwood.com) for reporting purposes.

2.5 Inspection and Tracing

The City conducts regular inspections of the MS4 outfalls. These visual inspections are performed by trained personnel to identify the physical characteristics that may indicate an illicit discharge is present. These identifiable physical characteristics include colors, odors, floatable debris, staining, deposits, benthic growth, and/or the presence of excessive vegetation. A copy of the physical indicators for visual inspections is included in Appendix 4. These inspections are performed during periods of both dry weather and following rainfall events. Additionally, the inspections are performed with the aid of an outfall inspection checklist. A copy of the outfall inspection checklist is provided in Appendix 5.

The City's outfall inspections are performed by City staff and contracted professionals. Each outfall inspection checklist is accompanied by a photograph of the outfall at the time of the inspection, if appropriate. The most recent inspection checklist and photos for the outfalls are provided in Appendix 6.

Based on the most recent outfall inspections, a comprehensive list was generated of outfalls that may require additional assessment to determine whether or not an illicit discharge may be present. A list with descriptions of additional activities that may be needed is provided in Appendix 7.

If necessary, the City Public Works staff will perform tracing procedures to determine the source of a potential illicit discharge. The City maintains an accurate GIS-based outfall map, as well as other storm sewer location documents such as original development plans, county data, etc., that can be utilized to determine the possible source of illicit discharge. An Outfall & Receiving Waters Map is provided as Exhibit 4.

2.6 Sampling and Testing

If an outfall inspection yields indicators of a potential illicit discharge, the City may initiate the collection of samples and laboratory testing. These tests may include:

- pH
- B.O.D.
- C.O.D.
- Chlorine
- Suspended Solids
- Chlorides
- Ammonia Nitrogen
- Dissolved Oxygen
- Settleable Solids
- Volatile Solids
- Fecal Coliform
- Hardness



- Phosphorus

During the most recent outfall inspections, there were no flows from outfalls that were determined to be in need of sampling and testing.

2.7 Contributing Facilities

The City has a number of facilities within its boundaries that are required to obtain separate NPDES permits from the IEPA to discharge to the MS4. These facilities are considered contributing facilities and are regularly monitored by the City for compliance with their NPDES permits. A list of these facilities and an associated location map are provided in Appendix 8.

2.8 Training

Employee education and training is a vital component of the City's overall MS4 NPDES program, as well as the IDDE program. The City regularly provides training for employees on a variety of topics related to illicit discharges, good housekeeping, spill prevention, proper maintenance procedures, and other pertinent stormwater topics.

As part of their in-house training program, the City provides staff with detailed instruction on how to identify illicit discharges and the procedures for reporting them if one is discovered. A sample training presentation is provided in Appendix 9.

2.9 Documentation and Recordkeeping

The City maintains appropriate copies of all inspection materials, checklists, and training documentation in this IDDE report. The materials included are regularly updated during the Annual Facility Inspection process and include the most up-to-date documents.



3. PROGRAM ASSESSMENT AND EVALUATION

3.1 IDDE Program Assessment

As required by their MS4 Permit, the City conducts annual inspections of their municipal facilities and an annual assessment of their NPDES program. The assessment and inspections are carried out by qualified personnel and documented by staff with appropriate forms and procedures. During this evaluation process, the IDDE program is audited for efficiency and effectiveness to verify that it is meeting the needs of the City and the requirements of the NPDES General Permit conditions.

3.2 Audits

As needed, the City will perform self-audits of their NPDES and IDDE programs or will contract this task to a qualified professional. Additionally, this IDDE report and related documents should be provided to the appropriate regulatory personnel during an audit or compliance evaluation.



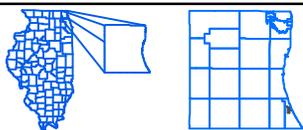
EXHIBITS

EXHIBIT 1

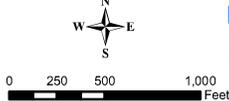
Lake County - City of Highwood



- Lake Michigan**
- 1 TOWER WEST
 - 2 TOWER EAST
 - 3 GILGARE LANE
 - 4 STABLES COURT WAY
 - 5 STABLES COURT WEST
 - 6 STABLES COURT EAST



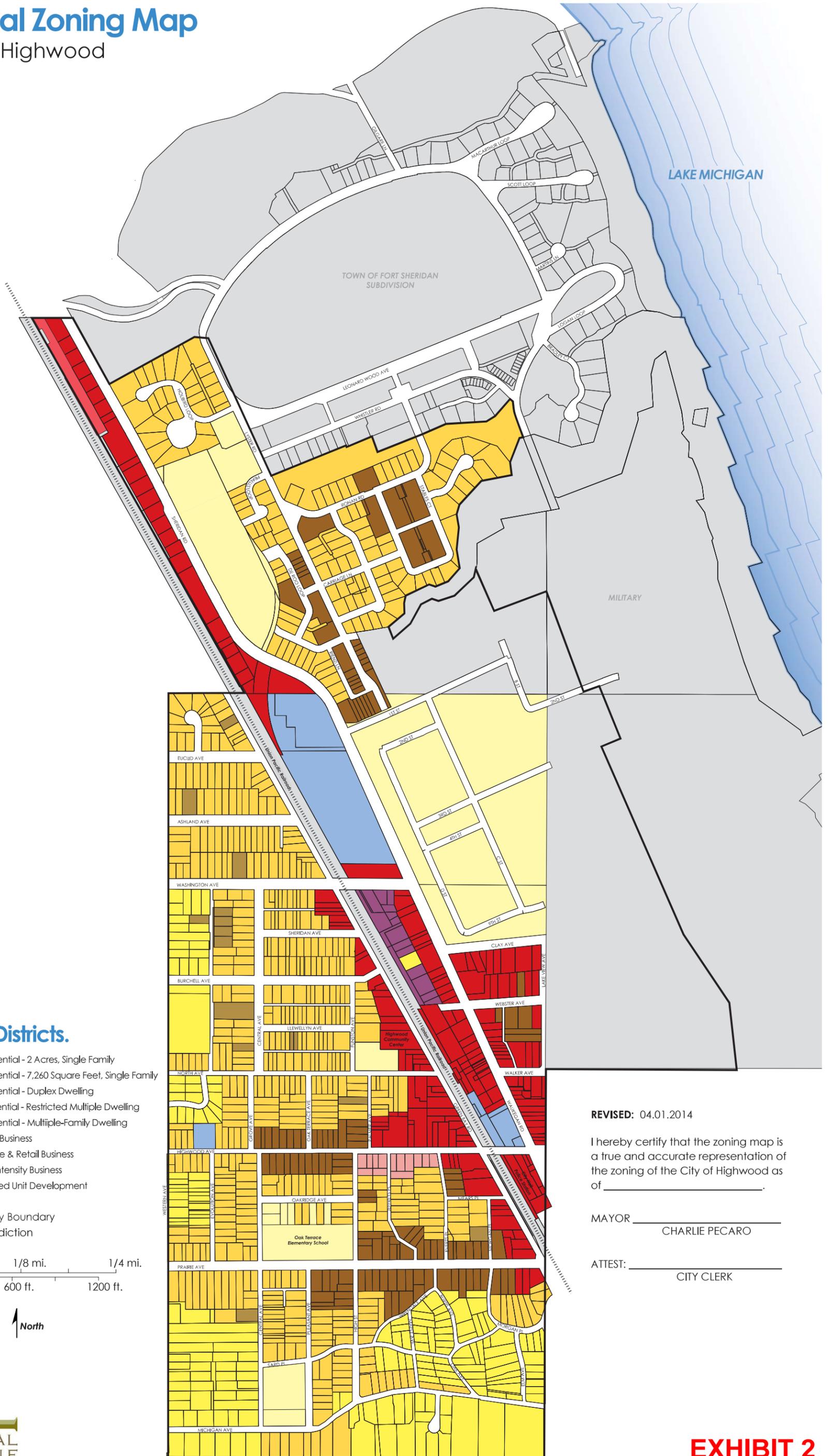
Revised:
2012



- District Boundary
- Major Water
- School
- Fire Department
- Police
- Parcels
- Trails
- Library
- Township Office / City Hall
- Airport
- Unincorporated Area
- Centerline
- Golf Course
- Metra Station
- Forest Preserve
- Park
- Railroad
- Hospital

Official Zoning Map

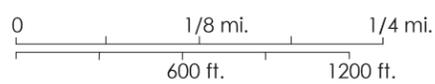
City of Highwood



Zoning Districts.

- R-1 Residential - 2 Acres, Single Family
- R-2 Residential - 7,260 Square Feet, Single Family
- R-3 Residential - Duplex Dwelling
- R-3A Residential - Restricted Multiple Dwelling
- R-4 Residential - Multiple-Family Dwelling
- B-1 Retail Business
- B-2 Service & Retail Business
- B-3 Low Intensity Business
- PUD Planned Unit Development

- Current City Boundary
- Other Jurisdiction



REVISED: 04.01.2014

I hereby certify that the zoning map is a true and accurate representation of the zoning of the City of Highwood as of _____.

MAYOR _____ CHARLIE PECARO

ATTEST: _____ CITY CLERK

EXHIBIT 2

LAND USE PLAN



map legend

- Single Family
- Two-Family
- Multi-Family
- Mixed-Use/Downtown Core
- Corridor Commercial
- Public/Semi Public
- Parks and Open Space
- Railroad Right-of-way
- City Right-of-way
- Current City Boundary
- Planning Area Boundary
- Lake County Forest Preserve
- Openlands Lakeshore Preserve
- Sheridan Reserve Center
- City of Highland Park

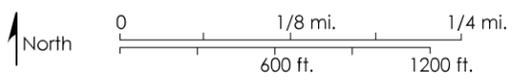


EXHIBIT 3

APPENDIX 1

City of Highwood Notice of Intent (NOI)
and IEPA General NPDES Permit No. ILR40



Illinois Environmental Protection Agency

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

Notice of Intent for New or Renewal of General Permit for Discharges from Small Municipal Separate Storm Sewer Systems - MS4's

Part I. General Information

1. MS 4 Operator Name: _____

2. MS4 Mailing Address: _____

City: _____

State: IL _____

3. Operator Type: _____

Other: _____

4. Operator Status: _____

Other: _____

5. Name(s) of governmental entity(ies) in which MS4 is located:

State of Illinois _____

County of Lake _____

6. Area of land that drains to your MS4 in square miles: _____

7. Latitude and Longitude at approximate geographical center of MS4 for which you are requesting authorization to discharge:

Latitude:

Longitude:

Degrees

Minutes:

Seconds:

Degrees:

Minutes:

Seconds:

8. Name(s) of known receiving waters

9. Persons responsible for implementation or coordination of Stormwater Management Program:

Name: _____ Title: _____ Phone: _____

Area of Responsibility: _____

Name: _____ Title: _____ Phone: _____

Area of Responsibility: _____

Part II. Best Management Practices (include shared responsibilities) which have been implemented or are proposed to be implemented in the MS4 area:

A. Public Education and Outreach

Measurable Goals (include shared responsibilities)

QLP MS4

- A.1 Distributed Paper Material
- A.2 Speaking Engagement
- A.3 Public Service Announcement
- A.4 Community Event
- A.5 Classroom Education Material
- A.6 Other Public Education

Measurable Goals (include shared responsibilities)

QLP MS4

- B.2 Educational Volunteer
- B.3 Stakeholder Meeting
- B.4 Public Hearing
- B.5 Volunteer Monitoring
- B.6. Program Involvement
- B.7 Other Public Involvement

C. Illicit Discharge Detection and Elimination

Measurable Goals (include shared responsibilities)

QLP MS4

- C.1 Sewer Map Preparation
- 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
- C.10 Other Illicit Discharge Controls

D. Construction Site Runoff Control

Measurable Goals (include shared responsibilities)

QLP MS4

- D.1 Regulatory Control Program
- D.2 Erosion and Sediment Control BMPs
- D.3 Other Waste Control Program
- D.4 Site Plan Review Procedures
- D.5 Public Information Handling Procedures
- D.6 Site Inspection/Enforcement Procedures
- D.7 Other Construction Site Runoff Controls

E. Post-Construction Runoff Control

Measurable Goals (include shared responsibilities)

QLP MS4

- E.1 Community Control Strategy
- E.2 Regulatory Control Program
- E.3 Long Term O & M Procedures
- E.4 Pre-Construction Review of BMP Designs
- E.5 Site Inspections During Construction
- E.6 Post-Construction Inspections
- E.7 Other Post-Construction Runoff Controls

F. Pollution Prevention/Good Housekeeping

Measurable Goals (include shared responsibilities)

QLP MS4

- F.1 Employee Training Program
- F.2 Inspection and Maintenance Program
- F.3 Municipal Operations Storm Water Control
- F.4 Municipal Operations Waste Disposal
- F.5 Flood Management/Assess Guidelines
- F.6 Other Municipal Operations Controls

Part III. Certification

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

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)).

 Authorized Representative Name

 Title

 Date

 Authorized Representative Signature

You may complete this form online and save a copy locally before printing and signing the form. It should then be sent to:

Illinois Environmental Protection Agency
 Bureau of Water
 Division of Water Pollution Control
 Attn: Permit Section
 P.O. Box 19276
 1021 North Grand Avenue East
 Springfield, IL 62794-9276

A. Public Education and Outreach

BMP Number _____

See Attachments A & B.

Add Another BMP

Delete Last Entry

B. Public Participation/Involvement

BMP Number _____

See Attachments A & B.

Add Another BMP

Delete Last Entry

C. Illicit Discharge Detection and Elimination

BMP Number _____

See Attachments A & B.

Add Another BMP

Delete Last Entry

D. Construction Site Runoff Control

BMP Number _____

See Attachments A & B.

Add Another BMP

Delete Last Entry

E. Post-Construction Runoff Control

BMP Number _____

See Attachments A & B.

Add Another BMP

Delete Last Entry

Additional Info - Page 6

F. Pollution Prevention/Good Housekeeping

BMP Number _____

See Attachments A & B.

Add Another BMP

Delete Last Entry

ATTACHMENT A SUMMARY OF PROPOSED QLP STORMWATER MANAGEMENT ACTIVITIES

SMC requires – through the Lake County Watershed Development Ordinance – local stormwater management programs to implement one or more of the minimum control measures specified in the Illinois Environmental Protection Agency’s (Illinois EPA’s) General NPDES Permit No. ILR40 (MS4 Permit), making it a Qualifying Local Program (QLP). Consistent with the County’s comprehensive, countywide approach to stormwater management, as a QLP, SMC has been working since the early 2000’s, when began the process of expanding its NPDES Stormwater Program to include small MS4s, to assist Lake County MS4s in developing and implementing efficient and effective stormwater management programs.

Although SMC is not itself an MS4, as it does not own or operate a separate storm sewer system, it does perform activities related to each of the six minimum control measures (MCMs) described in Illinois EPA’s General NPDES Permit No. ILR40.

Please note that the Illinois EPA has issued a new version of its MS4 Permit. The new version of the permit became effective on March 1, 2016. According to the new permit, MS4s have 180 days from the effective date of the permit to comply with any changes or new provisions contained in the permit.

SMC remains committed to performing a variety of stormwater management activities across the County – which are described in more detail below – to provide Lake County with a baseline Countywide stormwater management program that can be built upon by each of the individual MS4s. In addition to the stormwater management activities described below, SMC will work to update and enhance its stormwater management activities, as needed, over the coming months, to assist Lake County MS4s in meeting the requirements of the new MS4 Permit. Next year’s annual report due June 1, 2017, will contain information regarding the changes that have been made to SMC’s stormwater management activities to comply with and assist Lake County MS4s in meeting the requirements of the new MS4 Permit.

A. Public Education and Outreach

SMC will continue to provide a baseline Countywide stormwater management program and support Lake County MS4s in the development and implementation of their own stormwater management programs by performing activities related to the Public Education and Outreach MCM, 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.*

Milestone(s): *SMC began implementation of this BMP in March 2003 and will continue to
implement it on an annual basis.*

A.2 Speaking Engagement

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

Measurable Goal(s): *Provide educational presentations related to Illinois EPA’s NPDES
Stormwater Program at MAC meetings.
Upon request, provide educational presentations related to Illinois EPA’s
NPDES Stormwater Program (e.g., “The Big Picture: Water Quality,
Regulations & NPDES”) to Lake County MS4s.*

Milestone(s): *SMC began implementation of this BMP in March 2003 and will continue to
implement it on an annual basis.*

A.3 Public Service Announcement

A public service announcement related to Illinois EPA’s NPDES Stormwater Program will be included in SMC’s quarterly newsletter, “Mainstream,” at least once each year.

Measurable Goal(s): *Include public service announcement related to Illinois EPA’s NPDES
Stormwater Program in its quarterly newsletter, “Mainstream,” at least
once each year.*

Milestone(s): *SMC began implementation of this BMP in March 2003 and will continue to
implement it on an annual basis.*

A.4 Community Event

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 at least one workshop on a topic related to Illinois EPA’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 Illinois EPA’s NPDES
Stormwater Program.*

Milestone(s): *SMC began implementation of this BMP in March 2003 and will continue to
implement it on an annual basis.*

A.5 Classroom Education Material

Upon request, SMC will contribute to the development and compilation of materials 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 teachers and/or stakeholders interested in conducting storm drain stenciling.

Milestone(s): SMC began implementation of this BMP in March 2003 and will continue to implement it on an annual basis.

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 (NPDES) Phase II Stormwater Program,” “Stormwater Best Practices,” “Online Resources,” “Meeting Schedules,” “Watersheds,” “Partnerships,” and “Workshop Presentations.” These webpages provide information about Illinois EPA’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, provide links to completed watershed management plans, provide information on public involvement opportunities, 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 Illinois EPA’s NPDES Stormwater Program with resources such as model ordinances, case studies, brochures, and links.

Milestone(s): SMC began implementation of this BMP in March 2003 and will continue to implement it on an annual basis.

B. Public Participation/Involvement

SMC will continue to provide a baseline Countywide stormwater management program and support Lake County MS4s in the development and implementation of their own stormwater management programs by performing activities related to the Public Participation/Involvement MCM, 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.

Milestone(s): SMC began implementation of this BMP in March 2003 and will continue to implement it on an annual basis.

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 Illinois EPA's NPDES Stormwater Program. MAC will continue to meet quarterly or as needed to assist Lake County MS4s with the implementation of Illinois EPA's NPDES 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.*

Milestone(s): SMC began implementation of this BMP in March 2003 and will continue to implement it on an annual basis.

B.6 Program Involvement

The Lake County Stormwater Management Commission (SMC) serves as a QLP for Lake County MS4s. Consistent with the County's comprehensive, countywide approach to stormwater management, as a QLP, SMC has been working since the early 2000's, when the Illinois EPA began the process of expanding its NPDES Stormwater Program to include small MS4s, to assist Lake County MS4s in developing and implementing efficient and effective stormwater management programs. 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 Illinois EPA's NPDES Stormwater Program. SMC will continue to facilitate quarterly MAC meetings and will continue to provide a baseline Countywide stormwater management program that can be built upon by each of the individual MS4s. In addition, SMC will continue to provide general support to Lake County MS4s as they continue to develop and implement their own stormwater management programs. On an annual basis, 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.

Milestone(s): SMC began implementation of this BMP in March 2003 and will continue to implement it on an annual basis.

C. Illicit Discharge Detection and Elimination

SMC will continue to provide a baseline Countywide stormwater management program and 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 MCM, as described below. Note, however, that the primary responsibility for the implementation of the Illicit Discharge Detection and Elimination MCM 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.

Milestone(s): SMC began implementation of this BMP in March 2003 and will continue to implement it on an annual basis.

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 Illinois EPA'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 Illinois EPA'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.

Milestone(s): SMC began implementation of this BMP in March 2003 and will continue to implement it on an annual basis.

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 provide a baseline Countywide stormwater management program and support Lake County MS4s in the implementation of the Construction Site Runoff Control MCM 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 MCM 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 6 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 Illinois EPA'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.*

Milestone(s): SMC began implementation of this BMP in March 2003 and will continue to implement it on an annual basis.

D.2 Erosion and Sediment Control BMPs

Article 6 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.

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

Milestone(s): SMC began implementation of this BMP in March 2003 and will continue to implement it on an annual basis.

D.3 Other Waste Control Program

Article 6 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.

Milestone(s): SMC began implementation of this BMP in March 2003 and will continue to implement it on an annual basis.

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 provisions 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.

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.

Milestone(s): SMC began implementation of this BMP in March 2003 and will continue to implement it on an annual basis.

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 National 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.

Milestone(s): SMC began implementation of this BMP in March 2003 and will continue to implement it on an annual basis.

D.6 Site Inspection/Enforcement Procedures

Article 11 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 non-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 12 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.

Milestone(s): SMC began implementation of this BMP in March 2003 and will continue to implement it on an annual basis.

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 provide a baseline Countywide stormwater management program and support Lake County MS4s in the implementation of the Post-Construction Runoff Control MCM 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 MCM 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 permit applicants to adopt stormwater management strategies for controlling post-construction stormwater runoff on development sites. As outlined in Article 5, Section 503 of the WDO, all permit 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 5, Section 503 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.

Milestone(s): SMC began implementation of this BMP in March 2003 and will continue to implement it on an annual basis.

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.

Milestone(s): SMC began implementation of this BMP in March 2003 and will continue to implement it on an annual basis.

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.

Milestone(s): SMC began implementation of this BMP in March 2003 and will continue to implement it on an annual basis.

E.5 Site Inspections During Construction

As described above, Article 11 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.

Milestone(s): SMC began implementation of this BMP in March 2003 and will continue to implement it on an annual basis.

E.6 Post-Construction Inspections

As described above, Article 11 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.

Milestone(s): SMC began implementation of this BMP in March 2003 and will continue to implement it on an annual basis.

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 chairpersons, 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.*

Milestone(s): SMC began implementation of this BMP in March 2003 and will continue to implement it on an annual basis.

F. Pollution Prevention/Good Housekeeping

SMC will continue to provide a baseline Countywide stormwater management program and support Lake County MS4s in the development and implementation of their own stormwater management programs by performing activities related to the Pollution Prevention/Good Housekeeping MCM, as described below. Note, however, that the primary responsibility for the implementation of the Pollution Prevention/Good Housekeeping MCM 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 another workshop related to Illinois EPA'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 another training workshop related to Illinois EPA's NPDES Stormwater Program.

Milestone(s): SMC began implementation of this BMP in March 2003 and will continue to implement it on an annual basis.

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 for multi-objective opportunities.

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

Milestone(s): SMC began implementation of this BMP in March 2003 and will continue to implement it on an annual basis.

ATTACHMENT B
SUMMARY OF PROPOSED MS4 STORMWATER MANAGEMENT ACTIVITIES

As part of its stormwater management program, the City of Highwood conducts a number of activities related to each of the six minimum control measures (MCMs) described in Illinois EPA's General NPDES Permit No. ILR40.

Please note that the Illinois EPA has issued a new version of its General NPDES Permit No. ILR40 (MS4 Permit). The new version of the permit became effective on March 1, 2016. According to the new permit, MS4s have 180 days from the effective date of the permit to comply with any changes or new provisions contained in the permit.

The City of Highwood remains committed to maintaining its current stormwater management program, which is described in more detail below, and will work to update and enhance its program, as needed, over the coming months to comply with the requirements of the new permit. Next year's annual report due June 1, 2017, will contain information regarding the changes that have been made to the MS4's stormwater management activities to comply with the requirements of the new MS4 Permit.

Please note that the City of Highwood has developed a Stormwater Management Program Plan (SMPP), which describes the City of Highwood's stormwater management program in more detail. The City of Highwood's SMPP can be viewed at cityofhighwood.com.

A. Public Education and Outreach

As part of its stormwater management program, the City of Highwood conducts a number of Public Education and Outreach activities that educate and inform the public about the impacts of stormwater runoff on receiving water bodies and the steps that the public can take to reduce those impacts. In coordination and collaboration with the QLP, the City of Highwood will continue to perform activities related to the Public Education and Outreach MCM, as described below.

A.1 Distributed Paper Material

In addition to the QLP's efforts to distribute informational materials throughout Lake County, which are described in more detail in Attachment A, the City of Highwood works to compile and distribute within the City of Highwood a variety of materials related to stormwater management from a variety of sources, including the Lake County Stormwater Management Commission, Illinois EPA, US EPA, the Center for Watershed Protection, and other agencies and organizations. The City of Highwood maintains a list of the types of materials it has made available to the public and the methods through which such materials have been distributed.

Measurable Goal(s): *Distribute informational materials from "take away" rack at City Hall.*

Milestone(s): *The City of Highwood began implementation of this BMP in March 2003 and will continue to implement it on an annual basis.*

A.4 Community Event

In addition to the QLP's efforts to sponsor or co-sponsor workshops and provide educational presentations, which are described in more detail in Attachment A, the City of Highwood sponsors and/or attends community outreach events, including meetings, to provide information on stormwater management-related topics. Audiences attending such events may include homeowners

associations, lake management associations, businesses, and neighborhood groups. The City of Highwood maintains a list of the stormwater management-related community outreach events, including meetings, that it has attended.

Additionally, the City of Highwood supports the efforts of the Solid Waste Agency of Lake County (SWALCO) to implement programs throughout Lake County that increase reuse, recycling, and composting and reduce reliance on landfills. As part of these waste management efforts, SWALCO conducts dozens of household hazardous waste collection events each year at various locations throughout the county. The City of Highwood publicizes these household hazardous waste collection events to encourage the public to participate in such events.

*Measurable Goal(s): Sponsor and/or attend stormwater management-related community outreach events, including meetings.
Provide notice of SWALCO household hazardous waste collection events on City of Highwood website.*

Milestone(s): The City of Highwood began implementation of this BMP in March 2003 and will continue to implement it on an annual basis.

A.5 Classroom Education Material

In addition to the QLP's efforts to educate local students, teachers, and other local stakeholders, which are described in more detail in Attachment A, upon request, the City of Highwood will provide educational presentations on stormwater management-related topics to local students and teachers and/or other local stakeholders. The City of Highwood maintains a list of the stormwater management-related educational presentations that it has provided at local schools. Additionally, upon request, the City of Highwood will provide information and training to local students and teachers and/or other local stakeholders interested in conducting storm drain stenciling.

*Measurable Goal(s): Upon request, provide stormwater management-related educational presentation to local students and teachers and/or other local stakeholders.
Upon request, provide information and training to local students and teachers and/or other local stakeholders interested in conducting storm drain stenciling.*

Milestone(s): The City of Highwood began implementation of this BMP in March 2003 and will continue to implement it on an annual basis.

A.6 Other Public Education

In addition to the QLP's efforts to distribute information via its website, which are described in more detail in Attachment A, the City of Highwood maintains a website that contains materials and resources related to stormwater management. The website includes a webpage that provides information about Illinois EPA's NPDES Stormwater Program, information about the City of Highwood's stormwater management program, including its SMPP, NOI, MS4 Permit, and Annual Reports, and links to a number of other stormwater management-related resources, including the Lake County Stormwater Management Commission's website.

Measurable Goal(s): Maintain and update the portion of the City of Highwood website dedicated to its stormwater management program.

Milestone(s): The City of Highwood began implementation of this BMP in March 2003 and will continue to implement it on an annual basis.

B. Public Participation/Involvement

As part of its stormwater management program, the City of Highwood conducts a number of Public Participation/Involvement activities that involve and engage the public in the implementation of its stormwater management program. In coordination and collaboration with the QLP, the City of Highwood will continue to perform activities related to the Public Education and Outreach MCM, as described below.

B.3 Stakeholder Meeting

Watershed stakeholder meetings are regularly held throughout Lake County as part of new and/or ongoing watershed planning and/or project implementation efforts. When the City of Highwood is a stakeholder in a watershed planning and/or project implementation effort (i.e., any part of the MS4 is located within the boundaries of a watershed subject to a planning and/or project implementation effort), the City of Highwood participates in scheduled stakeholder meetings and publicizes the meetings to encourage other stakeholders (i.e., homeowner associations, lakes management associations, landowners) to participate.

Measurable Goal(s): As appropriate, attend and provide notice of stakeholder meetings on City of Highwood website.

Milestone(s): The City of Highwood began implementation of this BMP in March 2003 and will continue to implement it on an annual basis.

B.4 Public Hearing

The City of Highwood coordinates and conducts public meetings as well as committee meetings that are open to the public. A bi-monthly City Council meeting is open to the public and involves the City Council, which includes seven publicly elected representatives. Periodically, information about the City of Highwood's stormwater management program is presented at such meetings.

Measurable Goal(s): Present information about the City of Highwood's stormwater management program at a public meeting at least once each year.

Milestone(s): The City of Highwood began implementation of this BMP in March 2003 and will continue to implement it on an annual basis.

B.6 Program Involvement

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 to discuss, among other topics, the implementation of Illinois EPA's NPDES Stormwater Program. SMC plans to continue to facilitate quarterly MAC meetings to bring Lake County MS4s together to discuss the implementation of Illinois EPA's NPDES Stormwater Program. The City of Highwood will continue to attend and participate in the quarterly MAC meetings.

Measurable Goal(s): Continue to attend and participate in MAC meetings.

Milestone(s): The City of Highwood began implementation of this BMP in March 2003 and will continue to implement it on an annual basis.

B.7 Other Public Involvement

The City of Highwood provides and publicizes a phone number that the public can use to submit information about stormwater-related problems and concerns. The City of Highwood documents and tracks the resolutions of problems and complaints reported by the public, including reports of illicit discharges and illegal dumping.

Measurable Goal(s): Provide phone number that the public can use to submit information about stormwater-related problems and concerns. As needed, follow up on reports of stormwater-related problems and concerns received from the public.

Milestone(s): The City of Highwood began implementation of this BMP in March 2003 and will continue to implement it on an annual basis.

C. Illicit Discharge Detection and Elimination

As part of its stormwater management program, the City of Highwood conducts a number of activities related to Illicit Discharge Detection and Elimination. In accordance with the permit, the City of Highwood's Illicit Discharge Detection and Elimination program includes:

- 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-stormwater 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.

In coordination and collaboration with the QLP, the City of Highwood will continue to perform activities related to the Illicit Discharge Detection and Elimination MCM, as described below. Note that although the City of Highwood intends to share responsibility for the implementation of the Illicit Discharge Detection and Elimination MCM with the QLP, as outlined in this NOI, the primary responsibility for the implementation of the Illicit Discharge Detection and Elimination MCM lies with the City of Highwood.

C.1 Sewer Map Preparation

The City of Highwood has prepared 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. The storm

sewer system map is periodically maintained and updated to include outfalls associated with development projects and any previously unidentified outfalls.

Measurable Goal(s): Maintain and update storm sewer system map.

Milestone(s): The City of Highwood began implementation of this BMP in March 2003 and will continue to implement it on an annual basis.

C.2 Regulatory Control Program

The City of Highwood has adopted an illicit discharge ordinance that prohibits all non-stormwater discharges into the storm sewer system and provides the authority for appropriate enforcement procedures and actions. In addition, the Watershed Development Ordinance (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): Continue to administer and enforce the illicit discharge ordinance. Assist SMC in ensuring that development projects are in compliance with the WDO.

Milestone(s): The City of Highwood began implementation of this BMP in March 2003 and will continue to implement it on an annual basis.

C.3 Detection/Elimination Prioritization Plan

The City of Highwood has developed and implemented a plan to detect and address all non-stormwater discharges, including illegal dumping, into the storm sewer system. Methods used to detect illicit discharges include periodic visual dry weather screening, employee reporting, and public reporting. Outfalls with suspicious discharges are assessed to determine whether or not flow is observed and whether or not any indicators of an illicit discharge are present. The results of each inspection are recorded on a form, and based on such results, appropriate follow-up actions are prescribed. Such follow-up actions may include additional inspections, additional water quality sampling and analysis, source tracking, and source removal. Follow-up activities are generally prioritized based on the scope and magnitude of the associated illicit discharge.

Measurable Goal(s): Conduct 5-year inspections of storm sewer outfalls for detection of illicit discharges, and annual inspections of all High Priority Outfalls. Continue to investigate potential illicit discharges identified by employees conducting day-to-day activities and operations (e.g., storm sewer cleaning and maintenance). Continue to investigate potential illicit discharges identified through public reporting.

Milestone(s): The City of Highwood began implementation of this BMP in March 2003 and will continue to implement it on an annual basis.

C.4 Illicit Discharge Tracing Procedures

The City of Highwood has developed procedures for tracking illicit discharges to their source. Methods that can be used to track illicit discharges to their source include drainage area investigations, storm sewer network investigations, and on-site investigations, which may involve

smoke testing, dye testing, and/or video inspection to pinpoint the exact source of an illicit discharge. When an illicit discharge is identified, appropriate source tracking procedures are selected and used to track the discharge to its source.

Measurable Goal(s): As needed, implement procedures for tracking illicit discharges to their source.

Milestone(s): The City of Highwood began implementation of this BMP in March 2003 and will continue to implement it on an annual basis.

C.5 Illicit Source Removal Procedures

The City of Highwood has developed procedures for removing illicit discharges from the storm drain system once they have been tracked to their source. These procedures generally include: using an independent third-party to confirm the presence of an illicit discharge; notifying the landowner of the presence of an illicit discharge; requesting and conducting a site inspection with the landowner to pinpoint the source of the illicit discharge and to identify potential remedial actions; notifying the landowner of the need to take corrective action; and, if necessary, enforcing the provisions of the illicit discharge ordinance to have the illicit discharge removed from the storm sewer system.

Measurable Goal(s): As needed, implement procedures for removing illicit discharges from the storm drain system.

Milestone(s): The City of Highwood began implementation of this BMP in March 2003 and will continue to implement it on an annual basis.

C.6 Program Evaluation and Assessment

The City of Highwood periodically evaluates and assesses the effectiveness of its Illicit Discharge Detection and Elimination program. This evaluation is generally based on the results of the City of Highwood's visual dry weather screening program and on the number of non-stormwater discharges and illegal dumping incidents identified through both employee and public reporting. If the City of Highwood's Illicit Discharge Detection and Elimination program is effective, it is logical to assume that, over time, the number of non-stormwater discharges and illegal dumping incidents identified through visual dry weather screening, employee reporting, and public reporting will decline.

Measurable Goal(s): Conduct annual evaluation and assessment of illicit discharge detection and elimination program.

Milestone(s): The City of Highwood began implementation of this BMP in March 2003 and will continue to implement it on an annual basis.

C.7 Visual Dry Weather Screening

In accordance with the permit, the City of Highwood conducts periodic inspections of storm sewer outfalls for detection of non-stormwater discharges and illegal dumping. During such inspections, outfalls are assessed to determine whether or not flow is observed and whether or not any indicators of an illicit discharge are present. The results of each inspection are recorded on a form, and based on such results, appropriate follow-up actions are prescribed. Such follow-up actions may include additional inspections, additional water quality sampling and analysis, source tracking, and

source removal. Follow-up activities are generally prioritized based on the scope and magnitude of the associated illicit discharge.

Measurable Goal(s): Conduct annual inspections of storm sewer outfalls for detection of illicit discharges.

Milestone(s): The City of Highwood began implementation of this BMP in March 2003 and will continue to implement it on an annual basis.

C.9 Public Notification

The City of Highwood provides and publicizes a phone number that the public can use to submit information about stormwater-related problems and concerns. The City of Highwood documents and tracks the resolutions of problems and complaints reported by the public, including reports of illicit discharges and illegal dumping.

Measurable Goal(s): Provide phone number that the public can use to submit information about stormwater-related problems and concerns, including illicit discharges. As needed, follow up on reports of illicit discharges and illegal dumping received from the public.

Milestone(s): The City of Highwood began implementation of this BMP in March 2003 and will continue to implement it on an annual basis.

C.10 Other Illicit Discharge Controls

As part of its Public Education and Outreach program, the City of Highwood distributes informational materials to businesses and the general public about the hazards associated with illegal discharges and the improper disposal of waste.

Measurable Goal(s): Distribute informational materials about the hazards of illicit discharges and illegal dumping from "take away" rack at City Hall and through the City of Highwood website.

Milestone(s): The City of Highwood began implementation of this BMP in March 2003 and will continue to implement it on an annual basis.

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 City of Highwood by SMC, establishes standards for Construction Site Runoff Control. Although the City of Highwood intends to share responsibility for the implementation of the Construction Site Runoff Control MCM with the QLP, as outlined in this NOI, the primary responsibility for the implementation of the Construction Site Runoff Control MCM lies with SMC, as the City of Highwood is currently a Non-Certified Community, as defined by the WDO.

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 6. of the ordinance. At a minimum, these standards apply to any development project that hydrologically disturbs 5,000 square feet of land or more.

As a Non-Certified Community, SMC is responsible for the administration and enforcement of the WDO within the City of Highwood.

Measurable Goal(s): Assist SMC in ensuring that development projects are in compliance with the WDO.

Milestone(s): The City of Highwood began implementation of this BMP in March 2003 and will continue to implement it on an annual basis.

D.2 Erosion and Sediment Control BMPs

Article 6 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. As a Non-Certified Community, SMC is responsible for the administration and enforcement of the WDO within the City of Highwood.

Measurable Goal(s): Assist SMC in ensuring that development projects are in compliance with the WDO.

Milestone(s): The City of Highwood began implementation of this BMP in March 2003 and will continue to implement it on an annual basis.

D.3 Other Waste Control Program

Article 6 of the WDO includes provisions related to the control of waste and debris during construction on development sites. As a Non-Certified Community, SMC is responsible for the administration and enforcement of the WDO within the City of Highwood.

Measurable Goal(s): Assist SMC in ensuring that development projects are in compliance with the WDO.

Milestone(s): The City of Highwood began implementation of this BMP in March 2003 and will continue to implement it on an annual basis.

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 provisions 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. Since the City of Highwood is a Non-

Certified Community, SMC's Chief Engineer is responsible for reviewing and permitting development plans and for administering and enforcing the provisions of the WDO within the City of Highwood.

Measurable Goal(s): Assist SMC in ensuring that development projects are in compliance with the WDO.

Milestone(s): The City of Highwood began implementation of this BMP in March 2003 and will continue to implement it on an annual basis.

D.5 Public Information Handling Procedures

The City of Highwood provides and publicizes a phone number that the public can use to submit information about stormwater-related problems and concerns. The City of Highwood documents and tracks the resolutions of problems and complaints reported by the public, including reports of soil erosion and sediment control issues on development sites. Since the City of Highwood is a Non-Certified Community, SMC's Chief Engineer is responsible for investigating reports of soil erosion and sediment control issues on development sites within the City of Highwood and, consequently, all such reports are referred to SMC.

*Measurable Goal(s): Provide phone number that the public can use to submit information about stormwater-related problems and concerns, including soil erosion and sediment control issues.
As needed, refer reports of soil erosion and sediment control issues received from the public to SMC.*

Milestone(s): The City of Highwood began implementation of this BMP in March 2003 and will continue to implement it on an annual basis.

D.6 Site Inspection/Enforcement Procedures

Article 11 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 non-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. Since the City of Highwood is a Non-Certified Community, SMC's Chief Engineer is responsible for conducting site inspections within the City of Highwood.

Article 12 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): Assist SMC in ensuring that development projects are in compliance with the WDO.

Milestone(s): The City of Highwood began implementation of this BMP in March 2003 and will continue to implement it on an annual basis.

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. The WDO, which is administered and enforced within the City of Highwood by the SMC, establishes standards for Post-Construction Runoff Control. Although the City of Highwood intends to share responsibility for the implementation of the Post-Construction Runoff Control MCM with the QLP, as outlined in this NOI, the primary responsibility for the implementation of the Post-Construction Runoff Control MCM lies with SMC, as the City of Highwood is currently Non-Certified Community, as defined by the WDO.

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 5, Section 503 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 5, Section 503 of the WDO and must include appropriate stormwater BMPs to address the other applicable post-construction runoff control requirements of the WDO. As a Non-Certified Community, SMC is responsible for the administration and enforcement of the WDO within the City of Highwood.

Measurable Goal(s): Assist SMC in ensuring that development projects are in compliance with the WDO.

Milestone(s): The City of Highwood began implementation of this BMP in March 2003 and will continue to implement it on an annual basis.

E.3 Long Term O&M Procedures

The City of Highwood has developed long-term operation and maintenance procedures to help reduce the amount of pollution contained in post-construction stormwater runoff that enters the City of Highwood 's storm sewer system. The procedures address both new and existing development.

The City of Highwood's long-term operation and maintenance procedures address new development via the WDO. 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. As a Non-Certified Community, SMC is responsible for the administration and enforcement of the WDO within the City of Highwood.

The City of Highwood's long-term operation and maintenance procedures address existing development via an inspection and maintenance program. The City of Highwood periodically inspects all existing post-construction stormwater management facilities (e.g., detention facilities), including those that have a maintenance plan (i.e., facilities located within developments regulated by the WDO) as well as those that do not (i.e., facilities located within developments pre-dating, and therefore not regulated by, the WDO), to identify any maintenance tasks and/or any repairs that need to be completed. Responsible parties are notified of the inspection results and of the need to complete any maintenance tasks or repairs.

*Measurable Goal(s): Assist SMC in ensuring that development projects are in compliance with the WDO.
Conduct inspections of existing stormwater management facilities on a annual basis to identify the need for maintenance and/or repairs.*

Milestone(s): The City of Highwood began implementation of this BMP in March 2003 and will continue to implement it on an annual basis.

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. Since the City of Highwood is a Non-Certified Community, SMC's Chief Engineer is responsible for reviewing and permitting development plans and for administering and enforcing the provisions of the WDO within the City of Highwood.

Measurable Goal(s): Assist SMC in ensuring that development projects are in compliance with the WDO.

Milestone(s): The City of Highwood began implementation of this BMP in March 2003 and will continue to implement it on an annual basis.

E.5 Site Inspections During Construction

As described above, Article 11 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. Since the City of Highwood is a Non-Certified Community, SMC's Chief Engineer is responsible for conducting site inspections within the City of Highwood.

Measurable Goal(s): Assist SMC in ensuring that development projects are in compliance with the WDO.

Milestone(s): The City of Highwood began implementation of this BMP in March 2003 and will continue to implement it on an annual basis.

E.6 Post-Construction Inspections

As described above, Article 11 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. Since the City of Highwood is a Non-Certified Community, SMC's Chief Engineer is responsible for conducting site inspections within the City of Highwood.

Measurable Goal(s): Assist SMC in ensuring that development projects are in compliance with the WDO.

Milestone(s): The City of Highwood began implementation of this BMP in March 2003 and will continue to implement it on an annual basis.

F. Pollution Prevention/Good Housekeeping

In accordance with the permit, the City of Highwood has developed and implemented a Pollution Prevention/Good Housekeeping program to reduce the amount of pollution generated by municipal activities and operations. The program includes: an employee training program; an inspection and maintenance program that incorporates pollution prevention and good housekeeping practices into day-to-day activities and operations; stormwater pollution control and non-stormwater discharge control procedures; waste management and disposal procedures; and, spill prevention, control, and cleanup procedures.

In coordination and collaboration with the QLP, the City of Highwood will continue to perform activities related to the Pollution Prevention/Good Housekeeping minimum control measure, as described below. Note that although the City of Highwood intends to share responsibility for the implementation of the Pollution Prevention/Good Housekeeping MCM with the QLP, as outlined in this NOI, the primary responsibility for the implementation of the Pollution Prevention/Good Housekeeping MCM lies with the City of Highwood.

F.1 Employee Training Program

The City of Highwood has developed and implemented an employee training program to help educate employees about the impacts of the pollution generated by municipal activities and operations and the steps that they can take to reduce those impacts. The employee training program teaches employees about the following: the impacts of stormwater runoff on receiving water bodies; the activities and operations that may be sources of stormwater pollution and/or non-stormwater discharges; the roles and responsibilities of each department and each individual employee in reducing the amount of pollution generated by municipal activities and operations; selecting and implementing stormwater best management practices; and, managing and maintaining green infrastructure practices.

Employees are subjected to a software-based employee training program, which provides baseline training on municipal pollution prevention/good housekeeping and are encouraged to attend relevant training opportunities that appear on the list of known employee training resources and opportunities provided by the QLP. Additionally, the City of Highwood works to identify and develop employee training resources and opportunities that contain educational materials tailored to those activities and operations conducted by specific departments and employees.

Measurable Goal(s): Continue to develop and implement employee training program.

Milestone(s): The City of Highwood began implementation of this BMP in March 2003 and will continue to implement it on an annual basis.

F.2 Inspection and Maintenance Program

The City of Highwood regularly inspects and maintains municipally owned or operated properties and infrastructure, including streets, parking lots, stormwater management facilities, storm sewers, landscaped areas, and maintenance facilities. A primary goal of the inspection and maintenance program is to address municipal infrastructure repair and maintenance needs in a way that reduces the amount of pollution that collects or that is generated on municipally owned or operated properties. Consequently, the City of Highwood works to incorporate pollution prevention and good housekeeping into its day-to-day activities and operations.

*Measurable Goal(s): Continue to implement inspection and maintenance program.
Continue to incorporate pollution prevention and good housekeeping practices into day-to-day activities and operations.*

Milestone(s): The City of Highwood began implementation of this BMP in March 2003 and will continue to implement it on an annual basis.

F.3 Municipal Operations Stormwater Control

As part of its pollution prevention/good housekeeping efforts, the City of Highwood has identified municipal activities and operations with the potential to cause stormwater pollution or result in a non-stormwater discharge (e.g., vehicle maintenance, winter roadway maintenance). Through its employee training and operation and maintenance programs, the City of Highwood works to incorporate pollution prevention and good housekeeping practices into these activities and operations.

Measurable Goal(s): Continue to incorporate pollution prevention and good housekeeping practices into day-to-day activities and operations.

Milestone(s): The City of Highwood began implementation of this BMP in March 2003 and will continue to implement it on an annual basis.

F.4 Municipal Operations Waste Disposal

Waste management consists of implementing non-structural (i.e., procedural) and structural pollution prevention and good housekeeping practices for handling, storing, and disposing of wastes generated by municipal activities and operations. Through its employee training and operation and maintenance programs, the City of Highwood works to incorporate these waste management

practices into its day-to-day activities and operations to prevent the release of waste into the storm sewer system.

Measurable Goal(s): Continue to incorporate waste management practices into day-to-day activities and operations.

Milestone(s): The City of Highwood began implementation of this BMP in March 2003 and will continue to implement it on an annual basis.

F.6 Other Municipal Operations Controls

The City of Highwood has developed spill prevention, control, and cleanup procedures to prevent and respond to spills that result from municipal activities and operations. Through its employee training and operation and maintenance programs, the City of Highwood works to incorporate these spill prevention, control, and cleanup procedures into its day-to-day activities and operations to prevent the release of spills into the storm sewer system.

Measurable Goal(s): Continue to incorporate spill prevention, control, and cleanup procedures into day-to-day activities and operations.

Milestone(s): The City of Highwood began implementation of this BMP in March 2003 and will continue to implement it on an annual basis.



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 • (217) 782-3397

BRUCE RAUNER, GOVERNOR

LISA BONNETT, DIRECTOR

217/782-0610

February 10, 2016

Re: General NPDES Permit ILR40 for Discharge from Small Municipal Separate Storm Sewer Systems (MS4)

Dear Permittee:

Enclosed with this letter is the reissued General NPDES Permit ILR40 for the discharge of storm water from small MS4s. Significant changes have been made in the final permit based on comments received by the Agency. Please review the final permit and make any necessary modifications to your storm water management program. The Agency has also provided a list of permit modifications and a summary of responses to comments received by the Agency.

Please note that the Agency will be reviewing the Notice of Intent (NOI) for all NOIs that have been received. If you have not submitted an NOI, you must submit a NOI within 90 days of the effective date of the permit. A separate permit coverage letter will be sent by the Agency to persons who have submitted a complete NOI after review of the NOI.

Should you have any questions or comments regarding this letter, please contact Melissa Parrott or Cathy Demeroukas of my staff at (217) 782-0610 or at the above address.

Sincerely,


Alan Keller, P.E.
Manager, Permit Section
Division of Water Pollution Control

SAK:1602080Ibah/MS4 NOI Letter

4302 N. Main St., Rockford, IL 61103 (815) 987-7760
595 S. State, Elgin, IL 60123 (847) 608-3131
2125 S. First St., Champaign, IL 61820 (217) 278-5800
2009 Mall St., Collinsville, IL 62234 (618) 346-5120

9511 Harrison St., Des Plaines, IL 60016 (847) 294-4000
412 SW Washington St., Suite D, Peoria, IL 61602 (309) 671-3022
2309 W. Main St., Suite 116, Marion, IL 62959 (618) 993-7200
100 W. Randolph, Suite 10-300, Chicago, IL 60601

General NPDES Permit No. ILR40

Illinois Environmental Protection Agency

Division of Water Pollution Control

1021 North Grand East

P.O. Box 19276

Springfield, Illinois 62794-9276

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

General NPDES Permit

For

Discharges from Small Municipal Separate Storm Sewer Systems

Expiration Date: February 28, 2021

Issue Date: February 10, 2016

Effective Date: March 1, 2016

In compliance with the provisions of the Illinois Environmental Protection Act, the Illinois Pollution Control Board Rules and Regulations (35 Ill. Adm. Code, Subtitle C, Chapter 1) and the Clean Water Act, the following discharges may be authorized by this permit in accordance with the conditions herein:

Discharges of only storm water from small municipal separate storm sewer systems (MS4s), as defined and limited herein. Storm water means storm water runoff, snow melt runoff, and surface runoff and drainage.

Receiving waters: Discharges may be authorized to any surface water of the State.

To receive authorization to discharge under this general permit, a facility operator must submit a Notice of Intent (NOI) as described in Part II of this permit to the Illinois Environmental Protection Agency (Illinois EPA). Authorization, if granted, will be by letter and include a copy of this permit.



Alan Keller, P.E.
Manager, Permit Section
Division of Water Pollution Control

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PART I. COVERAGE UNDER GENERAL PERMIT ILR40**A. Permit Area**

This permit covers all areas of the State of Illinois.

B. Eligibility

1. This permit authorizes discharges of storm water from MS4s as defined in 40 CFR 122.26 (b)(16) as designated for permit authorizations pursuant to 40 CFR 122.32.
2. This permit authorizes the following non-storm water discharges provided they have been determined not to be substantial contributors of pollutants to a particular small MS4 applying for coverage under this permit:
 - Water line and fire hydrant flushing,
 - Landscape irrigation water,
 - Rising ground waters,
 - Ground water infiltration,
 - Pumped ground water,
 - Discharges from potable water sources, (excluding wastewater discharges from water supply treatment plants)
 - Foundation drains,
 - Air conditioning condensate,
 - Irrigation water, (except for wastewater irrigation),
 - Springs,
 - Water from crawl space pumps,
 - Footing drains,
 - Storm sewer cleaning water,
 - Water from individual residential car washing,
 - Routine external building washdown which does not use detergents,
 - Flows from riparian habitats and wetlands,
 - Dechlorinated pH neutral swimming pool discharges,
 - Residual street wash water,
 - Discharges or flows from fire fighting activities
 - Dechlorinated water reservoir discharges, and
 - Pavement washwaters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed).
3. Any municipality covered by this general permit is also granted automatic coverage under Permit No. ILR10 for the discharge of storm water associated with construction site activities for municipal construction projects disturbing one acre or more. The permittee is granted automatic coverage 30 days after Agency receipt of a Notice of Intent to Discharge Storm Water from Construction Site Activities from the permittee. The Agency will provide public notification of the construction site activity and assign a unique permit number for each project during this period. The permittee shall comply with all the requirements of Permit ILR10 for all such construction projects.

C. Limitations on Coverage

The following discharges are not authorized by this permit:

1. Storm water discharges that are mixed with non-storm water or storm water associated with industrial activity unless such discharges are:
 - a. In compliance with a separate NPDES permit; or
 - b. Identified by and in compliance with Part I.B.2 of this permit.
2. Storm water discharges that the Agency determines are not appropriately covered by this general permit. This determination may include discharges identified in Part 1.B.2 or that introduce new or increased pollutant loading that may be a significant contributor of pollutants to the receiving waters.
3. Storm water discharges to any receiving water specified under 35 Ill. Adm. Code 302.105(d) (6).
4. The following non-storm water discharges are prohibited by this permit: concrete and wastewater from washout of concrete (unless managed by an appropriate control), drywall compound, wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials, fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance, soaps, solvents, or detergents, toxic or hazardous substances from a spill or other release, or any other pollutant that could cause or tend to cause water pollution.
5. Discharges from dewatering activities (including discharges from dewatering of trenches and excavations) are allowable if managed by appropriate controls as specified in a project's storm water pollution prevention plan, erosion and sediment control plan, or storm water management plan.

D. Obtaining Authorization

In order for storm water discharges from small MS4s to be authorized to discharge under this general permit, a discharger must:

1. Submit a Notice of Intent (NOI) in accordance with the requirements of Part II using an NOI form provided by the Agency (or a photocopy thereof).
2. Submit a new NOI in accordance with Part II within 30 days of a change in the operator or the addition of a new operator.
3. Unless notified by the Agency to the contrary, an MS4 owner submitting a complete NOI in accordance with the requirements of this permit will be authorized to discharge storm water from their small MS4s under the terms and conditions of this permit 30 days after the date that the NOI is received. Authorization will be by letter and include a copy of this permit. The Agency may deny coverage under this permit and require submittal of an application for an individual NPDES permit based on a review of the NOI or other information.

PART II. NOTICE OF INTENT (NOI) REQUIREMENTS**A. Deadlines for Notification**

1. If an MS4 was automatically designated under 40 CFR 122.32(a)(1) to obtain permit coverage, then you were required to submit an NOI or apply for an individual permit by March 10, 2003.
2. If an MS4 has coverage under the previous general permit for storm water discharges from small MS4s, you must renew your permit coverage under this part. Unless previously submitted for this general permit, you must submit a new NOI within 90 days of the effective date of this reissued general permit for storm water discharges from small MS4s to renew your NPDES permit coverage. The permittee shall comply with any new provisions of this general permit within 180 days of the effective date of this permit and include modifications pursuant to the NPDES permit in its Annual Report.
3. If an MS4 is designated in writing by Illinois EPA under 40 CFR 122.32(a)(2) during the term of this general permit, then you are required to submit an NOI within 180 days of such notice.
4. MS4s are not prohibited from submitting an NOI after established deadlines for NOI submittals. If a late NOI is submitted, your authorization is only for discharges that occur after permit coverage is granted. Illinois EPA reserves the right to take appropriate enforcement actions against MS4s that have not submitted a timely NOI.

B. Contents of Notice of Intent

Dischargers seeking coverage under this permit shall submit the Illinois MS4 NOI form. The NOI shall be signed in accordance with Standard Condition 11 of this permit and shall include all of the following information:

1. The street address, county, and the latitude and longitude of the municipal office for which the notification is submitted;

General NPDES Permit No. ILR40

2. The name, address, and telephone number of the operator(s) filing the NOI for permit coverage and the name, address, telephone number, and email address of the person(s) responsible for implementation and compliance with the MS4 Permit; and
 3. The name and segment identification of the receiving water(s), whether any segments(s) is or are listed as impaired on the most recently approved list pursuant to Section 303(d) of the Clean Water Act or any currently applicable Total Maximum Daily Load (TMDL) or alternate water quality study, and the pollutants for which the segment(s) is or are impaired. The most recent 303(d) list may be found at <http://www.epa.state.il.us/water/water-quality/index.html>. Information regarding TMDLs may be found at <http://www.epa.state.il.us/water/tmdl/>.
 4. The following shall be provided as an attachment to the NOI:
 - a. A description of the best management practices (BMPs) to be implemented and the measurable goals for each of the storm water minimum control measures in paragraph IV. B. of this permit designed to reduce the discharge of pollutants to the maximum extent practicable;
 - b. The month and year in which you implemented any BMPs of the six minimum control measures, and the month and year in which you will start and fully implement any new minimum control measures or indicate the frequency of the action;
 - c. For existing permittees, provide adequate information or justification on any BMPs from previous NOIs that could not be implemented; and
 - d. Identification of a local qualifying program, or any partners of the program if any.
 5. For existing permittees, certification that states the permittee has implemented necessary BMPs of the six minimum control measures.
- C. All required information for the NOI shall be submitted electronically and in writing to the following addresses:

Illinois Environmental Protection Agency
 Division of Water Pollution Control
 Permit Section
 Post Office Box 19276
 Springfield, Illinois 62794-9276

epa.ms4noipermit@illinois.gov

D. Shared Responsibilities

Permittees may partner with other MS4s to develop and implement their storm water management program. Each MS4 must fill out the NOI form. MS4s may also jointly submit their individual NOI in coordination with one or more MS4s. The description of their storm water management program must clearly describe which permittees are responsible for implementing each of the control measures. Each permittee is responsible for implementation of best management practices for the Storm Water Management Program within its jurisdiction.

PART III. SPECIAL CONDITIONS

- A. The Permittee's discharges, alone or in combination with other sources, shall not cause or contribute to a violation of any applicable water quality standard outlined in 35 Ill. Adm. Code 302.
- B. If there is evidence indicating that the storm water discharges authorized by this permit cause, or have the reasonable potential to cause or contribute to a violation of water quality standards, you may be required to obtain an individual permit or an alternative general permit or the permit may be modified to include different limitations and/or requirements.
- C. If a TMDL allocation or watershed management plan is approved for any water body into which you discharge, you must review your storm water management program to determine whether the TMDL or watershed management plan includes requirements for control of storm water discharges. If you are not meeting the TMDL allocations, you must modify your storm water management program to implement the TMDL or watershed management plan within eighteen months of notification by the Agency of the TMDL or watershed management plan approval. Where a TMDL or watershed management plan is approved, the permittee must:
 1. Determine whether the approved TMDL is for a pollutant likely to be found in storm water discharges from your MS4.
 2. Determine whether the TMDL includes a pollutant waste load allocation (WLA) or other performance requirements specifically for storm water discharge from your MS4.
 3. Determine whether the TMDL addresses a flow regime likely to occur during periods of storm water discharge.
 4. After the determinations above have been made and if it is found that your MS4 must implement specific WLA provisions of the TMDL, assess whether the WLAs are being met through implementation of existing storm water control measures or if additional control measures are necessary.

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5. Document all control measures currently being implemented or planned to be implemented to comply with TMDL waste load allocation(s). Also include a schedule of implementation for all planned controls. Document the calculations or other evidence that shows that the WLA will be met.
 6. Describe and implement a monitoring program to determine whether the storm water controls are adequate to meet the WLA.
 7. If the evaluation shows that additional or modified controls are necessary, describe the type and schedule for the control additions/revisions.
 8. Continue requirements 4 through 7 above until monitoring from two continuous NPDES permit cycles demonstrate that the WLAs or water quality standards are being met.
 9. If an additional individual permit or alternative general permit includes implementation of work pursuant to an approved TMDL or alternate water quality management plan, the provisions of the individual or alternative general permit shall supersede the conditions of Part III.C. TMDL information may be found at <http://www.epa.state.il.us/water/tmdl/>.
- D. If the permittee performs any deicing activities that can cause or contribute to a violation of an applicable State chloride water quality standard, the permittee must participate in any watershed group(s) organized to implement control measures which will reduce the chloride concentration in any receiving stream in the watershed.
- E. Authorization: Owners or operators must submit either an NOI in accordance with the requirements of this permit or an application for an individual NPDES Permit to be authorized to discharge under this General Permit. Authorization, if granted will be by letter and include a copy of this Permit. Upon review of an NOI, the Illinois EPA may deny coverage under this permit and require submittal of an application for an individual NPDES permit.
1. Automatic Continuation of Expired General Permit: Except as provided in III.E.2 below, when this General Permit expires the conditions of this permit shall be administratively continued until the earliest of the following:
 - a. 150 days after the new General Permit is reissued;
 - b. The Permittee submits a Notice of Termination (NOT) and that notice is approved by Illinois EPA;
 - c. The Permittee is authorized for coverage under an individual permit or the renewed or reissued General Permit;
 - d. The Permittee's application for an individual permit for a discharge or NOI for coverage under the renewed or reissued General Permit is denied by the Illinois EPA; or
 - e. Illinois EPA issues a formal permit decision not to renew or reissue this General Permit. This General Permit shall be automatically administratively continued after such formal permit decision.
 2. Duty to Reapply:
 - a. If the permittee wishes to continue an activity regulated by this General Permit, the permittee must apply for permit coverage before the expiration of the administratively continued period specified in III.E.1 above.
 - b. If the permittee reapplies in accordance with the provisions of III.E.2.a above, the conditions of this General Permit shall continue in full force and effect under the provisions of 5 ILCS 100/10-65 until the Illinois EPA makes a final determination on the application or NOI.
 - c. Standard Condition 2 of Attachment H is not applicable to this General Permit.
- F. The Agency may require any person authorized to discharge by this permit to apply for and obtain either an individual NPDES permit or an alternative NPDES general permit. Any interested person may petition the Agency to take action under this paragraph. The Agency may require any owner or operator authorized to discharge under this permit to apply for an individual or alternative general NPDES permit only if the owner or operator has been notified in writing that a permit application is required. This notice shall include a brief statement of the reasons for this decision, an application form, a statement setting a deadline for the owner or operator to file the application, and a statement that on the effective date of the individual NPDES permit or the alternative general permit as it applies to the individual permittee, coverage under this general permit shall automatically terminate. The Agency may grant additional time to submit the application upon request of the applicant. If an owner or operator fails to submit in a timely manner an individual or alternative general NPDES permit application required by the Agency under this paragraph, then the applicability of this permit to the individual or alternative general NPDES permittee is automatically terminated by the date specified for application submittal.
- G. Any owner or operator authorized by this permit may request to be excluded from the coverage of this permit by applying for an individual permit. The owner or operator shall submit an individual application with reasons supporting the request, in accordance with the requirements of 40 CFR 122.28, to the Agency. The request will be granted by issuing an individual permit or an alternative general permit if the reasons cited by the owner are adequate to support the request.

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- H. When an individual NPDES permit is issued to an owner or operator otherwise subject to this permit, or the owner or operator is approved for coverage under an alternative NPDES general permit, the applicability of this permit to the individual NPDES permittee is automatically terminated on the issue date of the individual permit or the date of approval for coverage under the alternative general permit, whichever the case may be.

PART IV. STORM WATER MANAGEMENT PROGRAMS

A. Requirements

The permittee must develop, implement, and enforce a storm water management program designed to reduce the discharge of pollutants from their MS4 to the maximum extent practicable, to protect water quality, and to satisfy the appropriate water quality requirements of the Illinois Pollution Control Board Rules and Regulations (35 Ill. Adm. Code, Subtitle C, Chapter 1) and the Clean Water Act. The permittee's storm water management program must include the minimum control measures described in section B of this Part. For new permittees, the permittee must develop and implement specific program requirements by the date specified in the Agency's coverage letter. The U.S. Environmental Protection Agency's National Menu of Storm Water Best Management Practices (<http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm>) and the most recent version of the Illinois Urban Manual should be consulted regarding the selection of appropriate BMPs.

B. Minimum Control Measures

The 6 minimum control measures to be included in the permittee's storm water management program are:

1. Public Education and Outreach on Storm Water Impacts

New permittees shall develop and implement elements of their storm water management program addressing the provisions listed below. Existing permittees renewing coverage under this permit shall maintain their current programs addressing this Minimum Control Measure, updating and enhancing their storm water management programs as necessary to comply with the terms of this section.

- a. Distribute educational materials to the community or conduct equivalent outreach activities about the impacts of storm water discharges on water bodies and the steps that the public can take to reduce pollutants in storm water runoff. The educational materials shall include information on the potential impacts and effects on storm water discharge due to climate change. Information on climate change can be found at <http://epa.gov/climatechange/>. The permittee shall incorporate the following into its education materials, at a minimum:
 - i. Information on effective pollution prevention measures to minimize the discharge of pollutants from private property and activities into the storm sewer system, on the following topics:
 - A. Storage and disposal of fuels, oils and similar materials used in the operation of or leaking from, vehicles and other equipment;
 - B. Use of soaps, solvents or detergents used in the outdoor washing of vehicles, furniture and other property,
 - C. Paint and related décor;
 - D. Lawn and garden care; and
 - E. Winter de-icing material storage and use.
 - ii. Information about green infrastructure strategies such as green roofs, rain gardens, rain barrels, bioswales, permeable piping, dry wells, and permeable pavement that mimic natural processes and direct storm water to areas where it can be infiltrated, evaporated or reused.
 - iii. Information on the benefits and costs of such strategies and provide guidance to the public on how to implement them.
- b. Define appropriate BMPs for this minimum control measure and measurable goals for each BMP. These measurable goals must ensure the reduction of all of the pollutants of concern in the permittee's storm water discharges to the maximum extent practicable; and
- c. Provide an annual evaluation of public education and outreach BMPs and measurable goals. Report on this evaluation in the Annual Report pursuant to Part V.C.1.

2. Public Involvement/Participation

New permittees shall develop and implement elements of their storm water management program addressing the provisions listed below. Existing permittees renewing coverage under this permit shall maintain their current programs addressing this Minimum Control Measure, updating and enhancing their storm water management programs as necessary to comply with the terms of this section.

- a. At a minimum, comply with State and local public notice requirements when implementing a public involvement/participation program;
- b. Define appropriate BMPs for this minimum control measure and measurable goals for each BMP, which must ensure the reduction of all of the pollutants of concern in the permittee's storm water discharges to the maximum extent practicable;

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- c. Provide a minimum of one public meeting annually for the public to provide input as to the adequacy of the permittee's MS4 program. This requirement may be met in conjunction with or as part of a regular council or board meeting;
- d. The permittee shall identify environmental justice areas within its jurisdiction and include appropriate public involvement/participation. Information on environmental justice concerns may be found at <http://www.epa.gov/environmentaljustice/>. This requirement may be met in conjunction with or as part of a regular council or board meeting; and
- e. Provide an annual evaluation of public involvement/participation BMPs and measurable goals. Report on this evaluation in the Annual Report pursuant to Part V.C.1.

3. Illicit Discharge Detection and Elimination

New permittees shall develop and implement elements of their storm water management program addressing the provisions listed below. Existing permittees renewing coverage under this permit shall maintain their current programs addressing this Minimum Control Measure, updating and enhancing their storm water management programs as necessary to comply with the terms of this section.

- a. Develop, implement, and enforce a program to detect and eliminate illicit connections or discharges into the permittee's small MS4;
- b. Develop, if not already completed, a storm sewer system map, showing the location of all outfalls and the names and location of all waters that receive discharges from those outfalls. Existing permittees renewing coverage under this permit shall update their storm sewer system map to include any modifications to the sewer system;
- c. To the extent allowable under state or local law, prohibit, through ordinance, or other regulatory mechanism, non-storm water discharges into the permittee's storm sewer system and implement appropriate enforcement procedures and actions, including enforceable requirements for the prompt reporting to the MS4 of all releases, spills and other unpermitted discharges to the separate storm sewer system, and a program to respond to such reports in a timely manner;
- d. Develop and implement a plan to detect and address non-storm water discharges, including illegal dumping, to the system;
- e. Inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste and the requirements and mechanisms for reporting such discharges;
- f. Address the categories of non-storm water discharges listed in Section I.B.2 only if you identify them as significant contributor of pollutants to your small MS4 (discharges or flows from firefighting activities are excluded from the effective prohibition against non-storm water and need only be addressed where they are identified as significant sources of pollutants to waters of the United States);
- g. Define appropriate BMPs for this minimum control measure and measurable goals for each BMP. These measurable goals must ensure the reduction of all of the pollutants of concern in your storm water discharges to the maximum extent practicable;
- h. Conduct periodic inspections of the storm sewer outfalls in dry weather conditions for detection of non-storm water discharges and illegal dumping. The permittee may establish a prioritization plan for inspection of outfalls, placing priority on outfalls with the greatest potential for non-storm water discharges. Major/high priority outfalls shall be inspected at least annually; and
- i. Provide an annual evaluation of illicit discharge detection and elimination BMPs and measurable goals. Report on this evaluation in the Annual Report pursuant to Part V.C.1.

4. Construction Site Storm Water Runoff Control

New permittees shall develop and implement elements of their storm water management program addressing the provisions listed below. Existing permittees renewing coverage under this permit shall maintain their current programs addressing this Minimum Control Measure, updating and enhancing their storm water management programs as necessary to comply with the terms of this section.

- a. Develop, implement, and enforce a program to reduce pollutants in any storm water runoff to the permittee's small MS4 from construction activities that result in a land disturbance of greater than or equal to one acre. Control of storm water discharges from construction activity disturbing less than one acre must be included in your program if that construction activity is part of a larger common plan of development or sale that would disturb one acre or more or has been designated by the permitting authority.

At a minimum, the permittee must develop and implement the following:

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- i. An ordinance or other regulatory mechanism to require erosion and sediment controls, as well as sanctions to ensure compliance, to the extent allowable under state or local law;
 - ii. Erosion and Sediment Controls - The permittee shall ensure that construction activities regulated by the storm water program require the construction site owner/operator to design, install, and maintain effective erosion controls and sediment controls to minimize the discharge of pollutants. At a minimum, such controls must be designed, installed, and maintained to:
 - A. Control storm water volume and velocity within the site to minimize soil erosion;
 - B. Control storm water discharges, including both peak flow rates and total storm water volume, to minimize erosion at outlets and to minimize downstream channel and stream bank erosion;
 - C. Minimize the amount of soil exposed during construction activity;
 - D. Minimize the disturbance of steep slopes;
 - E. Minimize sediment discharges from the site. The design, installation and maintenance of erosion and sediment controls must address factors such as the amount, frequency, intensity and duration of precipitation, the nature of resulting storm water runoff, and soil characteristics, including the range of soil particle sizes expected to be present on the site;
 - F. Provide and maintain natural buffers around surface waters, direct storm water to vegetated areas to increase sediment removal, and maximize storm water infiltration, unless infeasible; and
 - G. Minimize soil compaction and preserve topsoil, unless infeasible.
 - iii. Requirements for construction site operators to control or prohibit non-storm water discharges that would include concrete and wastewater from washout of concrete (unless managed by an appropriate control), drywall compound, wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials, fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance, soaps, solvents, or detergents, toxic or hazardous substances from a spill or other release, or any other pollutant that could cause or tend to cause water pollution;
 - iv. Require all regulated construction sites to have a storm water pollution prevention plan that meets the requirements of Part IV of NPDES permit No. ILR10, including management practices, controls, and other provisions at least as protective as the requirements contained in the Illinois Urban Manual, 2014, or as amended including green infrastructure techniques where appropriate and practicable;
 - v. Procedures for site plan reviews which incorporate consideration of potential water quality impacts and site plan review of individual pre-construction site plans by the permittee to ensure consistency with local sediment and erosion control requirements;
 - vi. Procedures for receipt and consideration of information submitted by the public; and
 - vii. Site inspections and enforcement of ordinance provisions.
- b. Define appropriate BMPs for this minimum control measure and measurable goals for each BMP. These measurable goals must ensure the reduction of all of the pollutants of concern in your storm water discharges to the maximum extent practicable.
 - c. Provide an annual evaluation of construction site storm water control BMPs and measurable goals in the Annual Report pursuant to Part V.C.1.
5. **Post-Construction Storm Water Management in New Development and Redevelopment**

New permittees shall develop and implement elements of their storm water management program addressing the provisions listed below. Existing permittees renewing coverage under this permit shall maintain their current programs addressing this Minimum Control Measure, updating and enhancing their storm water management programs, as necessary, to comply with the terms of this section.

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- a. Develop, implement, and enforce a program to address and minimize the volume and pollutant load of storm water runoff from projects for new development and redevelopment that disturb greater than or equal to one acre, projects less than one acre that are part of a larger common plan of development or sale or that have been designated to protect water quality, that discharge into the permittee's small MS4 within the MS4's jurisdictional control. The permittee's program must ensure that appropriate controls are in place that would protect water quality and reduce the discharge of pollutants to the maximum extent practicable. In addition, each permittee shall adopt strategies that incorporate the infiltration, reuse, and evapotranspiration of storm water into the project to the maximum extent practicable. The permittee shall also develop and implement procedures for receipt and consideration of information submitted by the public.
- b. Develop and implement strategies which include a combination of structural and/or non-structural BMPs appropriate for all projects within the permittee's jurisdiction for all new development and redevelopment that disturb greater than or equal to 1 acre (at a minimum) that will reduce the discharge of pollutants and the volume and velocity of storm water flow to the maximum extent practicable. These strategies shall include effective water quality and watershed protection elements and shall be amenable to modification due to climate change. Information on climate change can be found at <http://www.epa.gov/climatechange/>. When selecting BMPs to comply with requirements contained in this Part, the permittee shall adopt one or more of the following general strategies, listed in order of preference below. The proposal of a strategy shall include a rationale for not selecting an approach from among those with a higher preference.
 - i. Preservation of the natural features of development sites, including natural storage and infiltration characteristics;
 - ii. Preservation of existing natural streams, channels, and drainage ways;
 - iii. Minimization of new impervious surfaces;
 - iv. Conveyance of storm water in open vegetated channels;
 - v. Construction of structures that provide both quantity and quality control, with structures serving multiple sites being preferable to those serving individual sites; and
 - vi. Construction of structures that provide only quantity control, with structures serving multiple sites being preferable to those serving individual sites.
- c. If a permittee requires new or additional approval of any development, redevelopment, linear project construction, replacement or repair on existing developed sites, or other land disturbing activity covered under this Part, the permittee shall require the person responsible for that activity to develop a long term operation and maintenance plan including the adoption of one or more of the strategies identified in Part IV.B.5.b. of this permit.
- d. Develop and implement a program to minimize the volume of storm water runoff and pollutants from public highways, streets, roads, parking lots, and sidewalks (public surfaces) through the use of BMPs that alone or in combination result in physical, chemical, or biological pollutant load reduction, increased infiltration, evapotranspiration, and reuse of storm water. The program shall include, but not be limited to the following elements:
 - i. Annual Training for all MS4 employees who manage or are directly involved in (or who retain others who manage or are directly involved in) the routine maintenance, repair, or replacement of public surfaces in current green infrastructure or low impact design techniques applicable to such projects; and
 - ii. Annual Training for all contractors retained to manage or carry out routine maintenance, repair, or replacement of public surfaces in current green infrastructure or low impact design techniques applicable to such projects. Contractors may provide training to their employees for projects which include green infrastructure or low impact design techniques.
- e. Develop and implement a program to minimize the volume of storm water runoff and pollutants from existing privately owned developed property that contributes storm water to the MS4 within the MS4 jurisdictional control. Such program must be documented and may contain the following elements:
 - i. Source Identification – Establish an inventory of storm water and pollutants discharged to the MS4;
 - ii. Implementation of appropriate BMPs to accomplish the following:
 - A. Education on green infrastructure BMPs;
 - B. Evaluation of existing flood control techniques to determine the feasibility of pollution control retrofits;
 - C. Evaluation of existing flood control techniques to determine potential impacts and effects due to climate change;
 - D. Implementation of additional controls for special events expected to generate significant pollution (fairs, parades, performances);
 - E. Implementation of appropriate maintenance programs, (including maintenance agreements, for structural pollution control devices or systems);
 - F. Management of pesticides and fertilizers; and
 - G. Street cleaning in targeted areas.

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- f. Infiltration practices should not be implemented in any of the following circumstances:
- i. Areas/sites where vehicle fueling and/or maintenance occur;
 - ii. Areas/sites with shallow bedrock which allow movement of pollutants into the groundwater;
 - iii. Areas/sites near Karst features;
 - iv. Areas/sites where contaminants in soil or groundwater could be mobilized by infiltration of storm water;
 - v. Areas/sites within a delineated source water protection area for a public drinking water supply where the potential for an introduction of pollutants into the groundwater exists. Information on groundwater protection may be found at:

<http://www.epa.state.il.us/water/groundwater/index.html>
 - vi. Areas/sites within 400 feet of a community water supply well if there is not a wellhead protection delineation area or within 200 feet of a private water supply well. Information on wellhead protection may be found at :

<http://www.epa.state.il.us/water/groundwater/index.html>
- g. Develop and implement an ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects, public surfaces, and existing developed property as set forth above to the extent allowable under state or local law.
- h. Require all regulated construction sites to have post-construction management plans that meet or exceed the requirements of Part IV.D.2.h of NPDES permit No. ILR10 including management practices, controls, and other provisions at least as protective as the requirements contained in the most recent version of the Illinois Urban Manual, 2014.
- i. Ensure adequate long-term operation and maintenance of BMPs.
- j. Define appropriate BMPs for this minimum control measure and measurable goals for each BMP. These measurable goals must ensure the reduction of all of the pollutants of concern in your storm water discharges to the maximum extent practicable.
- k. Within 3 years of the effective date of the permit, the permittee must develop and implement a process to assess the water quality impacts in the design of all new and existing flood management projects that are associated with the permittee or that discharge to the MS4. This process must include consideration of controls that can be used to minimize the impacts to site water quality and hydrology while still meeting the project objectives. This will also include assessment of any potential impacts and effects on flood management projects due to climate change.
- l. Provide an annual evaluation of post-construction storm water management BMPs and measureable goals in the Annual Report pursuant to Part V.C.1 .

6. Pollution Prevention/Good Housekeeping for Municipal Operations

New permittees shall develop and implement elements of their storm water management program addressing the provisions listed below. Existing permittees renewing coverage under this permit shall maintain their current programs addressing this Minimum Control Measure, updating and enhancing their storm water management programs as necessary to comply with the terms of this section.

- a. Develop and implement an operation and maintenance program that includes an annual training component for municipal staff and contractors and is designed to prevent and reduce the discharge of pollutants to the maximum extent practicable.
- b. Pollution Prevention- The permittee shall design, install, implement, and maintain effective pollution prevention measures to minimize the discharge of pollutants from municipal properties, infrastructure, and operations. At a minimum, such measures must be designed, installed, implemented and maintained to:
 - i. Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters. Wash waters must be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge;
 - ii. Minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, chemical storage tanks, deicing material storage facilities and temporary stockpiles, detergents, sanitary waste, and other materials present on the site to precipitation and to storm water;
 - iii. Minimize the discharge of pollutants from spills and leaks and implement chemical spill and leak prevention and response procedures; and

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- iv. Provide regular inspection of municipal storm water management BMPs. Based on inspection findings, the permittee shall determine if repair, replacement, or maintenance measures are necessary in order to ensure the structural integrity, proper function, and treatment effectiveness of structural storm water BMPs. Necessary maintenance shall be completed as soon as conditions allow to prevent or reduce the discharge of pollutants to storm water.
- c. Deicing material must be stored in a permanent or temporary storage structure or seasonal tarping must be utilized. If no permanent structures are owned or operated by the Permittee, new permanent deicing material storage structures shall be constructed within two years of the effective date of this permit. Storage structures or stockpiles shall be located and managed to minimize storm water pollutant runoff from the stockpiles or loading/unloading areas of the stockpiles. Stockpiles and loading/unloading areas should be located as far as practicable from any area storm sewer drains. Fertilizer, pesticides, or other chemicals shall be stored indoors to prevent any discharge of such chemicals within the storm water runoff.
- d. Using training materials that are available from USEPA, the State of Illinois, or other organizations, the permittee's program must include annual employee training to prevent and reduce storm water pollution from activities such as park and open space maintenance, fleet and building maintenance, operation of storage yards, snow disposal, deicing material storage handling and use on roadways, new construction and land disturbances, and storm water system maintenance procedures for proper disposal of street cleaning debris and catch basin material. In addition, training should include how flood management projects impact water quality, non-point source pollution control, green infrastructure controls, and aquatic habitat.
- e. Define appropriate BMPs for this minimum control measure and measurable goals for each BMP. These measurable goals must ensure the reduction of all of the pollutants of concern in your storm water discharges to the maximum extent practicable.
- f. Provide an annual evaluation of pollution prevention/good housekeeping for municipal operations and measurable goals in the Annual Report pursuant to Part V.C.1.

C. Qualifying State, County, or Local Program

If an existing qualifying local program requires a permittee to implement one or more of the minimum control measures of Part IV. B. above, the permittee may follow that qualifying program's requirements rather than the requirements of Part IV.B. above. A qualifying local program is a local, county, or state municipal storm water management program that imposes, at a minimum, the relevant requirements of Part IV. B. Any qualifying local programs that permittees intend to follow shall be specified in their storm water management program.

D. Sharing Responsibility

1. Implementation of one or more of the minimum control measures may be shared with another entity, or the entity may fully take over the control measure. A permittee may rely on another entity only if:
 - a. The other entity implements the control measure;
 - b. The particular control measure, or component of that measure is at least as stringent as the corresponding permit requirement;
 - c. The other entity agrees to implement any minimum control measure on the permittee's behalf. A written agreement of this obligation is recommended. This obligation must be maintained as part of the description of the permittee's Storm Water Management Program. If the other entity agrees to report on the minimum control measure, the permittee must supply the other entity with the reporting requirements contained in Part V.C of this permit. If the other entity fails to implement the minimum control measure on the permittee's behalf, then the permittee remains liable for any discharges due to that failure to implement the minimum control measure.

E. Reviewing and Updating Storm Water Management Programs

1. Storm Water Management Program Review- The permittee must perform an annual review of its Storm Water Management Program in conjunction with preparation of the annual report required under Part V.C. The permittee must include in its annual report a plan for complying with any changes or new provisions in this permit, or in any State or federal regulations. The permittee must also include in its annual report a plan for complying with all applicable TMDL Report(s) or watershed management plan(s). Information on TMDLs may be found at:

<http://www.epa.state.il.us/water/tmdl/>.

2. Storm Water Management Program Update - The permittee may modify its Storm Water Management Program during the life of the permit in accordance with the following procedures:
 - a. Modifications adding (but not subtracting or replacing) components, controls, or requirements to the Storm Water Management Program may be made at any time upon written notification to the Agency;

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- b. Modifications replacing an ineffective or infeasible BMP specifically identified in the Storm Water Management Program with an alternate BMP may be requested at any time. Unless denied by the Agency, modifications proposed in accordance with the criteria below shall be deemed approved and may be implemented 60 days from submittal of the request. If the request is denied, the Agency will send the permittee a written response giving a reason for the decision. The permittee's modification requests must include the following:
 - i. An analysis of why the BMP is ineffective or infeasible (including cost prohibitive);
 - ii. Expectations on the effectiveness of the replacement BMP; and
 - iii. An analysis of why the replacement BMP is expected to achieve the goals of the BMP to be replaced.
 - c. Modification of any ordinances relative to the storm water management program, provided the updated ordinance is at least as stringent as the provisions stipulated in this permit; and
 - d. Modification requests or notifications must be made in writing and signed in accordance with Standard Condition II of Attachment H.
3. Storm Water Management Program Updates Required by the Agency. Modifications requested by the Agency must be made in writing, set forth the time schedule for permittees to develop the modifications, and offer permittees the opportunity to propose alternative program modifications to meet the objective of the requested modification. All modifications required by the Permitting Authority will be made in accordance with 40 CFR 124.5, 40 CFR 122.62, or as appropriate 40 CFR 122.63. The Agency may require modifications to the Storm Water Management Program as needed to:
- a. Address impacts on receiving water quality caused, or contributed to, by discharges from the MS4;
 - b. Include more stringent requirements necessary to comply with new federal or State statutory or regulatory requirements; or
 - c. Include such other conditions deemed necessary by the Agency to comply with the goals and requirements of the Clean Water Act.

PART V. MONITORING, RECORDKEEPING, AND REPORTING

A. Monitoring

The permittee must develop and implement a monitoring and assessment program to evaluate the effectiveness of the BMPs being implemented to reduce pollutant loadings and water quality impacts within 180 days of the effective date of this permit. The program should be tailored to the size and characteristics of the MS4 and the watershed. The permittee shall provide a justification of its monitoring and assessment program in the Annual Report. By not later than 180 days after the effective date of this permit, the permittee shall initiate an evaluation of its storm water program. The plan for monitoring/evaluation shall be described in the Annual Report. Evaluation and/or monitoring results shall be provided in the Annual Report. The monitoring and assessment program may include evaluation of BMPs and/or direct water quality monitoring as follows:

1. An evaluation of BMPs based on estimated effectiveness from published research accompanied by an inventory of the number and location of BMPs implemented as part of the permittee's program and an estimate of pollutant reduction resulting from the BMPs, or
2. Monitoring the effectiveness of storm water control measures and progress towards the MS4's goals using one or more of the following:
 - a. MS4 permittees serving a population of less than 25,000 may conduct visual observations of the storm water discharge documenting color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, or other obvious indicators of storm water pollution; or
 - b. MS4 permittees may evaluate storm water quality and impacts using one or more of the following methods:
 - i. Instream monitoring in the highest level hydrological unit code segment in the MS4 area. Monitoring shall include, at a minimum, quarterly monitoring of receiving waters upstream and downstream of the MS4 discharges in the designated stream(s).
 - ii. Measuring pollutant concentrations over time.
 - iii. Sediment monitoring.
 - iv. Short-term extensive network monitoring. Short-term sampling at the outlets of numerous drainage areas to identify water quality issues and potential storm water impacts, and may help in ranking areas for implementation priority. Data collected simultaneously across the MS4 to help characterize the geographical distribution of pollutant sources.

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- v. Site-specific monitoring. High-value resources such as swimming beaches, shellfish beds, or high-priority habitats could warrant specific monitoring to assess the status of use support. Similarly, known high-priority pollutant sources or impaired water bodies with contaminated aquatic sediments, an eroding stream channel threatening property, or a stream reach with a degraded fish population could be monitored to assess impacts of storm water discharges and/or to identify improvements that result from the implementation of BMPs.
 - vi. Assessing physical/habitat characteristics such as stream bank erosion caused by storm water discharges.
 - vii. Outfall/Discharge monitoring.
 - viii. Sewershed-focused monitoring. Monitor for pollutants in storm water produced in different areas of the MS4. For example, identify which pollutants are present in storm water from industrial areas, commercial areas, and residential areas.
 - ix. BMP performance monitoring. Monitoring of individual BMP performance to provide a direct measure of the pollutant reduction efficiency of these key components of a MS4 program.
 - x. Collaborative watershed-scale monitoring. The permittee may choose to work collaboratively with other permittees and/or a watershed group to design and implement a watershed or sub-watershed-scale monitoring program that assesses the water quality of the water bodies and the sources of pollutants. Such programs must include elements which assess the impacts of the permittee's storm water discharges and/or the effectiveness of the BMPs being implemented.
- c. If ambient water quality monitoring under 2b above is performed, the monitoring of storm water discharges and ambient monitoring intended to gauge storm water impacts shall be performed within 48 hours of a precipitation event greater than or equal to one quarter inch in a 24-hour period. At a minimum, analysis of storm water discharges or ambient water quality shall include the following parameters: total suspended solids, total nitrogen, total phosphorous, fecal coliform, chlorides, and oil and grease. In addition, monitoring shall be performed for any other pollutants associated with storm water runoff for which the receiving water is considered impaired pursuant to the most recently approved list under Section 303(d) of the Clean Water Act.

B. Recordkeeping

The permittee must keep records required by this permit for 5 years after the expiration of this permit. Records to be kept under this Part include the permittee's NOI, storm water management plan, annual reports, and monitoring data. All records shall be kept onsite or locally available and shall be made accessible to the Agency for review at the time of an on-site inspection. Except as otherwise provided in this permit, permittees must submit records to the Agency only when specifically requested to do so. Permittees must post their NOI, storm water management program plan, and annual reports on the permittee's website. The permittee must make its records available to the public at reasonable times during regular business hours. The permittee may require a member of the public to provide advance notice, in accordance with the applicable Freedom of Information Act requirements. Storm sewer maps may be withheld for security reasons.

C. Reporting

The permittee must submit Annual Reports to the Agency by the first day of June for each year that this permit is in effect. If the permittee maintains a website, a copy of the Annual Report shall be posted on the website by the first day of June of each year. Each Report shall cover the period from March of the previous year through March of the current year. Annual Reports shall be maintained on the permittees' website for a period of 5 years. The Report must include:

1. An assessment of the appropriateness and effectiveness of the permittee's identified BMPs and progress towards achieving the statutory goal of reducing the discharge of pollutants to the maximum extent practicable (MEP), and the permittee's identified measurable goals for each of the minimum control measures;
2. The status of compliance with permit conditions, including a description of each incidence of non-compliance with the permit, and the permittee's plan for achieving compliance with a timeline of actions taken or to be taken;
3. Results of information collected and analyzed, including monitoring data, if any, during the reporting period;
4. A summary of the storm water activities the permittee plans to undertake during the next reporting cycle, including an implementation schedule;
5. A change in any identified BMPs or measurable goals that apply to the program elements;
6. Notice that the permittee is relying on another government entity to satisfy some of the permit obligations (if applicable);
7. Provide an updated summary of any BMP or adaptive management strategy constructed or implemented pursuant to any approved TMDL or alternate water quality management study. Use the results of your monitoring program to assess whether the WLA or other performance requirements for storm water discharges from your MS4 are being met; and

8. If a qualifying local program or programs with shared responsibilities is implementing all minimum control measures on behalf of one or more entities, then the local qualifying program or programs with shared responsibilities may submit a report on behalf of itself and any entities for which it is implementing all of the minimum control measures.

The Annual Reports shall be submitted to the following office and email addresses:

Illinois Environmental Protection Agency
 Division of Water Pollution Control
 Compliance Assurance Section
 Municipal Annual Inspection Report
 1021 North Grand Avenue East
 P.O. Box 19276
 Springfield, Illinois 62794-9276

epa.ms4annualinsp@illinois.gov

PART VI. DEFINITIONS AND ACRONYMS

All definitions contained in Section 502 of the Clean Water Act, 40 CFR 122, and 35 Ill. Adm. Code 309 shall apply to this permit and are incorporated herein by reference. For convenience, simplified explanations of some regulatory/statutory definitions have been provided. In the event of a conflict, the definition found in the statute or regulation takes precedence.

Best Management Practices (BMPs) means structural or nonstructural controls, schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the state. BMPs also include treatment requirements, operating procedures, and practices to control runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

BMP is an acronym for "Best Management Practices."

CFR is an acronym for "Code of Federal Regulations."

Control Measure as used in this permit refers to any Best Management Practice or other method used to prevent or reduce storm water runoff or the discharge of pollutants to waters of the State.

CWA or The Act means the Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Pub. L. 92-500, as amended Pub. L. 95-217, Pub. L. 95-576, Pub. L. 96-483 and Pub. L. 97-117, 33 U.S.C. 1251 ET. seq.

Discharge when used without a qualifier, refers to discharge of a pollutant as defined at 40 CFR 122.2.

Environmental Justice (EJ) means the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies

Environmental Justice Area means a community with a low-income and/or minority population greater than twice the statewide average. In addition, a community may be considered a potential EJ community if the low-income and/or minority population is less than twice the state-wide average but greater than the statewide average and it has identified itself as an EJ community. If the low-income and/or minority population percentage is equal to or less than the statewide average, the community should not be considered a potential EJ community.

Flood management project means any project which is intended to control, reduce or minimize high stream flows and associated damage. This may also include projects designed to mimic or improve natural conditions in the waterway.

Green Infrastructure means wet weather management approaches and technologies that utilize, enhance or mimic the natural hydrologic cycle processes of infiltration, evapotranspiration and reuse. Green infrastructure approaches currently in use include green roofs, trees and tree boxes, rain gardens, vegetated swales, pocket wetlands, infiltration planters, porous and permeable pavements, porous piping systems, dry wells, vegetated median strips, reforestation/revegetation, rain barrels, cisterns, and protection and enhancement of riparian buffers and floodplains.

Illicit Connection means any man-made conveyance connecting an illicit discharge directly to a municipal separate storm sewer.

Illicit Discharge is defined at 40 CFR 122.26(b)(2) and refers to any discharge to a municipal separate storm sewer that is not composed entirely of storm water, except discharges authorized under an NPDES permit (other than the NPDES permit for discharges from the MS4) and discharges resulting from fire fighting activities.

MEP is an acronym for "Maximum Extent Practicable," the technology-based discharge standard for Municipal Separate Storm Sewer Systems to reduce pollutants in storm water discharges that was established by CWA Section 402(p). A discussion of MEP as it applies to small MS4s is found at 40 CFR 122.34.

MS4 is an acronym for "Municipal Separate Storm Sewer System" and is used to refer to a Large, Medium, or Small Municipal Separate Storm Sewer System (e.g. "the Dallas MS4"). The term is used to refer to either the system operated by a single entity or a group of systems within an area that are operated by multiple entities (e.g., the Houston MS4 includes MS4s operated by the city of Houston, the Texas Department of Transportation, the Harris County Flood Control District, Harris County, and others).

Municipal Separate Storm Sewer is defined at 40 CFR 122.26(b)(8) and means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains): (i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under Section 208 of the CWA that discharges to waters of the United States; (ii) Designed or used for collecting or conveying storm water; (iii) Which is not a combined sewer; and (iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

NOI is an acronym for "Notice of Intent" to be covered by this permit and is the mechanism used to "register" for coverage under a general permit.

NPDES is an acronym for "National Pollutant Discharge Elimination System."

Outfall is defined at 40 CFR 122.26(b) (9) and means a point source as defined by 40 CFR 122.2 at the point where a municipal separate storm sewer discharges to waters of the United States and does not include open conveyances connecting two municipal storm sewers, or pipes, tunnels or other conveyances which connect segments of the same stream or other waters of the United States and are used to convey waters of the United States.

Owner or Operator is defined at 40 CFR 122.2 and means the owner or operator of any "facility or activity" subject to regulation under the NPDES program.

Permitting Authority means the Illinois EPA.

Point Source is defined at 40 CFR 122.2 and means any discernable, confined and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff.

Pollutants of Concern means pollutants identified in a TMDL waste load allocation (WLA) or on the Section 303(d) list for the receiving water, and any of the pollutants for which water monitoring is required in Part V.A. of this permit.

Qualifying Local Program is defined at 40 CFR 122.34(c) and means a local, state, or Tribal municipal storm water management program that imposes, at a minimum, the relevant requirements of paragraph (b) of Section 122.34.

Small Municipal Separate Storm Sewer System is defined at 40 CFR 122.26(b)(16) and refers to all separate storm sewers that are owned or operated by the United States, a State [sic], city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State [sic] law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under Section 208 of the CWA that discharges to waters of the United States, but is not defined as "large" or "medium" municipal separate storm sewer system. This term includes systems similar to separate storm sewer systems in municipalities, such as systems at military bases, large hospital or prison complexes, and highways and other thoroughfares. The term does not include separate storm sewers in very discrete areas, such as individual buildings.

Storm Water is defined at 40 CFR 122.26(b) (13) and means storm water runoff, snowmelt runoff, and surface runoff and drainage.

Storm Water Management Program (SWMP) refers to a comprehensive program to manage the quality of storm water discharged from the municipal separate storm sewer system.

SWMP is an acronym for "Storm Water Management Program."

TMDL is an acronym for "Total Maximum Daily Load."

Waters (also referred to as waters of the state or receiving water) is defined at Section 301.440 of Title 35: Subtitle C: Chapter I of the Illinois Pollution Control Board Regulations and means all accumulations of water, surface and underground, natural, and artificial, public and private, or parts thereof, which are wholly or partially within, flow through, or border upon the State of Illinois, except that sewers and treatment works are not included except as specially mentioned; provided, that nothing herein contained shall authorize the use of natural or otherwise protected waters as sewers or treatment works except that in-stream aeration under Agency permit is allowable.

"You" and "Your" as used in this permit is intended to refer to the permittee, the operator, or the discharger as the context indicates and that party's responsibilities (e.g., the city, the county, the flood control district, the U.S. Air Force, etc.).

Attachment H

Standard Conditions

Definitions

Act means the Illinois Environmental Protection Act, 415 ILCS 5 as Amended.

Agency means the Illinois Environmental Protection Agency.

Board means the Illinois Pollution Control Board.

Clean Water Act (formerly referred to as the Federal Water Pollution Control Act) means Pub. L 92-500, as amended. 33 U.S.C. 1251 et seq.

NPDES (National Pollutant Discharge Elimination System) means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 402, 318 and 405 of the Clean Water Act.

USEPA means the United States Environmental Protection Agency.

Daily Discharge means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurements, the "daily discharge" is calculated as the average measurement of the pollutant over the day.

Maximum Daily Discharge Limitation (daily maximum) means the highest allowable daily discharge.

Average Monthly Discharge Limitation (30 day average) means the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

Average Weekly Discharge Limitation (7 day average) means the highest allowable average of daily discharges over a calendar week, calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

Best Management Practices (BMPs) means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the State. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Aliquot means a sample of specified volume used to make up a total composite sample.

Grab Sample means an individual sample of at least 100 milliliters collected at a randomly-selected time over a period not exceeding 15 minutes.

24-Hour Composite Sample means a combination of at least 8 sample aliquots of at least 100 milliliters, collected at periodic intervals during the operating hours of a facility over a 24-hour period.

8-Hour Composite Sample means a combination of at least 3 sample aliquots of at least 100 milliliters, collected at periodic intervals during the operating hours of a facility over an 8-hour period.

Flow Proportional Composite Sample means a combination of sample aliquots of at least 100 milliliters collected at periodic intervals such that either the time interval between each aliquot or the volume of each aliquot is proportional to either the stream flow at the time of sampling or the total stream flow since the collection of the previous aliquot.

- (1) **Duty to comply.** The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action, permit termination, revocation and reissuance, modification, or for denial of a permit renewal application. The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirements.
- (2) **Duty to reapply.** If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit. If the permittee submits a proper application as required by the Agency no later than 180 days prior to the expiration date, this permit shall continue in full force and effect until the final Agency decision on the application has been made.
- (3) **Need to halt or reduce activity not a defense.** It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
- (4) **Duty to mitigate.** The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.
- (5) **Proper operation and maintenance.** The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up, or auxiliary facilities, or similar systems only when necessary to achieve compliance with the conditions of the permit.
- (6) **Permit actions.** This permit may be modified, revoked and reissued, or terminated for cause by the Agency pursuant to 40 CFR 122.62 and 40 CFR 122.63. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.
- (7) **Property rights.** This permit does not convey any property rights of any sort, or any exclusive privilege.
- (8) **Duty to provide information.** The permittee shall furnish to the Agency within a reasonable time, any information which the Agency may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with the permit. The permittee shall also furnish to the Agency upon request, copies of records required to be kept by this permit.
- (9) **Inspection and entry.** The permittee shall allow an authorized representative of the Agency or USEPA (including an authorized contractor acting as a representative of the Agency or USEPA), upon the presentation of credentials and other documents as may be required by law, to:
 - (a) Enter upon the permittee's premises where a regulated

- facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
- (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
 - (c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
 - (d) Sample or monitor at reasonable times, for the purpose of assuring permit compliance, or as otherwise authorized by the Act, any substances or parameters at any location.
- (10) **Monitoring and records.**
- (a) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
 - (b) The permittee shall retain records of all monitoring information, including all calibration and maintenance records, and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of this permit, measurement, report or application. Records related to the permittee's sewage sludge use and disposal activities shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503). This period may be extended by request of the Agency or USEPA at any time.
 - (c) Records of monitoring information shall include:
 - (1) The date, exact place, and time of sampling or measurements;
 - (2) The individual(s) who performed the sampling or measurements;
 - (3) The date(s) analyses were performed;
 - (4) The individual(s) who performed the analyses;
 - (5) The analytical techniques or methods used; and
 - (6) The results of such analyses.
 - (d) Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit. Where no test procedure under 40 CFR Part 136 has been approved, the permittee must submit to the Agency a test method for approval. The permittee shall calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at intervals to ensure accuracy of measurements.
- (11) **Signatory requirement.** All applications, reports or information submitted to the Agency shall be signed and certified.
- (a) **Application.** All permit applications shall be signed as follows:
 - (1) For a corporation: by a principal executive officer of at least the level of vice president or a person or position having overall responsibility for environmental matters for the corporation;
 - (2) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or
 - (3) For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official.
 - (b) **Reports.** All reports required by permits, or other information requested by the Agency shall be signed by a person described in paragraph (a) or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - (1) The authorization is made in writing by a person described in paragraph (a); and
 - (2) The authorization specifies either an individual or a position responsible for the overall operation of the facility, from which the discharge originates, such as a plant manager, superintendent or person of equivalent responsibility; and
 - (3) The written authorization is submitted to the Agency.
 - (c) **Changes of Authorization.** If an authorization under (b) is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of (b) must be submitted to the Agency prior to or together with any reports, information, or applications to be signed by an authorized representative.
 - (d) **Certification.** Any person signing a document under paragraph (a) or (b) of this section shall make the following certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.
- (12) **Reporting requirements.**
- (a) **Planned changes.** The permittee shall give notice to the Agency as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required when:
 - (1) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source pursuant to 40 CFR 122.29 (b); or
 - (2) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements pursuant to 40 CFR 122.42 (a)(1).
 - (3) The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.
 - (b) **Anticipated noncompliance.** The permittee shall give advance notice to the Agency of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.
 - (c) **Transfers.** This permit is not transferable to any person except after notice to the Agency.
 - (d) **Compliance schedules.** Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.
 - (e) **Monitoring reports.** Monitoring results shall be reported at the intervals specified elsewhere in this permit.
 - (1) Monitoring results must be reported on a Discharge Monitoring Report (DMR).

- (2) If the permittee monitors any pollutant more frequently than required by the permit, using test procedures approved under 40 CFR 136 or as specified in the permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR.
- (3) Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Agency in the permit.
- (f) **Twenty-four hour reporting.** The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24-hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and time; and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. The following shall be included as information which must be reported within 24-hours:
- (1) Any unanticipated bypass which exceeds any effluent limitation in the permit.
 - (2) Any upset which exceeds any effluent limitation in the permit.
 - (3) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Agency in the permit or any pollutant which may endanger health or the environment.
The Agency may waive the written report on a case-by-case basis if the oral report has been received within 24-hours.
- (g) **Other noncompliance.** The permittee shall report all instances of noncompliance not reported under paragraphs (12) (d), (e), or (f), at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph (12) (f).
- (h) **Other information.** Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application, or in any report to the Agency, it shall promptly submit such facts or information.
- (13) **Bypass.**
- (a) **Definitions.**
 - (1) Bypass means the intentional diversion of waste streams from any portion of a treatment facility.
 - (2) Severe property damage means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
 - (b) Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs (13)(c) and (13)(d).
 - (c) **Notice.**
 - (1) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.
 - (2) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in paragraph (12)(f) (24-hour notice).
 - (d) Prohibition of bypass.
 - (1) Bypass is prohibited, and the Agency may take enforcement action against a permittee for bypass, unless:
 - (i) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
 - (ii) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
 - (iii) The permittee submitted notices as required under paragraph (13)(c).
 - (2) The Agency may approve an anticipated bypass, after considering its adverse effects, if the Agency determines that it will meet the three conditions listed above in paragraph (13)(d)(1).
- (14) **Upset.**
- (a) **Definition.** Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
 - (b) **Effect of an upset.** An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph (14)(c) are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
 - (c) **Conditions necessary for a demonstration of upset.** A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - (1) An upset occurred and that the permittee can identify the cause(s) of the upset;
 - (2) The permitted facility was at the time being properly operated; and
 - (3) The permittee submitted notice of the upset as required in paragraph (12)(f)(2) (24-hour notice).
 - (4) The permittee complied with any remedial measures required under paragraph (4).
 - (d) **Burden of proof.** In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.
- (15) **Transfer of permits.** Permits may be transferred by modification or automatic transfer as described below:
- (a) **Transfers by modification.** Except as provided in paragraph (b), a permit may be transferred by the permittee to a new owner or operator only if the permit has been modified or revoked and reissued pursuant to 40 CFR 122.62 (b) (2), or a minor modification made pursuant to 40 CFR 122.63 (d), to identify the new permittee and incorporate such other requirements as may be necessary under the Clean Water Act.
 - (b) **Automatic transfers.** As an alternative to transfers under paragraph (a), any NPDES permit may be automatically transferred to a new permittee if:

- (1) The current permittee notifies the Agency at least 30 days in advance of the proposed transfer date;
 - (2) The notice includes a written agreement between the existing and new permittees containing a specified date for transfer of permit responsibility, coverage and liability between the existing and new permittees; and
 - (3) The Agency does not notify the existing permittee and the proposed new permittee of its intent to modify or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement.
- (16) All manufacturing, commercial, mining, and silvicultural dischargers must notify the Agency as soon as they know or have reason to believe:
- (a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant identified under Section 307 of the Clean Water Act which is not limited in the permit, if that discharge will exceed the highest of the following notification levels:
 - (1) One hundred micrograms per liter (100 ug/l);
 - (2) Two hundred micrograms per liter (200 ug/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/l) for 2,4-dinitrophenol and for 2-methyl-4,6 dinitrophenol; and one milligram per liter (1 mg/l) for antimony.
 - (3) Five (5) times the maximum concentration value reported for that pollutant in the NPDES permit application; or
 - (4) The level established by the Agency in this permit.
 - (b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant which was not reported in the NPDES permit application.
- (17) All Publicly Owned Treatment Works (POTWs) must provide adequate notice to the Agency of the following:
- (a) Any new introduction of pollutants into that POTW from an indirect discharge which would be subject to Sections 301 or 306 of the Clean Water Act if it were directly discharging those pollutants; and
 - (b) Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.
 - (c) For purposes of this paragraph, adequate notice shall include information on (i) the quality and quantity of effluent introduced into the POTW, and (ii) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.
- (18) If the permit is issued to a publicly owned or publicly regulated treatment works, the permittee shall require any industrial user of such treatment works to comply with federal requirements concerning:
- (a) User charges pursuant to Section 204 (b) of the Clean Water Act, and applicable regulations appearing in 40 CFR 35;
 - (b) Toxic pollutant effluent standards and pretreatment standards pursuant to Section 307 of the Clean Water Act; and
 - (c) Inspection, monitoring and entry pursuant to Section 308 of the Clean Water Act.
- (19) If an applicable standard or limitation is promulgated under Section 301(b)(2)(C) and (D), 304(b)(2), or 307(a)(2) and that effluent standard or limitation is more stringent than any effluent limitation in the permit, or controls a pollutant not limited in the permit, the permit shall be promptly modified or revoked, and reissued to conform to that effluent standard or limitation.
 - (20) Any authorization to construct issued to the permittee pursuant to 35 Ill. Adm. Code 309.154 is hereby incorporated by reference as a condition of this permit.
 - (21) The permittee shall not make any false statement, representation or certification in any application, record, report, plan or other document submitted to the Agency or the USEPA, or required to be maintained under this permit.
 - (22) The Clean Water Act provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Clean Water Act is subject to a civil penalty not to exceed \$25,000 per day of such violation. Any person who willfully or negligently violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318 or 405 of the Clean Water Act is subject to a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment for not more than one year, or both. Additional penalties for violating these sections of the Clean Water Act are identified in 40 CFR 122.41 (a)(2) and (3).
 - (23) The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than 4 years, or both.
 - (24) The Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.
 - (25) Collected screening, slurries, sludges, and other solids shall be disposed of in such a manner as to prevent entry of those wastes (or runoff from the wastes) into waters of the State. The proper authorization for such disposal shall be obtained from the Agency and is incorporated as part hereof by reference.
 - (26) In case of conflict between these standard conditions and any other condition(s) included in this permit, the other condition(s) shall govern.
 - (27) The permittee shall comply with, in addition to the requirements of the permit, all applicable provisions of 35 Ill. Adm. Code, Subtitle C, Subtitle D, Subtitle E, and all applicable orders of the Board or any court with jurisdiction.
 - (28) The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit is held invalid, the remaining provisions of this permit shall continue in full force and effect.

(Rev. 7-9-2010 bah)

APPENDIX 2

City of Highwood Annual Facility Inspection Report



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, 2016 To March, 2017

Permit No. ILR40 0353

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

Name: City of Highwood Mailing Address 1: 17 Highwood Avenue

Mailing Address 2: _____ County: Lake

City: Highwood State: IL Zip: 60040 Telephone: 847-456-6442

Contact Person: Scott Coren Email Address: scoren@cityofhighwood.org
(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 City of Highwood
Moraine Township

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))

Scott Coren
Owner Signature:

5-22-17
Date:

Scott Coren
Printed Name:

City Manager
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

**Illinois Environmental Protection Agency
Annual Facility Inspection Report
for General Permit for Discharges from Small MS4s**

City of Highwood, IL

Permit No. ILR40 0350

Permit Year 14: March 2016 to March 2017

Contents

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Part A. City Changes to Best Management Practices, Year 14

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

Note: “X” indicates BMPs that were implemented in accordance with the City’s SMPP
✓ indicates BMPs that were changed during Year 14

Year 14	
City	
A. Public Education and Outreach	
X	A.1 Distributed Paper Material
	A.2 Speaking Engagement
	A.3 Public Service Announcement
X	A.4 Community Event
	A.5 Classroom Education Material
X	A.6 Other Public Education
B. Public Participation/Involvement	
	B.1 Public Panel
X	B.2 Educational Volunteer
	B.3 Stakeholder Meeting
X	B.4 Public Hearing
	B.5 Volunteer Monitoring
X	B.6 Program Coordination
X	B.7 Other Public Involvement
C. Illicit Discharge Detection and Elimination	
	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 14	
City	
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
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
	F.6 Other Municipal Operations Controls

Additional information about the changes that were made to the BMPs described in the City's SMPP during Year 14 is provided below.

In response to the new ILR40 permit, effective March 1, 2016, the City reviewed and revised its SMPP. Year 14 activities were done in accordance with the previous SMPP. Commitments described for Year 15 are a reflection of the revised SMPP.

B.6 Program Coordination

Measurable Goal(s):

- Continue to attend and participate in MAC meetings.

Year 14 City activities:

- Due to scheduling conflicts, the City was unable to attend and participate in several of the MAC meetings facilitated by SMC during Year 14. Meeting materials were obtained and reviewed for all MAC meetings that were missed. During Year 15, the City anticipates that it will be able to resume its participation in MAC meetings.

Part B. City Status of Compliance with Permit Conditions, Year 14

Stormwater Management Activities, Year 14

Please note that IEPA issued a new version of its General NPDES Permit No. ILR40 (Permit), effective on March 1, 2016. The bulk of City efforts during Year 14 consisted on reviewing and revising its SMPP to comply with the new permit conditions. A significant enhancement to the SMPP is the inclusion of Chapter 3.1 Qualified Local Program. On behalf of all MS4s within the county, SMC performs activities related to each of the six minimum control measures which are described in detail in the SMPP. These BMPs, implemented at the county level, make significant strides in achieving the statutory goal of reducing the discharge of pollutants to the MEP as watershed boundaries are not constrained by municipal borders. The SMPP can be viewed at the following link:

<http://www.cityofhighwood.com/index.aspx?nid=195> .

The stormwater management activities that the City performed during Year 14, including the City's BMPs and measurable goals, are described in detail in the City's previous SMPP and summarized below. A copy of the annual tracking form is included at the end of Part B of this report.

A. **Public Education and Outreach**

Measurable Goal(s):

- Implement BMPs and track progress of BMP implementation, as described in the SMPP.

Year 14 City activities:

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

B. **Public Participation/Involvement**

Measurable Goal(s):

- Implement BMPs and track progress of BMP implementation, as described in the SMPP.

Year 14 City activities:

- The City 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**

Measurable Goal(s):

- Implement BMPs and track progress of BMP implementation, as described in the SMPP.

Year 14 City activities:

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

D. Construction Site Runoff Control

Measurable Goal(s):

- Implement BMPs and track progress of BMP implementation, as described in the SMPP.
- Assist SMC in ensuring that all applicable developments are regulated pursuant to the WDO.

Year 14 City activities:

- The City continues to implement the BMPs described in its SMPP and to track progress in implementing its stormwater management program.
- The City continues to assist SMC in ensuring that all applicable developments are regulated pursuant to the WDO.

E. Post-Construction Runoff Control

Measurable Goal(s):

- Implement BMPs and track progress of BMP implementation, as described in the SMPP.
- Assist SMC in ensuring that all applicable developments regulated pursuant to the WDO.

Year 14 City activities:

- The City continues to implement the BMPs described in its SMPP and to track progress in implementing its stormwater management program.
- The City continues to assist SMC in ensuring that all applicable developments are regulated pursuant to the WDO.

F. Pollution Prevention/Good Housekeeping

Measurable Goal(s):

- Implement BMPs and track progress of BMP implementation, as described in the SMPP.

Year 14 City activities:

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

Stormwater Management Program Assessment, Year 14

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

The City revised their SMPP to coincide with the March 2016 ILR40 permit. As described in the revised SMPP there are extensive monitoring efforts already underway across the County, refer to Part C of this report for additional information. The QLP section of the report describes the Status of Lake County waters using information gathered by active workgroups and the Lake County Health Department along with a discussion on TMDL status within the County. The Status of Lake County Waters provides insight as to the overall effectiveness of countywide efforts to improve water quality. As an active MS4 within the County, the

countywide findings are a reflection of the individual efforts of each MS4. Additionally, the SMPP identified impaired waters based on the July 2016 303(d) list. The inclusion or exclusion of water bodies on the IEPAs 303(d) list, published bi-annually, is a direct reflection of the program's effectiveness. This comparison is expected to be provided in the Year 16 annual report (after the next 303(d) list is published).

Part C. City Information and Data Collection Results, Year 14

Annual Monitoring and Data Collection, Year 14

Information and data that the City collected to meet the monitoring requirement of the version of IEPA's General NPDES Permit No. ILR40 that applied to the reporting period are summarized below.

The City revised their SMPP to coincide with the March 2016 ILR40 permit. As described in the revised SMPP there are extensive monitoring efforts already underway across the County. The QLP section of the report describes the status of Lake County waters using information gathered by these workgroups, the LCHD and IEPA. Following is a brief summary of the efforts described in more detail in the SMPP.

- Lake Michigan Beaches have a significant portion of the Lake Michigan Beaches listed as impaired. The LCHD samples beaches from approximately Memorial Day to Labor Day. These results are used by the LCHD, in concert with other data collected by IEPA, to determine if TMDL implementation recommendations have resulted in load reductions and improved overall beach health.
- A portion of the community is located in the North Branch of the Chicago River. The North Branch Chicago River Watershed-Based Plan includes documented monitoring efforts.

Part D. City Summary of Year 15 Stormwater Activities

The table below indicates the stormwater management activities that the City plans to undertake during Year 15. Additional information about the stormwater management activities that the City will perform is provided in the section following the table.

Note: “X” indicates BMPs that will be implemented during Year 15

Year 15	
City	
A. Public Education and Outreach	
X	A.1 Distributed Paper Material
	A.2 Speaking Engagement
	A.3 Public Service Announcement
X	A.4 Community Event
	A.5 Classroom Education Material
X	A.6 Other Public Education
B. Public Participation/Involvement	
	B.1 Public Panel
	B.2 Educational Volunteer
	B.3 Stakeholder Meeting
X	B.4 Public Hearing
	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 15	
City	
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
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

Stormwater Management Activities, Year 15

As described in Part B above, a significant enhancement to the SMPP is the inclusion of Chapter 3.1 Qualified Local Program. On behalf of all MS4s within the county, SMC performs activities related to each of the six minimum control measures which are described in detail in the SMPP. These BMPs, implemented at the county level, make significant strides in achieving the statutory goal of reducing the discharge of pollutants to the MEP as watershed boundaries are not constrained by municipal borders. As such, a significant portion of the stated City measurable goals are to “support QLP efforts.”

During Year 15, the City plans to continue to support and supplement QLP efforts, as described in detail in the City's SMPP and in brief below. The City's SMPP can be viewed at <http://www.cityofhighwood.com/index.aspx?nid=195>.

A. Public Education and Outreach

In addition to the extensive QLP efforts, the City 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 City's Public Education and Outreach program includes: the distribution of educational material via take-away racks, municipal newsletters, website, at outreach events and by supporting efforts of the Solid Waste Agency of Lake County (SWALCO).

Measurable Goal(s):

- Support QLP efforts.
- Implement BMPs and track progress of BMP implementation, as described in the SMPP.

B. Public Participation/Involvement

In addition to the extensive QLP efforts, the City utilizes a variety of methods to allow input from citizens during the development and implementation of the SMPP. The City's Public Participation/Involvement program includes: maintaining a process for receiving and processing citizen input/complaints; attending and publicizing stakeholder meetings and the Lake County Municipal Advisory Committee, identification of environmental justice areas, and presenting program information at a public meeting at least once annually.

Measurable Goal(s):

- Support QLP efforts.
- Implement BMPs and track progress of BMP implementation, as described in the SMPP.

C. Illicit Discharge Detection and Elimination

In addition to the extensive QLP efforts, the City will conduct activities toward the identification and removal of direct connections of pollutants into the storm water management systems (including wetlands and receiving waters). The program includes the following primary components.

- A outfall map showing the locations of outfalls and the names and locations of all waters that receive discharges from those outfalls;
- An ordinance 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, into the storm sewer system;
- Periodic inspection of outfalls for detection of non-stormwater discharges and illegal dumping (5-yr rescreening schedule).

- Annual inspection of all High Priority Outfalls.

Measurable Goal(s):

- Support QLP Efforts.
- 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 establishes countywide standards for runoff maintenance, detention sites, soil erosion and sediment control, inspections, water quality, wetlands and floodplains. The WDO, which is administered and enforced within the community by SMC, establishes standards for construction site runoff control.

Measurable Goal(s):

- Implement BMPs and track progress of BMP implementation, as described in the SMPP.
- Assist SMC in ensuring that all applicable developments are in compliance with the WDO.

E. Post-Construction Runoff Control

As described above, the countywide WDO establishes the minimum stormwater management requirements for development in Lake County. BMP standards are incorporated into the WDO to implement stormwater management strategies that minimize increases in stormwater runoff rates, volumes, and pollutant loads from development sites. The SMPP also includes support of adopted Watershed Plan recommendations and 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.
- Assist SMC in ensuring that all applicable developments are in compliance with the WDO.

F. Pollution Prevention/Good Housekeeping

In addition to the QLP efforts to provide training materials and opportunities, the City is committed to implementing the Pollution Prevention/Good Housekeeping component of its SMPP. The City is responsible for the care and upkeep of the general facilities, municipal roads, its general facilities and associated maintenance yards. The City'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):

- Support QLP efforts.
- 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 14 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 14.
- **Part E3** summarizes the information and data collected by the QLP during Year 14.
- **Part E4** describes the stormwater management activities that the QLP plans to undertake during Year 15.
- **Part E5** lists the construction projects conducted by the QLP during Year 14.

Part E1. QLP Changes to Best Management Practices, Year 14

Note: “X” indicates BMPs that were implemented as planned

✓ indicates BMPs that were changed during Year 14

Year 14	
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 14	
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 14

IEPA issued a new version of its General NPDES Permit No. ILR40 effective March 1, 2016 (the first day of Year 14). SMC has reviewed the new permit, compared it to the previous permit, summarized the changes, and evaluated what the changes appear to mean for Lake County MS4s. Based on these findings, SMC revised its SMPP template and provided it to communities in August 2016; the final draft was provided in November 2016.

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 14 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.

Year 14 QLP activities:

- 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.
- In 2016, SMC developed “Living on the Water’s Edge” which included prevention pollution and bio infiltration practices for riparian landowners. This was widely distributed electronically (<https://lakecountyil.gov/DocumentCenter/View/11146>) as well as in print form.
- Provided NPDES related information via Facebook

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 or download “[The Big Picture: Water Quality, Regulations & NPDES](#)” to Lake County MS4s.

Year 14 QLP activities:

- 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, (url: <https://lakecountyil.gov/DocumentCenter/View/16533>).

A.4 Community Event

Measurable Goal(s):

- Sponsor or co-sponsor workshop on a topic related to IEPA’s NPDES Stormwater Program.

Year 14 QLP activities:

- SMC sponsored or co-sponsored many workshops and events on stormwater-related topics between March 1, 2016 and February 28, 2017, including:
 - Municipal Pollution Prevention/Good Housekeeping: Indiana & California Indiana Perspectives at April 2016 MAC meeting
 - Presentations at April, June, September 2016 MAC meetings regarding new ILR40 permit, its implications and SMCs guidance on compliance.
 - Center for Watershed Protection stormwater webinars (March, May, June, September, October, November 2016)
 - Homeowners Association Workshop on maintaining stormwater BMPs at CLC May 2016
 - Fox River/Chain O’Lakes river clean-up in Fox Lake, Port Barrington & Antioch, IL on May 7, 2016
 - Chicago River clean-up (Chicago River Day) in Lincolnshire, Highland Park, Lake Forest & Deerfield, IL on May 14, 2016
 - Buffalo Creek clean-up (Rylko Community Park Workday) in Buffalo Grove, IL on May 20, 2016
 - Rain Barrel, Compost Bin, and Native Plant Sale held in Libertyville, IL on May 7, 2016
 - Roadway De-Icing Workshop held in Libertyville, IL on Oct. 3 & 5, 2016
 - Parking Lots & Sidewalks De-Icing Workshop held in Libertyville, IL on October 4, 2016
 - Green Infrastructure workshop for Highland Park District Supervisors and Staff February 11, 2016
 - Des Plaines River Watershed Presentation at Adlai Stevenson Center on Democracy Oct. 13, 2016
 - SMC sponsored a Designated Erosion Control Inspector (DECI) Workshop held on Jan. 5/2017

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.

Year 14 QLP activities

- Stormwater educational materials were compiled for use at several public education events that were held between March 1, 2016 and March 31, 2017, including:

- Riparian Landowner Open House held in Beach Park, IL on May 25, 2016
- Loch Lomond Property Owners Association’s Loch Fest held in Mundelein, IL on July 30, 2016
- Rain Barrel, Compost Bin, and Native Plant Sale held in Libertyville, IL on May 7, 2016
- Developed Deicing Residential & Commercial Informational Brochure
- Developed “Living on the Water’s Edge” Brochure used for multiple events, including Des Plaines River watershed planning meetings, watershed meetings, LCHD lakes committee meetings, etc.

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.

Year 14 QLP activities:

- As new information and resource materials become available, they are posted to the SMC website and/or distributed directly to Lake County MS4s, (url:<https://lakecountyil.gov/2479/NPDES-Phase-II>).
- SMC continues to make available “The Big Picture: Water Quality, Regulations & NPDES” presentation to Lake County MS4s, (url:<https://lakecountyil.gov/DocumentCenter/View/16533>).
- SMC developed an ArcGIS geospatial web tool for Lake County that indicates TMDL statuses, 303(b), 305(d), watershed and urbanized area information within an MS4, (url:<https://lakecountyil.maps.arcgis.com/apps/InformationLookup/index.html?appid=09ab978957e7499f9926805d29e9394a>).
- SMC developed an ArcGIS geospatial web tool for Lake County within the Des Plaines River watershed, allowing the public to see an [Inventory of Stream and Detention Basin Information](#), (url:<https://lakecountyil.maps.arcgis.com/apps/webappviewer/index.html?id=918c4042dcec431ba46b5c1a7030b46c&extent=-9835848.6057,5176480.893,-9738009.2095,5239847.1894,102100>).
- SMC maintains reference documents for stormwater best practices, BMPs and green infrastructure practices on its website, (url: <https://lakecountyil.gov/2261/Stormwater-Best-Practices>).

B. Public Participation/Involvement

B.1 Public Panel

Measurable Goal(s):

- Provide notice of public meetings on SMC website. Track number of meetings conducted.

Year 14 QLP activities:

- 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 14, between March 1, 2016 and March 31, 2017.
 - Per records, there were 10 SMC meetings, 0 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.

Year 14 QLP activities:

- 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 14:
 - North Branch Chicago River Planning Committee – 3
 - Bull Creek/Bull's Brook Watershed Council – 2
 - Buffalo Creek Clean Water Partnership – 1
 - Des Plaines Watershed Planning Committee – 10
 - Des Plaines River Watershed Workgroup – 15 (excluding executive board meetings)
- 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 14.
- Prepare annual report on Qualifying Local Program activities at end of Year 14.

Year 14 QLP activities:

- SMC tracked the number of Municipal Advisory Committee (MAC) meetings conducted during Year 14: According to records, there were 3 MAC meetings conducted during this reporting period. 4/6/16, 6/8/16, 9/14/16
- The stormwater management activities that SMC performed as a QLP during Year 14 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 15 are described in Part E4 of the Annual Report template.
- A detailed QLP section was added to the SMPP template describing the QLP commitments related to the implementation of the program.

C. Illicit Discharge Detection and Elimination

C.2 Regulatory Control Program

Measurable Goal(s):

- Continue to enforce the countywide WDO.

Year 14 QLP activities:

- SMC continues to enforce the countywide WDO.
- Lake County continues to provide [the Lake County Illicit Discharge Detection and Elimination \(IDDE\) Manual](#) on the SMC website, (url: <https://lakecountyil.gov/DocumentCenter/View/17264>)

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.

Year 14 QLP activities:

- SMC sponsored or co-sponsored many workshops and events on stormwater-related topics between March 1, 2016 and February 28, 2017. 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.

Year 14 QLP activities:

- SMC continues to enforce the countywide WDO.
- SMC continues to administer the Designated Erosion Control Inspector (DECI) program as outlined by the WDO, (url: <https://lakecountyil.gov/2470/Designated-Erosion-Control-Inspector-Pro>).
- Total DECIs who have passed the exam (to date): 1,356.
- DECIs who have passed the exam between 03/01/2016 – 02/28/2017: 34.
- Total listed DECIs (to date): 139 (DECI completed certification process).
- DECIs have a recertification process every (3) years. Current cycle 2017-2020.

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.

Year 14 QLP activities:

- SMC continues to enforce the countywide WDO.
- SMC continues to provide technical guidance and reference materials to support the administration and enforcement of the countywide WDO.

D.3 Other Waste Control Program

Measurable Goal(s):

- Enforce WDO provisions regarding the control of waste and debris at construction sites.

Year 14 QLP activities:

- 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.

Year 14 QLP activities:

- SMC continues to track the number of enforcement officers (EOs) who have passed the EO exam and have become EOs. Per records, as of the end of Year 14, there are 57 EOs certified in Lake County.
- The list of EOs representing Certified Communities is continually updated and maintain on the SMC website: (url:<https://lakecountyil.gov/DocumentCenter/View/14412>).
- 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 certification process is every 5 years the next cycle of the community re-certification process is scheduled to begin in fall/winter 2017. (url: <https://lakecountyil.gov/2459/Community-Certification>)
- The website includes guidance information to supplement the TRM related to WDO interpretation 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.

Year 14 QLP activities:

- SMC continues to track the number of complaints received and processed related to soil erosion and sediment control.
- According to records, between March 1, 2016 and March 31, 2017, 2 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.

Year 14 QLP activities:

- SMC continues to track the number of site inspections conducted by SMC staff.
- According to records, between March 1, 2016 and March 31, 2017, 756 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.

Year 14 QLP activities:

- SMC continues to enforce the countywide WDO.

E.3 Long Term O&M Procedures

Measurable Goal(s):

- Continue to enforce the countywide WDO.

Year 14 QLP activities:

- SMC continues to enforce the countywide WDO.

E.4 Pre-Construction Review of BMP Designs

Measurable Goal(s):

- Continue to enforce the countywide WDO.

Year 14 QLP activities:

- SMC continues to enforce the countywide WDO.

E.5 Site Inspections During Construction

Measurable Goal(s):

- Continue to enforce the countywide WDO.

Year 14 QLP activities:

- SMC continues to enforce the countywide WDO.

E.6 Post-Construction Inspections

Measurable Goal(s):

- Continue to enforce the countywide WDO.

Year 14 QLP activities:

- SMC continues to enforce the countywide WDO.

E.7 Other Post-Construction Runoff Controls

Measurable Goal(s):

- Conduct annual Watershed Management Board (WMB) meeting.
- Contribute funding to flood reduction and water quality improvement projects, including stormwater retrofits, through the WMB.

Year 14 QLP activities:

- The annual WMB meeting was held on Dec. 8, 2016.
- At the annual WMB meeting 13 Projects were selected to receive \$177,000 of funding through the SMC grant program. These projects including planning and in the ground

project efforts that support flood reduction, water quality improvement, and stormwater retrofit projects.

- 11 WMB project grants awarded
- 1 Stormwater Infrastructure Repair Fund (SIRF) project grant awarded
- 1 Watershed Management Assistance (WMAG) project grant awarded

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 training video and testing.

Year 14 QLP activities:

- 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, 2016 and February 28, 2017. 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, 2016 and February 28, 2017, 1 MS4 borrowed the Excal Visual software. (url: <http://lakecountyil.gov/2479/NPDES-Phase-II>)
- SMC staff participated in Pollution Modeling Workshop Dec 12, 2016 at CMAP

F.5 Flood Management/Assess Guidelines

Measurable Goal(s):

- Track number of projects that are reviewed for multi-objective opportunities.

Year 14 QLP activities:

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

F.6 Other Municipal Operations Controls

Winter Roadway Deicing

Measurable Goal(s):

- Advise MS4 communities of watershed groups addressing issues associated with the use of chlorides (i.e. road salt)

Year 14 QLP activities:

- SMC co-sponsored 2 de-icing workshops:
 - Deicing for Parking Lots and Sidewalks 10/4/2016
 - Deicing Roads 10/5/2016
- A de-icing certification process to promote trained vendors is offered
 - Preferred Providers that successfully completed a Lake County Deicing Training Workshop and passed the Course Exam can be referenced on a

- | Preferred | Provider | List | (url: |
|-----------|---|---|---|
| | | https://www.lakecountyil.gov/DocumentCenter/Home/View/10767) | |
| ○ | Certification is through a third-party vendor, Fortin Consulting, Inc | | |
| ▪ | SMC continues to make available chloride reduction documents | | |
| ○ | Too Much Salt in Our Winter Maintenance Recipe - Tips for Managing Snow and Ice at Home (PDF) | | (url: https://lakecountyil.gov/DocumentCenter/Home/View/3047) |
| ○ | Lake County Winter Parking Lot and Sidewalk Maintenance Manual (2015) (PDF) | | (url: https://lakecountyil.gov/DocumentCenter/Home/View/3044) |
| ○ | Less Salt Equals Less Money, Clean Water, Safe Conditions - Tips for Effective Road Salting (PDF) | | (url: https://lakecountyil.gov/DocumentCenter/Home/View/3045) |

Part E3. QLP Information and Data Collection Results, Year 14

The QLP did not collect any monitoring data on behalf of Lake County's MS4s during Year 14. However, SMC has reviewed information presented by the [Illinois EPA \(IEPA\) in the 2016 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 March 2017

This brief report is based on information contained in the Illinois EPA's 2016 Illinois Integrated Water Quality Report (IIWQR) and Section 303(d) List, dated July 2016. Its purpose is to provide basic information to Lake County's MS4 communities 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 2016 Illinois Integrated Water Quality Report and Section 303(d) List.

The Illinois EPA's 2016 IIWQR and Section 303(d) List assesses the condition of surface water within streams, inland lakes and Lake Michigan waters. The IEPA assessment of surface water conditions is based on a degree of support (attainment) of a designated use within a stream segment, inland lake or within Lake Michigan. Determination designation is through an analysis of various types of information: including biological, physicochemical, physical habitat, and toxicity data. Illinois waters are designated for various uses including aquatic life, wildlife, agricultural use, primary contact (e.g., swimming, water skiing), secondary contact (e.g., boating, fishing), industrial use, public and food-processing water supply, and aesthetic quality. When sufficient data is available the IEPA assesses each applicable designation as Fully Supporting (Good resource quality), Not Supporting (Fair or Poor resource quality), Not Assessed or Insufficient Information. Uses determined to be Not Supporting are called "impaired," and waters that have at least one use assessment as Not Supporting are also called impaired as designated within the 303(d) list.

Streams

An analysis of data accompanying the Illinois EPA's 2016 IIWQR and Section 303(d) List shows that 179.68 stream miles in Lake County have been assessed by the Illinois EPA for attainment of at least one designated use per the IIWQR Appendix B-2. Specific Assessment Information for Streams, 2016.

An analysis of data accompanying the Illinois EPA's 2016 Illinois Integrated Water Quality Report and Section 303(d) List shows that 157.84 stream miles (of the 179.68 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.

An analysis of the 2014 impaired streams to the 2016 impaired streams, indicates 8 stream miles previously listed in the 2014 303(d) list have new data indicating aquatic life is now "Fully Supported" and applicable water quality standards have been attained; these water are no longer included in the 2016 303(d) list. The IIWQR mentions there is no specified reason for the recovery.

Table E3.1 2014 303(d) streams removed from 2016 303(d) list						
Assessment ID	Name	Miles		Assessment ID	Name	Miles
IL_G-08	Des Plaines River	0.98		IL_QE-01	Dead Dog Creek	4.02
IL_GV-01	Bull Creek	2.33		IL_DTZS-01	Flint Creek	9.66
IL_RGZB	Hastings Lake	0.34		IL_RTJ	Long Lake	2.85
IL_DT-35	Fox River	5.03		IL_RHK	Eleanor Lake	0.36
IL_HCCB-05	West Fork North Branch	5.73		IL_GWA	North Mill Creek	6.62
IL_GST	Buffalo Creek	8.77		IL_RGZE	Slough Lake	0.42
IL_RGZA	Crooked Lake	1.00				

An analysis of the 2014 impaired streams to the 2016 impaired streams indicates 27 stream miles previously not listed in the 2014 303(d) list are now considered impaired in the 2016 303(d) list as new data indicates impairments.

Table E3.2 Stream Segments added to 2016 303(d) list not previously listed in 2014						
Assessment ID	Name	Miles		Assessment ID	Name	Miles
IL_HCCB-05	West Fork North Branch Chicago River	0.002		IL_QC-03	Waukegan River	1.47
IL_DTRA-W-C1	Fiddle Creek	0.003		IL_GU-02	Indian Creek	11.32
IL_GW-02	Mill Creek	12.96		IL_QA-C4	Pettibone Creek	1.24

Lakes

An analysis of data accompanying the Illinois EPA's 2016 IIWQR 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 per the IIWQR Appendix B-3. Specific Assessment Information for Lakes, 2016.

An analysis of data accompanying the Illinois EPA's 2016 IIWQR and Section 303(d) List shows that 140 inland lakes, of the 170 assessed, in Lake County are considered impaired by the Illinois EPA. These lakes have been mapped and are shown in Figure E3.1.

An analysis of the 2014 impaired lakes to the 2016 impaired lakes indicates 5 lakes previously not listed in the 2014 303(d) list are now considered impaired in the 2016 303(d) list as new data indicates impairments.

Table E3.3 Inland Lakes added to 2016 303(d) list not previously listed in 2014						
Assessment ID	Name	Acres		Assessment ID	Name	Acres
IL_RGZD	Miltmore	83.1		IL_VGW	Rollins Savanna #1	8
IL_RGK	Grays	80		IL_VGX	Rollins Savanna #2	53
IL_SGZ	Briarcrest Pond	4				

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, 13 harbors, and 64 shoreline miles of Lake Michigan.

Located within Illinois is 196 square miles of open water of Lake Michigan, or about thirteen percent of the total open water located within Illinois. These waters were assessed for the 2016 IIWQR 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.

Along Illinois' Lake Michigan coastline, four of the 13 harbors are currently assessed in the 2016 IIWQR and Section 303(d) List, for several different designated uses. The Illinois EPA uses data collected from the Lake Michigan Monitoring Program harbor component to assess water quality for the following designated uses:

- Aesthetic Quality, a 0.18 sq. mi area was assessed, with 0.12 sq. mi fully supporting and 0.06 sq. mi Not Supporting (poor).
- Aquatic Life, a 3.88 sq. mi area was assessed, with 3.82 sq. mi fully supporting and 0.06 sq. mi Not Supporting (poor).
- Fish Consumption, a 2.62 sq. mi area was assessed, with 2.62 sq. mi Not Supporting (poor).
- Primary and Secondary Contact were not assessed.

Table C-10 of the IIWQR, lists potential causes of impairment in the harbors of Lake Michigan that can include Pesticides, Organic Pollutants, Metal Pollutants as well as polychlorinated biphenyls (PCBs), mercury, bottom deposits, lead, zinc, cadmium, arsenic, phosphorus, copper, and chromium.

Along Illinois' Lake Michigan coastline, a portion of all 64 shoreline miles of Lake Michigan located in Illinois were assessed for the Illinois EPA's 2016 IIWQR and Section 303(d) List for several different designated uses. Contamination sources for Not Supporting is due to polychlorinated biphenyls (PCBs) and mercury and bacterial contamination from Escherichia coli (E. coli) bacteria.

- Aesthetic Quality and Aquatic Life were not assessed.
- Fish Consumption, 64 mi area was assessed, with 64 mi Not Supporting (poor).
- Primary Contact, 64 mi area was assessed, with 5.5 mi fully supporting and 58.5 mi Not Supporting (poor).
- Secondary Contact, 5.5 mi area was assessed, with 5.5 mi fully supporting

In addition to the information contained within the 303(b) and 303(d) reports, the Des Plaines River Watershed Workgroup (DRWW) founded in 2014, on behalf of its members, monitors water quality in the Des Plaines River and tributaries, prioritize and implement water quality improvement projects, and secure grant funding to offset the cost. Monitoring data will allow for a greater understanding of the water quality impairments, identify priority restoration activities, and track water quality improvements. The Workgroup is committed to an approach for attaining water quality standards that focuses on stakeholder involvement, monitoring, and locally led decision-making based on sound science. Comprehensive baseline monitoring has been completed at 69 sites for water chemistry, sediment chemistry and biology. Flow monitoring began in late 2016. An annual water chemistry monitoring report was submitted to IL EPA in March 2017, which covers the NPDES II monitoring requirements for MS4 communities that are DRWW members. A Des Plaines River Watershed monitoring strategy was completed in February 2016 and updated in March 2017; a monitoring program report is intended to be submitted to IEPA by January 31, 2018.

The LCHD Lakes Management Unit has been collecting water quality data on Lake County lakes since the late 1960s. Since 2000, 176 different lakes each year have been studied and data collected on temperature, dissolved oxygen, phosphorus, nitrogen, solids, pH, alkalinity, chloride, conductivity, water clarity, the plant community and shoreline characteristics. Lake summary reports can be found <https://www.lakecountyil.gov/2400/Lake-Reports>. This data is used as part of ongoing watershed planning efforts throughout the county, which result in specific programmatic and site specific recommendations throughout the county. SMC is currently developing an application to assist communities in identifying potential site specific recommendations within their jurisdictional boundaries.

Part E4. QLP Summary of Year 15 Stormwater Activities

The table below indicates the stormwater management activities that the QLP plans to undertake during Year 15. Additional information about the BMPs and measurable goals that the QLP will implement during Year 15 is provided in the section following the table.

Note: X indicates BMPs that will be implemented during Year 15

Year 15	
QLP	
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
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 15	
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
X	F.6 Other Municipal Operations Controls

The Lake County Stormwater Management Commission (SMC) is a Qualifying Local Program for MS4s in Lake County. SMC has been providing services under four of the six minimum control categories since it began implementing a comprehensive, countywide stormwater program in 1991. The revised SMPP template clarifies and emphasizes the significant efforts by SMC

related to each of the six minimum control measures. These QLP commitments provide Lake County with a baseline Countywide stormwater management program that can be built upon by each of the individual MS4s.

During Year 15, SMC remains committed to performing a variety of stormwater management activities across the County, these commitments are now specifically outlined in the SMPP template. SMC program is continually evolving, to better assist Lake County MS4s in meeting the requirements of the new 2016 MS4 Permit.

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.

Measurable Goal(s):

- Develop and 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

SMC performs extensive Social Media Outreach & Announcement Activities. Public service announcement related to IEPA’s NPDES Stormwater Program or Stormwater BMPs are included in SMC’s watershed E-News. SMC also utilizes social media and coordinates 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 announcements related to IEPA’s NPDES Stormwater Program or stormwater BMPs in watershed E-News at least once each year.

- Post watershed identification signage in cooperation and collaboration with LCDOT.
- Provide information via social media (Facebook and Twitter).

A.4 Outreach Events

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 stormwater-related topics.
- Track workshops and events.

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 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, includes watershed plans and watershed workgroup information, 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 including information related to climate change.
- Make "The Big Picture: Water Quality, Regulations & NPDES" presentation available to Lake County MS4s.

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.1 Public Panel

SMC provides procedural guidance and implements its Citizen Inquiry Response System (CIRS) for receiving and taking action on information provided by the public regarding post-construction stormwater runoff control. SMC coordinates and conducts public meetings as well as committee meetings that are open to the public.

Measurable Goal(s):

- Implement and provide guidance on existing CIRS procedures.
- Provide notice of public meetings on SMC website.
- Track number of meetings conducted

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.6 Program Involvement

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 template for use by Lake County MS4s including a description of the Qualifying Local Program stormwater management activities.
- Prepare/maintain SMPP template for use by Lake County MS4s in creating their own SMPP.

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.

Measurable Goal(s):

- Continue to make available information regarding prioritization of outfalls for illicit discharge screening activities.
- Continue to make available compiled GIS data related to the County's existing stormwater infrastructure (e.g. storm sewer atlases, stream inventories and detention basin inventories).

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.

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.

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. SMC has also created a Designated Erosion Control Inspector (DECI) program, a program 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

§600 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. SMC has maintains technical guidance documents to accompany the WDO.

Measurable Goal(s):

- Continue to administer and enforce the WDO.
- Continue to maintain technical guidance documents.

D.3 Other Waste Control Program

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.

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 the responsibility lies with the MS4; within non-certified communities the designated enforcement officer is SMC's chief engineer. 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.

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. (url:<https://lakecountyil.gov/2467/Enforcement-Officers>)
- Periodically review each community's WDO administration and enforcement records.
Re-Certification Procedure. url:
(url:<https://lakecountyil.gov/DocumentCenter/Home/View/4244>)
- Continue to maintain technical guidance documents.

D.5 Public Information Handling Procedures

SMC provides a number of opportunities for the receipt and consideration of information submitted by the public.

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 11 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. Article 12 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

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.

E.2 Regulatory Control Program

Proposed stormwater management strategies must address the runoff volume reduction requirements described in §503 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

§401 of the WDO requires that maintenance plans be developed for all stormwater management systems and, §500 further details deed or plat restriction requirements for all stormwater management systems.

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 and adherence to the Runoff Volume Reduction standards of §503.

Measurable Goal(s):

- Continue to administer and enforce the WDO.

E.5 Site Inspections During Construction

As described above in MCM D.6 Article 11 of the WDO contains both recommended and minimum requirements for the inspection of development sites.

Measurable Goal(s):

- Continue to administer and enforce the WDO.

E.6 Post-Construction Inspections

SMC has collaborated on a number of watershed based plans throughout the County. These watershed plans included a stream and detention basin inventories. The plans also include a list of site specific best management practices within various communities based on an assessment of these inventories and other data. SMC is currently developing an application to assist communities in identifying potential project sites, recommended in adopted watershed plans, within their jurisdictional boundaries.

Measurable Goal(s):

- Continue to administer and enforce the WDO.
- Develop an application, for use by MS4s, to identify adopted watershed plan recommendations within their communities.

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.

URL: <http://www.lakecountyil.gov/3635/Watershed-Management-Board-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 technical assistance to local MS4s. In addition, each year, SMC will sponsor or co-sponsor training workshops.

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 for multi-objective opportunities.

Measurable Goal(s):

- Track number of SMC-sponsored projects that are reviewed for multi-objective opportunity.

F.6 Other Municipal Operations Controls

SMC develops and distributes chloride reduction documents and materials. Each year, SMC will sponsor or co-sponsor at least one workshop on a topic related to winter de-icing. Lake County also publishes a "Lake County Winter Maintenance Preferred Providers" list. Providers included on this list have successfully completed a Lake County Deicing Training Workshop and passes the associated course exam.

Measurable Goal(s):

- Advise MS4 communities of watershed groups addressing issues associated with the use of chlorides (i.e. road salt).
- Sponsor or co-sponsor at least one workshop on a topic related to winter de-icing.
- Make available chloride reduction documents on take-away racks and the website.

Part E5. QLP Construction Projects Conducted During Year 14

Project Name	Project Size (acres)	Construction Start Date	Construction End Date
Bull Creek Restoration Project - Beach Park, IL	1.87	5/2016	11/2017
Strawberry Condo Drainage Improvements - North Chicago, IL	0.25	6/2016	10/2016
Floodplain Home Buyout - FMA FY14, 98 Keystone Dr., Fox Lake, IL	0.22	8/1/2016	8/31/2016
Floodplain Home Buyout - FMA FY15, 37 Medinah, Fox Lake, IL	0.15	8/1/2016	8/31/2016
Floodplain Home Buyout - HMGP 1935, 103 Lindenhurst, Lindenhurst, IL	0.21	10/15/2016	10/31/2016
Floodplain Home Buyout - HMGP 1935, 105 Lindenhurst, Lindenhurst, IL	0.26	10/15/2016	10/31/2016
Floodplain Home Buyout - HMGP 1935, 109 Lindenhurst, Lindenhurst, IL	0.53	10/15/2016	10/31/2016
Floodplain Home Buyout - HMGP 1935, 2000 Old Elm, Lindenhurst, IL	0.26	10/15/2016	10/31/2016
Floodplain Home Buyout - HMGP 1935, 2002 Old Elm, Lindenhurst, IL	0.25	10/15/2016	10/31/2016
Floodplain Home Buyout - HMGP 4116, 24655 River Shore, Cary, IL	0.44	9/1/2016	9/30/2016
Floodplain Home Buyout - HMGP 4116, 24762 N. Lagoon, Cary, IL	0.54	9/1/2016	9/30/2016
Floodplain Home Buyout - HMGP 4116, 1018 Kilbourne Rd, Gurnee, IL	0.42	9/1/2016	9/30/2016
Floodplain Home Buyout - HMGP 4116, 1001 Kilbourne Rd, Gurnee, IL	2.03	9/1/2016	9/30/2016
Floodplain Home Buyout - HMGP 4116, 26970 N. Grace, Wauconda, IL	0.22	9/1/2016	9/30/2016
Floodplain Home Buyout - HMGP 4116, 200 Park, Ingleside, IL	0.22	9/1/2016	9/30/2016
Floodplain Home Buyout - HMGP 4116, 26195 W. Mattalina, Ingleside, IL	0.45	9/1/2016	9/30/2016

APPENDIX 3

City of Highwood Municipal Code: Title 9, Chapter 3 –
Stormwater Drainage System; Illicit Discharges and Connections

PREFACE

This city code of the city of Highwood, as supplemented, contains ordinances up to and including ordinance 17-O-5, passed January 17, 2017. Ordinances of the city adopted after said ordinance supersede the provisions of this city code to the extent that they are in conflict or inconsistent therewith. Consult the city office in order to ascertain whether any particular provision of the code has been amended, superseded or repealed.

Sterling Codifiers
Coeur d'Alene, Idaho

Chapter 3 STORMWATER DRAINAGE SYSTEM; ILLICIT DISCHARGES AND CONNECTIONS

9-3-1: PURPOSE AND OBJECTIVES:

The purpose of this chapter is to provide for the health, safety and general welfare of the citizens of the city through the regulation of nonstormwater discharges to the storm drainage system to the maximum extent practicable as required by federal and state law. This chapter establishes methods for controlling the introduction of pollutants into the municipal separate storm sewer system (MS4) in order to comply with requirements of the national pollutant discharge elimination system (NPDES) permit process. The objectives of this chapter are:

- A. To regulate the contributions of pollutants to the MS4 by stormwater discharges by any user.
- B. To prohibit illicit connections and discharges to the MS4.
- C. To establish legal authority to carry out all inspections, surveillance, monitoring and enforcement procedures necessary to ensure compliance with this chapter. (Ord. 2008-O-22, 8-5-2008)

9-3-2: DEFINITIONS:

For the purpose of this chapter, the following shall mean:

AUTHORIZED ENFORCEMENT AGENCY: The city of Highwood building department or any department designated by the city administrator to enforce this chapter.

BEST MANAGEMENT PRACTICES (BMPs): Schedules of activities, prohibitions of practices, general good housekeeping practices, pollution prevention and educational practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants directly or indirectly to stormwater, receiving waters, or stormwater conveyance systems. "BMPs" also include treatment practices, operating procedures, and practices to control site runoff, spillage or leaks, sludge or water disposal, or drainage from raw materials storage.

CITY: The city of Highwood, Illinois.

CLEAN WATER ACT: The federal water pollution control act (33 USC section 1251 et seq.), and any subsequent amendments thereto.

CONSTRUCTION ACTIVITIES: Activities subject to NPDES construction permits. These include construction projects resulting in land disturbance of one acre or more. Such activities include, but are not limited to, clearing and grubbing, grading, excavating, and demolition.

HAZARDOUS MATERIALS: Any material, including any substance, waste, or combination thereof, which, because of its quantity, concentration, or physical, chemical, or infectious characteristics, may cause, or significantly contribute to, a substantial present or potential hazard to human health, safety, property, or the environment when improperly treated, stored, transported disposed of, or otherwise managed.

ILLEGAL DISCHARGE: Any direct or indirect nonstormwater discharge to the storm drain system, except as exempted in section [9-3-6](#) of this chapter.

ILLICIT CONNECTIONS: Either of the following:

- A. Any drain or conveyance, whether on the surface or subsurface, that allows an illegal discharge to enter the storm drain system including, but not limited to, any conveyances that allow any nonstormwater discharge including sewage, process wastewater, and wash water to enter the storm drain system and any connections to the storm drain system from indoor drains and sinks, regardless of whether said drain or connection had been previously allowed, permitted, or approved by an authorized enforcement agency; or
- B. Any drain or conveyance connected from a commercial or industrial land use to the storm drain system that has not been documented in plans, maps, or equivalent records and approved by an authorized enforcement agency.

INDUSTRIAL ACTIVITIES: Activities subject to NPDES industrial stormwater permits as defined in 40 CFR section 122.26(b)(14).

MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4): The system of conveyances (including sidewalks, roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains) owned and operated by the city and designed or used for collecting or conveying stormwater, and that is not used for collecting or conveying sewage.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) STORMWATER DISCHARGE PERMIT: A permit issued by the EPA (or by a state under authority delegated pursuant to 33 USC section 1342(b)) that authorizes the discharge of pollutants to waters of the United States,

whether the permit is applicable on an individual, group, or general areawide basis.

NONSTORMWATER DISCHARGE: Any discharge to the storm drain system that is not composed entirely of stormwater.

PERSON: Any individual, association, organization, partnership, firm, corporation or other entity recognized by law and acting as either the owner or as the owner's agent.

POLLUTANT: Anything which causes or contributes to pollution. "Pollutants" may include, but are not limited to, paints, varnishes, and solvents; oil and other automotive fluids; nonhazardous liquid and solid wastes and yard wastes; refuse, rubbish, garbage, litter, or other discarded or abandoned objects, ordinances, and accumulations so that same may cause or contribute to pollution; floatables; pesticides, herbicides, and fertilizers; hazardous substances and wastes; sewage, fecal coliform and pathogens; dissolved and particulate metals; animal wastes; wastes and residues that result from constructing a building or structure; and noxious or offensive matter of any kind.

PREMISES: Any building, lot, parcel of land, or portion of land, whether improved or unimproved, including adjacent sidewalks and parking strips.

STORM DRAINAGE SYSTEM: Publicly owned facilities by which stormwater is collected and/or conveyed including, but not limited to, any roads with drainage systems, municipal streets, gutters, curbs, inlets, piped storm drains, pumping facilities, retention and detention basins, natural and humanmade or altered drainage channels, reservoirs, and other drainage structures.

STORMWATER: Any surface flow, runoff, and drainage consisting entirely of water from any form of natural precipitation, and resulting from such precipitation.

STORMWATER MANAGEMENT PLAN: A document which describes the best management practices and activities to be implemented by a person or business to identify sources of pollution or contamination at a site and the actions to eliminate or reduce pollutant discharges to stormwater, stormwater conveyance systems, and/or receiving waters to the maximum extent practicable.

WASTEWATER: Any water or other liquid, other than uncontaminated stormwater, discharged from a facility. (Ord. 2008-O-22, 8-5-2008)

9-3-3: APPLICATION AND INTERPRETATION:

A. This chapter shall apply to all water entering the storm drain system generated on any developed and undeveloped lands unless explicitly exempted by the city.

B. This chapter is not intended to modify or repeal any other ordinance, rule, regulation, or other provision of law. The requirements of this chapter are in addition to the requirements of any other ordinance, rule, regulation, or other provision of law, and where any provision of this chapter imposes restrictions different from those imposed by any other ordinance, rule, regulation, or other provision of law, whichever provision is more restrictive or imposes higher protective standards for human health or the environment shall control. (Ord. 2008-O-22, 8-5-2008)

9-3-4: ADMINISTRATION AND ENFORCEMENT:

The city shall administer, implement, and enforce the provisions of this chapter. Any powers granted or duties imposed upon the city may be delegated in writing by the city administrator to persons or entities acting in the beneficial interest of or in the employ of the city. (Ord. 2008-O-22, 8-5-2008)

9-3-5: MINIMUM STANDARDS:

The standards set forth herein and promulgated pursuant to this chapter are minimum standards. Therefore, this chapter does not intend or imply that compliance by any person will ensure that there will be no contamination, pollution, or unauthorized discharge of pollutants. (Ord. 2008-O-22, 8-5-2008)

9-3-6: DISCHARGE AND CONNECTION PROHIBITIONS:

A. Discharges Prohibited:

1. No person shall throw, drain, or otherwise discharge, cause, or allow others under its control to throw, drain, or otherwise discharge into the MS4 any pollutants or waters containing any pollutants, other than stormwater. The commencement, conduct or continuance of any illegal discharge to the storm drain system is prohibited except as described as follows:
 - a. The following discharges are exempt from discharge prohibitions established by this chapter: water line flushing, landscape irrigation, diverted stream flows, rising ground waters, uncontaminated ground water infiltration, uncontaminated pumped ground water, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering, individual residential car washing, flows from riparian habitats and wetlands, dechlorinated swimming pool discharges, and street wash water.
 - b. Discharges or flow from firefighting and other discharges specified in writing by the city as being necessary to protect public health and safety.
 - c. Discharges associated with dye testing. However, this activity requires a verbal notification to the city prior to the time of the test.
 - d. The prohibition shall not apply to any nonstormwater discharge permitted under an NPDES permit, waiver, or waste discharge order issued to the discharger and administered under the authority of the United States environmental protection agency (EPA); provided, that the discharger is in full compliance with all requirements of the permit, waiver, or order and other applicable laws and regulations; and provided, that written approval has been granted for any discharge to the storm drain system.
2. The city may evaluate and remove any of the above exemptions if it is determined that they are causing an adverse impact.

B. Illicit Connections Prohibited:

1. The construction, use, maintenance or continued existence of illicit connections to the storm drain system is prohibited.
2. This prohibition expressly includes, without limitation, illicit connections made in the past, regardless of whether the connection was permissible under law or practices applicable or prevailing at the time of connection.
3. A person is considered to be in violation of this chapter if the person connects a line conveying sewage to the MS4 or allows such a connection to continue.
4. Improper connections in violation of this chapter must be disconnected and redirected, if necessary, to an approved on site wastewater management system or the sanitary sewer system, upon approval of the city.
5. Any drain or conveyance that has not been documented in plans, maps or equivalent, and which may be connected to the storm sewer system shall be located by the owner or occupant of that property upon receipt of written notice of violation from the city requiring that such locating be completed. Such notice will specify a reasonable time period within which the location of the drain or conveyance is to be determined, that the drain or conveyance be identified as a storm sewer, sanitary sewer or other, and that the outfall location or point of connection to the storm sewer system, sanitary sewer system or other discharge point be identified. Results of these investigations are to be documented and provided to the city. (Ord. 2008-O-22, 8-5-2008)

9-3-7: INDUSTRIAL OR CONSTRUCTION ACTIVITY DISCHARGES:

- A. Any person subject to an industrial or construction activity NPDES stormwater discharge permit shall comply with all provisions of such permit. Proof of compliance with said permit may be required in a form acceptable to the city prior to the allowing discharges to the MS4.
- B. The operator of a facility, including construction sites, required to have an NPDES permit to discharge stormwater associated with industrial activity shall submit a copy of the notice of intent (NOI) to the city at the same time the operator submits the original notice of intent to the EPA as applicable. The copy of the notice of intent may be delivered to the city either in person or by mailing to:

Notice of Intent to Discharge Stormwater
City Administrator
17 Highwood Avenue
Highwood, IL 60040

- C. A person commits an offense if the person operates a facility that is discharging stormwater associated with industrial activity without having submitted a copy of a notice of intent to do so to the city. (Ord. 2008-O-22, 8-5-2008)

9-3-8: MONITORING DISCHARGES:

- A. The city shall be permitted to enter and inspect facilities subject to regulation under this chapter as often as may be necessary to determine compliance with this chapter. If a discharger has security measures in force which require proper identification and clearance before entry into its premises, the discharger shall make the necessary arrangements to allow access to representatives of the city.

- B. Facility operators shall allow the city ready access to all parts of the premises for the purposes of inspection, sampling, examination and copying of records that must be kept under the conditions of an NPDES permit to discharge stormwater and the performance of any additional duties as defined by state and federal law.

- C. The city shall have the right to set up on any permitted facility such devices as are necessary, in the opinion of the city, to conduct monitoring and/or sampling of the facility's stormwater discharge.

- D. The city has the right to require the discharger to install monitoring equipment as necessary. The facility's sampling and monitoring equipment shall be maintained at all times in a safe and proper operating condition by the discharger at its own expense. All devices used to measure stormwater flow and quality shall be calibrated to ensure their accuracy.

- E. Any temporary or permanent obstruction to safe and easy access to the facility to be inspected and/or sampled shall be promptly removed by the operator at the written or oral request of the city and shall not be replaced. The costs of clearing such access shall be borne by the operator.

- F. Unreasonable delays in allowing the city access to a permitted facility is a violation of a stormwater discharge permit and of this chapter. A person who is the operator of a facility with an NPDES permit to discharge stormwater associated with industrial activity commits an offense if the person denies the city reasonable access to the permitted facility for the purpose of conducting any activity authorized or required by this chapter.

- G. If the city has been refused access to any part of the premises from which stormwater is discharged, and he/she is able to demonstrate probable cause to believe that there may be a violation of this chapter, or that there is a need to inspect and/or sample as part of a routine inspection and sampling program designed to verify compliance with this chapter or any order issued hereunder, or to protect the overall public health, safety, and welfare of the community, then the city may seek issuance of a search warrant from any court of competent jurisdiction. (Ord. 2008-O-22, 8-5-2008)

9-3-9: BEST MANAGEMENT PRACTICES TO REDUCE POLLUTION:

The city will adopt requirements identifying best management practices for any activity, operation, or facility which may cause or contribute to pollution or contamination of stormwater, the storm drain system, or waters of the United States. The owner or operator of such activity, operation, or facility shall provide, at its own expense, reasonable protection from accidental discharge of prohibited materials or other wastes into the municipal storm drain system or watercourses through the use of these structural and nonstructural BMPs. Further, any person responsible for a property or premises that is, or may be, the source of an illicit discharge may be required to implement, at said person's expense, additional structural and nonstructural BMPs to prevent the further discharge of pollutants to the MS4. Compliance with all terms and conditions of a valid NPDES permit authorizing the discharge of stormwater associated with industrial activity, to the extent practicable, shall be deemed compliance with the provisions of this section. These BMPs shall be part of a stormwater management plan (SWMP) as necessary for compliance with requirements of the NPDES permit. (Ord. 2008-O-22, 8-5-2008)

9-3-10: WATERCOURSE PROTECTION:

Every person owning property through which a watercourse passes, or such person's lessee, shall keep and maintain that part of the watercourse within the property free of trash, debris, excessive vegetation, and other obstacles that would pollute, contaminate, or significantly retard the flow of water through the watercourse. In addition, the owner or lessee shall maintain existing privately owned structures within or adjacent to a watercourse, so that such structures will not become a hazard to the use, function, or physical integrity of the watercourse. (Ord. 2008-O-22, 8-5-2008)

9-3-11: NOTIFICATION OF SPILLS:

Notwithstanding other requirements of law, as soon as any person responsible for a facility or operation, or responsible for emergency response for a facility or operation, has information of any known or suspected release of materials which are resulting or may result in illegal discharges or pollutants discharging into stormwater, the storm drain system, or waters of the United States, said person shall take all necessary steps to ensure the discovery, containment, and cleanup of such release. In the event of such a release of hazardous materials, said person shall immediately notify emergency response agencies of the occurrence via emergency dispatch services. In the event of a release of nonhazardous materials, said person shall notify the city in person or by phone or facsimile no later than the next business day. Notifications in person or by phone shall be confirmed by written notice addressed and mailed to the city within three (3) business days of the phone notice. If the discharge of prohibited materials emanates from a commercial or industrial establishment, the owner or operator of such establishment shall also retain an on site written record of the discharge and the actions taken to prevent its recurrence. Such records shall be retained for at least five (5) years. Failure to provide notification of a release as provided in this section is a violation of this chapter. (Ord. 2008-O-22, 8-5-2008)

9-3-12: VIOLATIONS, ENFORCEMENT AND PENALTIES:

- A. Violations: It shall be unlawful for any person to violate any provision or fail to comply with any of the requirements of this chapter. Any person who has violated or continues to violate the provisions of this chapter may be subject to the enforcement actions outlined in this section or may be restrained by injunction or otherwise abated in a manner provided by law. In the event the violation constitutes an immediate danger to public health or public safety, the city is authorized to enter upon the subject private property without giving prior notice, to take any and all measures necessary to abate the violation and/or restore the property. The city is authorized to seek costs of the abatement as outlined in subsection D2 of this section.
- B. Warning Notice: When the city finds that any person has violated, or continues to violate, any provision of this chapter, or any order issued hereunder, the city may, in lieu of a notice of violation, serve upon that person a written warning notice, specifying the particular violation believed to have occurred and requesting the discharger to immediately investigate the matter and to seek a resolution whereby any offending discharge will cease. Investigation and/or resolution of the matter in response to the warning notice in no way relieves the alleged violator of liability for any violations occurring before or after receipt of the warning notice. Nothing in this subsection shall limit the authority of the city to take any action, including emergency action or any other enforcement action, without first issuing a warning notice.
- C. Notice Of Violation; Appeals:
1. Issuance And Contents:
 - a. Whenever the city finds that a person has violated a prohibition or failed to meet a requirement of this chapter, the city may order compliance by written notice of violation to the responsible person. The notice of violation shall contain:
 - (1) The name and address of the alleged violator;
 - (2) The address, when available, or a description of the building, structure or land upon which the violation is occurring, or has occurred;
 - (3) A statement specifying the nature of the violation;
 - (4) A description of the remedial measures necessary to restore compliance with this chapter and a time schedule for the completion of such remedial action;
 - (5) A statement of the penalty or penalties that shall or may be assessed against the person to whom the notice of violation is directed;
 - (6) A statement that the determination of violation may be appealed to the city by filing a written notice of appeal within fourteen (14) days of service of notice of violation; and
 - (7) A statement specifying that, should the violator fail to restore compliance within the established time schedule, the work will be done by a designated governmental agency or a contractor, and the expense thereof shall be charged to the violator.
 - b. Such notice may require, without limitation:

- (1) The performance of monitoring, analyses, and reporting;
 - (2) The elimination of illicit connections or discharges;
 - (3) That violating discharges, practices, or operations shall cease and desist;
 - (4) The abatement or remediation of stormwater pollution or contamination hazards and the restoration of any affected property;
 - (5) Payment of a fine to cover administrative and remediation costs; and
 - (6) The implementation of source control or treatment BMPs.
2. Appeal: Any person receiving a notice of violation may appeal the determination of the city. The notice of appeal must be received within seven (7) days from the date of the notice of violation. Hearing on the appeal before the appropriate authority or his/her designee shall take place within thirty (30) days from the date of receipt of the notice of appeal. The decision of the municipal authority or its designee shall be final.

D. Abatement Of Violations; Costs:

1. Abatement Procedure: If the violation has not been corrected pursuant to the requirements set forth in the notice of violation or, in the event of an appeal, within seven (7) days of the decision of the municipal authority upholding the decision of the city, then representatives of the city shall enter upon the subject private property and are authorized to take any and all measures necessary to abate the violation and/or restore the property. It shall be unlawful for any person, owner or agent in possession of any premises to refuse to allow the government agency or designated contractor to enter upon the premises for the purposes set forth herein.
2. Costs:
 - a. Within thirty (30) days after abatement of the violation, the owner of the property will be notified of the cost of abatement, including administrative costs. The property owner may file a written protest objecting to the amount of the assessment within thirty (30) days. If the amount due is not paid in a timely manner as determined by the decision of the municipal authority or by the expiration of the time in which to file an appeal, the charges shall become a special assessment against the property and shall constitute a lien on the property for the amount of the assessment.
 - b. Any person violating any of the provisions of this chapter shall become liable to the city by reason of such violation. The liability shall be paid in not more than five (5) equal payments. Interest at the rate of six percent (6%) per annum shall be assessed on the balance beginning on day thirty (30) following discovery of the violation.

E. Suspension Of MS4 Access:

1. Emergency Cease And Desist Orders:
 - a. When the city finds that any person has violated, or continues to violate, any provision of this chapter, or any order issued hereunder, or that the person's past violations are likely to recur, and that the person's violation(s) has (have) caused or contributed to an actual or threatened discharge to the MS4 or waters of the United States which reasonably appears to present an

imminent or substantial endangerment to the health or welfare of persons or to the environment, the city may issue an order to the violator directing it immediately to cease and desist all such violations and directing the violator to:

(1) Immediately comply with all ordinance requirements; and

(2) Take such appropriate preventive action as may be needed to properly address a continuing or threatened violation, including immediately halting operations and/or terminating the discharge.

b. Any person notified of an emergency order under this subsection E1 shall immediately comply and stop or eliminate its endangering discharge. In the event of a discharger's failure to immediately comply voluntarily with the emergency order, the city may take such steps as deemed necessary to prevent or minimize harm to the MS4 or waters of the United States, and/or endangerment to persons or to the environment, including immediate termination of a facility's water supply, sewer connection, or other municipal utility services. The city may allow the person to recommence its discharge when it has demonstrated to the satisfaction of the city that the period of endangerment has passed, unless further termination proceedings are initiated against the discharger under this section. A person that is responsible, in whole or in part, for any discharge presenting imminent endangerment shall submit a detailed written statement, describing the causes of the harmful discharge and the measures taken to prevent any future occurrence, to the city within five (5) days of receipt of the emergency order. Issuance of an emergency cease and desist order shall not be a bar against, or a prerequisite for, taking any other action against the violator.

2. Suspension Due To Illicit Discharges In Emergency Situations: The city may, without prior notice, suspend MS4 discharge access to a person when such suspension is necessary to stop an actual or threatened discharge which presents or may present imminent and substantial danger to the environment, or to the health or welfare of persons, or to the MS4 or waters of the United States. If the violator fails to comply with the suspension order issued in an emergency, the city may take such steps as deemed necessary to prevent or minimize damage to the MS4 or waters of the United States, or to minimize danger to persons.

3. Suspension Due To Detection Of Illicit Discharge: Any person discharging to the MS4 in violation of this chapter may have his/her MS4 access terminated if such termination would abate or reduce an illicit discharge. The city will notify a violator of the proposed termination of its MS4 access. The violator may petition the city for a reconsideration and hearing. A person commits an offense if the person reinstates MS4 access to premises terminated pursuant to this subsection without the prior approval of the city.

F. Civil Penalties: In the event the alleged violator fails to take the remedial measures set forth in the notice of violation or otherwise fails to cure the violations described therein within one day, or such greater period as the city shall deem appropriate, after the city has taken one or more of the actions described in this section, the city may impose a penalty not to exceed seven hundred fifty dollars (\$750.00) (depending on the severity of the violation) for each day the violation remains unremedied after receipt of the notice of violation.

G. Criminal Prosecution: Any person that has violated or continues to violate this chapter shall be liable to criminal prosecution to the fullest extent of the law, and shall be subject to a criminal penalty of seven hundred fifty dollars (\$750.00) per violation per day. Each act of violation and each day upon which any violation shall occur shall constitute a separate offense.

- H. Compensatory Action: In lieu of enforcement proceedings, penalties, and remedies authorized by this section, the city may impose upon a violator alternative compensatory actions, such as storm drain stenciling, attendance at compliance workshops, creek cleanup or similar remedial measures.
- I. Violations A Public Nuisance: In addition to the enforcement processes and penalties provided, any condition caused or permitted to exist in violation of any of the provisions of this chapter is a threat to public health, safety, and welfare, and is declared and deemed a nuisance, and may be summarily abated or restored at the violator's expense, and/or a civil action to abate, enjoin, or otherwise compel the cessation of such nuisance may be taken.
- J. Remedies Not Exclusive: The remedies listed in this section are not exclusive of any other remedies available under any applicable federal, state or local law, and it is within the discretion of the city to seek cumulative remedies. The city may recover all attorney fees, court costs and other expenses associated with enforcement of this chapter, including sampling and monitoring expenses. (Ord. 2008-O-22, 8-5-2008)

APPENDIX 4

Physical Indicators of Outfall Visual Inspections

Visual Inspection of Outfalls

Physical Conditions

Observed Conditions	Possible Problems	Possible Causes
Color		
Muddy, Cloudy	Indicates elevated levels of suspended solids giving the water a muddy or cloudy appearance	Erosion is the most common source. Land use associated with soil erosion include mining, farming, construction, and unpaved roads
Dark Reds, Purple, Blues, Blacks	May indicate organic dye pollution	Originating from clothing manufacture or textile mills
Orange-Red	May indicate the presence of copper or iron	Copper can be both a pollutant and naturally occurring
Blue	May indicate the presence of copper which can cause skin irritations and death of fish	Copper is sometimes used as a pesticide in which case an acrid (sharp) odor might also be present
Foam	May indicate the presence of soap or detergent	<u>Excessive</u> foam is usually the result of soap and detergent pollution. Moderate levels of foam can also result from decaying algae, which indicates nutrient pollution.
Multi-colored (oily sheen)	Indicates the presence of oil or gasoline floating on the surface of the water. Oil and gasoline can cause poisoning, internal burning of the gastrointestinal tract and stomach ulcers	Oil and gasoline pollution can be caused by leaks in fuel lines and underground tanks, automotive junk yards, nearby service stations, wastes from boats, or runoff from roads and parking lots.
No Unusual Color	Not necessarily an indicator of clean water	Many pesticides, herbicides, chemicals, and other pollutants are colorless or produce no visible signs of contamination
Odors		
Sulfur (rotten eggs)	May indicate the presence of organic pollution	Possible domestic or industrial waste.
Musty	May indicate presence of organic pollution	Possible sewage discharge, livestock waste, decaying algae, or decomposition of other organic pollution
Harsh	May indicate presence of chemicals	Possible industrial or pesticide pollution
Chlorine	May indicate the presence of over chlorinated effluent	Sewage treatment plant or a chemical industry
No unusual smell	Not necessarily an indicator of clean water	Many pesticides and herbicides from agriculture and forestry runoff are colorless and odorless as are many chemicals discharged by industry
Vegetation		
Excessive plant growth	Overgrown area	Fertilizers from residential or farm areas; nutrients from food wastes
Inhibited plant growth	Dead, dying plants	Industrial discharges; High or Low pH water; scour from high flows (not pollution)

Guidelines for Visual Inspections Of Stormwater Outfalls

Visual inspections for signs of storm water contamination should be performed routinely. Flows and outfalls should be observed during dry periods to determine the presence of any stains, sludge, odors, and other abnormal conditions.

It is also useful for visual inspections to be made at all stormwater outfall locations during the first hour of a storm event, once runoff has reached its maximum flow rate. Inspectors should examine the discharge for the presence of floating and suspended materials, oil and grease, discoloration, turbidity, foam and odor.

Specific Parameters to look for in completing a visual inspection include the following:

Odor: Discharge odors can vary widely. Some may indicate the source of the contamination. Industrial discharges may smell like a particular spoiled product, oil, gasoline, a specific chemical, or a solvent. For example, the decomposition of organic wastes in a discharge will release sulfide compounds creating an intense smell of rotten eggs. Significant sanitary wastewater contributions will also cause pronounced and distinctive odors.

Color: Color may indicate inappropriate discharges especially from industrial sources. Industrial discharges may be any color. Dark colors, such as brown, gray or black are most common. For instance, flow contaminated by meat processing industries is usually a deep reddish brown.

Turbidity: Turbidity is often affected by the degree of gross contamination. Industrial flows can be cloudy or opaque (highly turbid). Sanitary wastewater is also often cloudy in nature. Erosion is the most common source of cloudy water.

Floatable Matter: A contaminated flow may also contain floatable solids or liquids. Identifying floatables can often aid in finding the source of the contamination because these substances are usually direct products or byproducts of a manufacturing process or sanitary system. Examples of floatables are animal fats, spoiled food products, oils, plant parts, solvents, sawdust, foams, packing materials and fuel.

Deposits and Stains: Deposits and stains (residues) are any type of coating that remains after a non-storm water discharge has ceased. Deposits or stains usually are of a dark color and usually cover the area surrounding the storm discharge. They often contain fragments of floatable substances and at times take the form of a crystalline or amorphous powder. An example is the coating of white crystalline powder formed on sewer outfalls by nitrogenous fertilizer wastes.

Vegetation: Stormwater discharges often affect surrounding vegetation. Industrial pollutants can cause a substantial alteration in the chemical composition and pH of the discharge water, which can affect plant growth even when the source of the contamination is intermittent. For example, nutrients from various food product wastes increase plant growth. In contrast, the discharge of chemical dyes and inorganic pigments from textile mills may decrease vegetation as these discharges are often very acidic. Even when the pollution source is gone the vegetation surrounding the discharge will continue to show the effects of the contamination. In order to accurately judge if the vegetation surrounding a discharge is normal, the observer must take into account recent weather conditions as well as the time of year. Increased or inhibited plant growth near storm water outfalls as well as dead and decaying plants is often a sign of pollution. However, it is important to distinguish whether plant damage is caused by contamination or by the physical effects of increased flows, such as scour.

Structural Damage: Structural damage is also a sign of industrial discharge contamination. Cracked or deteriorated concrete or peeling surface paint at an outfall usually indicates the presence of severely contaminated discharges. Contaminants causing this type of damage are usually very acidic or basic and are usually industrial in nature. For instance, discharges from primary metal industries may cause structural damage because their batch dumps are highly acidic.

References:

EPA Stormwater Management Fact Sheet. Visual Inspection

Global Rivers Environmental Education Network

APPENDIX 5

Outfall Inspection Checklist

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed:		Outfall ID:	
Today's date:		Time (Military):	
Investigators:		Form completed by:	
Temperature (°F):	Rainfall (in.):	Last 24 hours:	Last 48 hours:
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		Known Industries: _____	
Notes (e.g., origin of outfall, if known):			

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input type="checkbox"/> Circular <input type="checkbox"/> Single <input type="checkbox"/> Elliptical <input type="checkbox"/> Double <input type="checkbox"/> Box <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: _____	In Water: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER	RESULT	UNIT	EQUIPMENT	
<input type="checkbox"/> Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	Tape measure
	Flow width	_____', _____"	Ft, In	Tape measure
	Measured length	_____', _____"	Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature		°F	Thermometer	
pH		pH Units	Test strip/Probe	
Ammonia		mg/L	Test strip	

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? Yes No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 – Faint	<input type="checkbox"/> 2 – Easily detected	<input type="checkbox"/> 3 – Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 – Faint colors in sample bottle	<input type="checkbox"/> 2 – Clearly visible in sample bottle	<input type="checkbox"/> 3 – Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 – Slight cloudiness	<input type="checkbox"/> 2 – Cloudy	<input type="checkbox"/> 3 – Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 – Few/slight; origin not obvious	<input type="checkbox"/> 2 – Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 3 – Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? Yes No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	

Section 6: Overall Outfall Characterization

<input type="checkbox"/> Unlikely <input type="checkbox"/> Potential (presence of two or more indicators) <input type="checkbox"/> Suspect (one or more indicators with a severity of 3) <input type="checkbox"/> Obvious

Section 7: Data Collection

1. Sample for the lab?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
2. If yes, collected from:	<input type="checkbox"/> Flow	<input type="checkbox"/> Pool	
3. Intermittent flow trap set?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	If Yes, type: <input type="checkbox"/> OBM <input type="checkbox"/> Caulk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

APPENDIX 6

Completed Outfall Inspection Checklists and Photographs

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed: <u>Lake Michigan</u>		Outfall ID: <u>1</u>	
Today's date: <u>3/5/18</u>		Time (Military): <u>12:15pm</u>	
Investigators: <u>MJB</u>		Form completed by: <u>MJB</u>	
Temperature (°F):	Rainfall (in.): Last 24 hours: <u>0</u> Last 48 hours: <u>0</u>		
Latitude: <u>42.2137</u>	Longitude: <u>-87.8108</u>	GPS Unit:	GPS LMK #:
Camera:	Photo #s:		
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial	<input type="checkbox"/> Open Space		
<input type="checkbox"/> Ultra-Urban Residential	<input type="checkbox"/> Institutional		
<input checked="" type="checkbox"/> Suburban Residential	Other: _____		
<input type="checkbox"/> Commercial	Known Industries: _____		
Notes (e.g., origin of outfall, if known):			

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input checked="" type="checkbox"/> Closed Pipe	<input checked="" type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input checked="" type="checkbox"/> Single <input type="checkbox"/> Elliptical <input type="checkbox"/> Double <input type="checkbox"/> Box <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>24"</u>	In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input checked="" type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER	RESULT	UNIT	EQUIPMENT	
<input type="checkbox"/> Flow #1	Volume	Liter	Bottle	
	Time to fill	Sec		
<input type="checkbox"/> Flow #2	Flow depth	In	Tape measure	
	Flow width	____' ____"	Tape measure	
	Measured length	____' ____"	Tape measure	
	Time of travel		Stop watch	
Temperature		°F	Thermometer	
pH		pH Units	Test strip/Probe	
Ammonia		mg/L	Test strip	

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? Yes No (If No, Skip to Section 5)

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
			1 - Faint	2 - Easily detected	3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? Yes No (If No, Skip to Section 6)

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paini <input type="checkbox"/> Other:	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	

Section 6: Overall Outfall Characterization

Unlikely Potential (presence of two or more indicators) Suspect (one or more indicators with a severity of 3) Obvious

Section 7: Data Collection

1. Sample for the lab?	<input type="checkbox"/> Yes <input type="checkbox"/> No
2. If yes, collected from:	<input type="checkbox"/> Flow <input type="checkbox"/> Pool
3. Intermittent flow trap set?	<input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, type: <input type="checkbox"/> OBM <input type="checkbox"/> Caulk dam

Section 8: Any Non-Illlicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?



OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed: <u>Lake Michigan</u>		Outfall ID: <u>82</u>	
Today's date: <u>3/5/18</u>		Time (Military): <u>12:00 PM</u>	
Investigators: <u>MJB</u>		Form completed by: <u>MJB</u>	
Temperature (°F): <u>30</u>	Rainfall (in.): Last 24 hours: <u>0</u> Last 48 hours: <u>0</u>		
Latitude: <u>42.2154</u>	Longitude: <u>-87.8115</u>	GPS Unit:	GPS LMK #:
Camera: <u>Iphone 6</u>		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input checked="" type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		Known Industries: _____	
Notes (e.g., origin of outfall, if known):			

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input checked="" type="checkbox"/> Closed Pipe	<input checked="" type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input checked="" type="checkbox"/> Single <input type="checkbox"/> Elliptical <input type="checkbox"/> Double <input type="checkbox"/> Box <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>15"</u>	In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		<i>If No, Skip to Section 5</i>	
Flow Description (If present)	<input checked="" type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER	RESULT	UNIT	EQUIPMENT	
<input type="checkbox"/> Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	Tape measure
	Flow width	_____ ' _____"	Ft, In	Tape measure
	Measured length	_____ ' _____"	Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature		°F	Thermometer	
pH		pH Units	Test strip/Probe	
Ammonia		mg/L	Test strip	

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? Yes No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Green <input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Gray <input type="checkbox"/> Red <input type="checkbox"/> Yellow <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Suds <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? Yes No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Corrosion	<input type="checkbox"/> Peeling Paint
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Suds <input type="checkbox"/> Colors <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	

Section 6: Overall Outfall Characterization

Unlikely Potential (presence of two or more indicators) Suspect (one or more indicators with a severity of 3) Obvious

Section 7: Data Collection

1. Sample for the lab? Yes No

2. If yes, collected from: Flow Pool

3. Intermittent flow trap set? Yes No If Yes, type: OBM Caulk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?



OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed: <u>Lake Michigan</u>		Outfall ID: <u>3</u>	
Today's date: <u>3/5/18</u>		Time (Military): <u>12:20 pm</u>	
Investigators: <u>MJB</u>		Form completed by: <u>MJB</u>	
Temperature (°F):		Rainfall (in.): Last 24 hours: <u>0</u> Last 48 hours: <u>0</u>	
Latitude: <u>42.2145</u>	Longitude: <u>-87.8097</u>	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input checked="" type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		Known Industries: _____	
Notes (e.g., origin of outfall, if known):			

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input checked="" type="checkbox"/> Closed Pipe	<input checked="" type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input checked="" type="checkbox"/> Single <input type="checkbox"/> Elliptical <input type="checkbox"/> Double <input type="checkbox"/> Box <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>12"</u>	In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER	RESULT	UNIT	EQUIPMENT	
<input type="checkbox"/> Flow #1	Volume	Liter	Bottle	
	Time to fill	Sec		
<input type="checkbox"/> Flow #2	Flow depth	In	Tape measure	
	Flow width	____' ____"	Tape measure	
	Measured length	____' ____"	Tape measure	
	Time of travel		Stop watch	
Temperature		°F	Thermometer	
pH		pH Units	Test strip/Probe	
Ammonia		mg/L	Test strip	

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? Yes No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? Yes No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	

Section 6: Overall Outfall Characterization

Unlikely Potential (presence of two or more indicators) Suspect (one or more indicators with a severity of 3) Obvious

Section 7: Data Collection

1. Sample for the lab? Yes No

2. If yes, collected from: Flow Pool

3. Intermittent flow trap set? Yes No If Yes, type: OBM Caulk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?



OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed: <u>Lake Michigan</u>		Outfall ID: <u>4</u>	
Today's date: <u>3/5/18</u>		Time (Military): <u>12:10 PM</u>	
Investigators: <u>MJB</u>		Form completed by: <u>MJB</u>	
Temperature (°F): <u>30</u>	Rainfall (in.): Last 24 hours: <u>0</u> Last 48 hours: <u>0</u>		
Latitude: <u>42.215</u>	Longitude: <u>-87.8133</u>	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input checked="" type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		Known Industries: _____	
Notes (e.g., origin of outfall, if known):			

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED	
<input checked="" type="checkbox"/> Closed Pipe	<input checked="" type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>12"</u> Depth: _____ Top Width: _____ Bottom Width: _____	In Water: <input type="checkbox"/> No <input checked="" type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____		
<input type="checkbox"/> In-Stream	(applicable when collecting samples)				
Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If No, Skip to Section 5</i>				
Flow Description (If present)	<input type="checkbox"/> Trickle <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER	RESULT	UNIT	EQUIPMENT	
<input type="checkbox"/> Flow #1	Volume	Liter	Bottle	
	Time to fill	Sec		
<input type="checkbox"/> Flow #2	Flow depth	In	Tape measure	
	Flow width	____' ____"	Tape measure	
	Measured length	____' ____"	Tape measure	
	Time of travel	S	Stop watch	
Temperature		°F	Thermometer	
pH		pH Units	Test strip/Probe	
Ammonia		mg/L	Test strip	

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? Yes No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
			1 - Faint	2 - Easily detected	3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? Yes No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	

Section 6: Overall Outfall Characterization

Unlikely Potential (presence of two or more indicators) Suspect (one or more indicators with a severity of 3) Obvious

Section 7: Data Collection

1. Sample for the lab?	<input type="checkbox"/> Yes <input type="checkbox"/> No
2. If yes, collected from:	<input type="checkbox"/> Flow <input type="checkbox"/> Pool
3. Intermittent flow trap set?	<input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, type: <input type="checkbox"/> OBM <input type="checkbox"/> Caulk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?



OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed: <u>Lake Michigan</u>		Outfall ID: <u>5</u>	
Today's date: <u>3/5/18</u>		Time (Military): <u>12:05pm</u>	
Investigators: <u>MJB</u>		Form completed by: <u>MJB</u>	
Temperature (°F): <u>30</u>	Rainfall (in.): Last 24 hours: <u>0</u> Last 48 hours: <u>0</u>		
Latitude: <u>42.2151</u>	Longitude: <u>-87.8129</u>	GPS Unit:	GPS LMK #:
Camera: <u>Iphone 6</u>		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input checked="" type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		Known Industries: _____	
Notes (e.g., origin of outfall, if known):			

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input checked="" type="checkbox"/> Closed Pipe	<input checked="" type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>30"</u> In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input checked="" type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER	RESULT	UNIT	EQUIPMENT	
<input type="checkbox"/> Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	Tape measure
	Flow width	____' ____"	Ft, In	Tape measure
	Measured length	____' ____"	Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature		°F	Thermometer	
pH		pH Units	Test strip/Probe	
Ammonia		mg/L	Test strip	

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? Yes No (If No, Skip to Section 5)

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
			1 - Faint	2 - Easily detected	3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Green <input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Gray <input type="checkbox"/> Red <input type="checkbox"/> Yellow <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Suds <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? Yes No (If No, Skip to Section 6)

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Corrosion <input type="checkbox"/> Peeling Paint	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Suds <input type="checkbox"/> Colors <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	

Section 6: Overall Outfall Characterization

Unlikely Potential (presence of two or more indicators) Suspect (one or more indicators with a severity of 3) Obvious

Section 7: Data Collection

- Sample for the lab? Yes No
- If yes, collected from: Flow Pool
- Intermittent flow trap set? Yes No If Yes, type: OBM Caulk dam

Section 8: Any Non-Ilicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?



APPENDIX 7

Outfall Action Items

APPENDIX 8

Contributing Facilities List and Location Map

Storm Water Notices of Intent Information for Construction and Industrial Activities

Home Construction Quick Search

Search Options

*Screen Tip: First, check a search option. Next, enter the required search criteria depending on the option selected, then click "Perform Search". There are additional links available next to the record in the results grid below to view additional details about the NOI. Simply click on the desired link to view each respective area. For example, Uploaded SWPPP files, if available, can be found by clicking the "View Files" link next to the corresponding NOI record (if there are no files to view then the column is blank). Permits with a "In-Progress" Status or with NO ILR# assigned will not display as a result after clicking perform search from this search page since those permits are not complete or have not been reviewed by IEPA.

<input type="checkbox"/> Permits By Status
<input type="checkbox"/> Find Permits By Owner
<input type="checkbox"/> Find Permits By Facility
<input checked="" type="checkbox"/> Find Permits By Facility City
<input type="checkbox"/> Find Permits By County

<input type="checkbox"/> Find Permits By Facility Address
<input type="checkbox"/> Find Permits By Contractor
<input type="checkbox"/> Find Permits By NPDES Number
<input type="checkbox"/> Find Permits By Permit Id

*Screen Tip: You may sort on column headings that are underlined. Your database field you are sorting on and the current direction of the sort is listed below. To change directions click the column again. Each time you click the column, the grid will be resorted in the opposite direction.

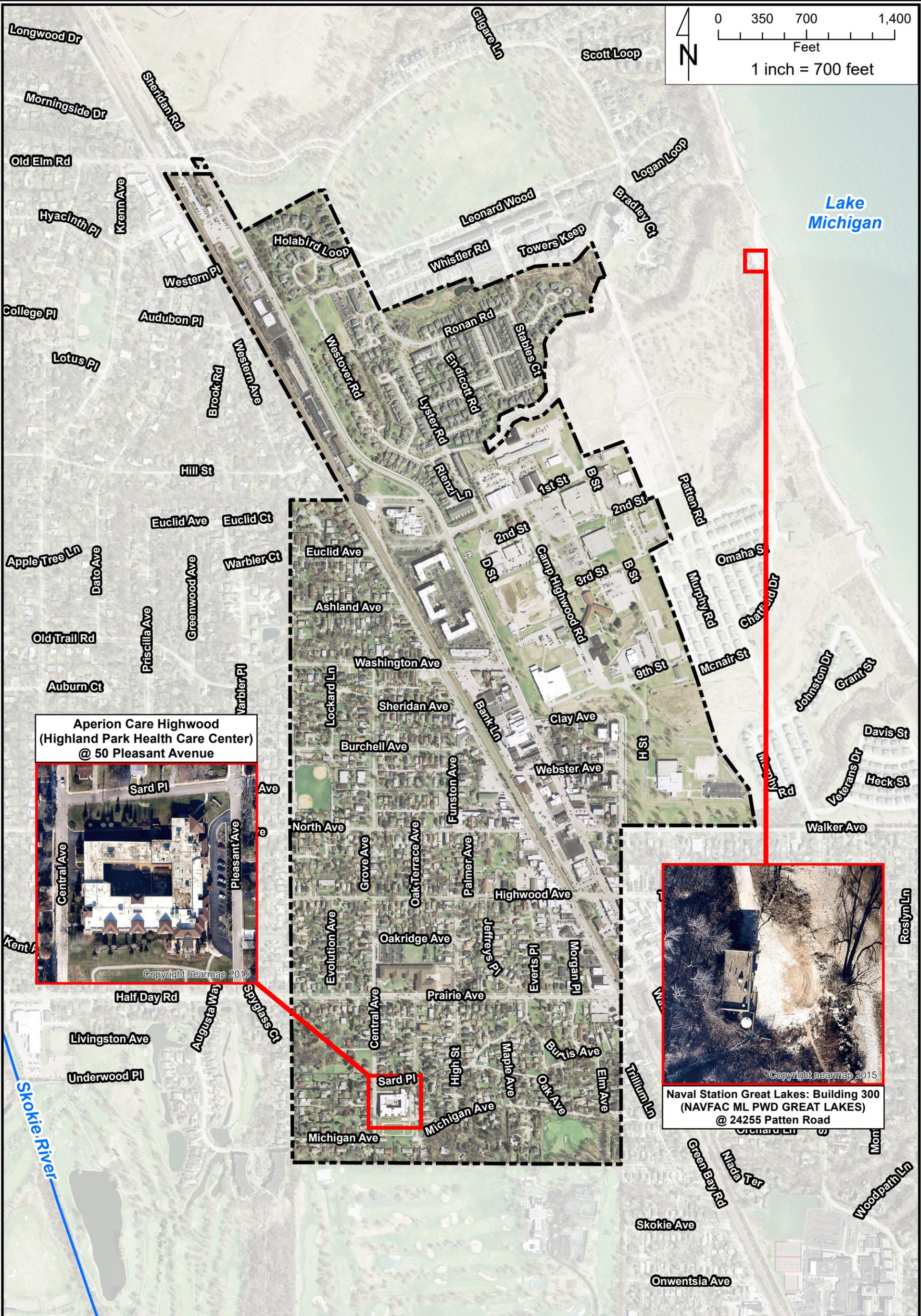
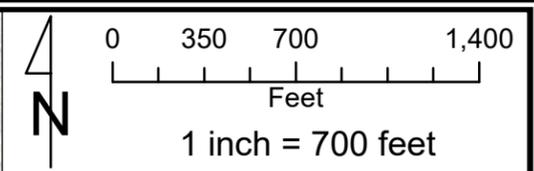
Search Criteria Used:

Current Sort: Sort Direction:

<u>NPDES #</u>	<u>Facility Name</u>	<u>Facility City</u>	<u>Facility Address</u>	<u>Owner Name</u>	<u>Phone Number</u>	<u>County</u>	<u>Date Received</u>	<u>More Info.</u>	<u>Uploaded Files</u>
ILR10Z288	BUILDING 300 REPLACE MAIN SEWAGE LIFT STATION	HIGHWOOD	24255 PATTEN RD	NAVFAC ML PWD GREAT LAKES	847-688- 2121	LAKE	09-20-2017	More Info.	View Files
ILR10L100	HIGHLAND PARK HEALTH CARE CENTER	HIGHWOOD	50 PLEASANT AVE	HIGHLAND PARK HEALTH CARE CENTER	847-432- 9142	LAKE	01-12-2009	More Info.	View Files

[Reset Search](#)

[Contact Us](#)



Aperion Care Highwood
(Highland Park Health Care Center)
@ 50 Pleasant Avenue



Naval Station Great Lakes: Building 300
(NAVFAC ML PWD GREAT LAKES)
@ 24255 Patten Road



Christopher B. Burke Engineering, Ltd.
9575 West Higgins Road, Suite 600
Rosemont, IL 60018
(847) 823-0500 / FAX (847) 823-0520

CLIENT	CITY OF HIGHWOOD	PROJECT NO.	170196.A1706
TITLE	CONTRIBUTING FACILITIES LOCATION MAP		DATE 01/02/18
			EXHIBIT



APPENDIX 9

IDDE Sample Training Presentation

NPDES Phase II MS4 Compliance Seminar



Travis M. Parry, CFM, CMS4S
Christopher B. Burke Engineering, Ltd.

What is NDPES?

National Pollution Discharge Elimination System

Permit program controls water pollution by regulating point sources that discharge pollutants into waters of the United States:

- Point sources are discrete conveyances such as pipes or man-made ditches
- Not for individual homes that are connected to a municipal system or use a septic system
- Industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters.

What is an MS4?

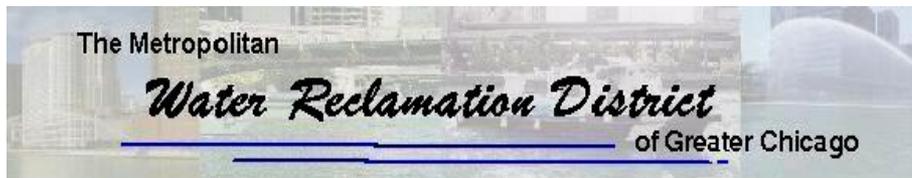
Municipal Separate Storm Sewer System

A conveyance or system of conveyance owned by a state, city, or other public entity that discharges to waters of the United States:

- Designed or used for collecting storm water;
- Is not a combined sewer; and
- Is not part of a Publicly Owned Treatment Works (POTW)

Other MS4 - Examples

- Highway Departments
- Universities
- Local Sewer Districts
- Hospitals
- Military Bases
- Prisons
- Airports



Aspects of the MS4

- Not Always A System of Storm Sewers
- MS4's May Include:
 - Ditches
 - Curbs
 - Gutters
 - Streams
 - Wetlands
 - Drainage Swales
 - Any Storm Water Conveyance

Best Management Practices

- A BMP is a method, device, or practice for removing, reducing, or preventing pollution in stormwater runoff from reaching receiving waters.
- Examples:
 - Construction – Silt Fence
 - Municipal – Street Sweeping
 - Industrial – Secondary Containment

Why Are We Here?

- Required to develop a SWMP comprised of BMPs and measurable goals for each of the following six minimum control measures:
 1. Public education and outreach on storm water impacts
 2. Public involvement and participation
 3. Illicit discharge detection and elimination
 4. Construction site storm water runoff control
 5. Post construction storm water management in new development and redevelopment
 6. Pollution prevention/good housekeeping for municipal operations

Why Are We Here?

Village must regulate all discharges to the MS4

- **Construction Sites**
- **Commercial Uses**
- **Industrial Uses**
- **Municipal Facilities**
- **Private Residences**

Illicit Discharges

- Any discharge to the MS4 that is not composed entirely of stormwater

Outfall Inspections

1. Background Data
2. Outfall Description
3. Quantitative Characterization
4. Physical Indicators – Flowing Only
5. Physical Indicators – Both
6. Overall Outfall Characterization
7. Data Collection
8. Other Concerns

Outfall Inspections

I. Background Data

- a) Personnel
- b) Weather (temp, rainfall, etc)
- c) Location
- d) Land Use

Outfall Inspections

2. Outfall Descriptions

- a) Type (open, closed)
- b) Material (RPC, PVC, etc)
- c) Shape
- d) Size
- e) Submerged

Outfall Inspections



Outfall Inspections

3. Quantitative Characterization

- a) Flow Parameter (volume, depth, etc)
- b) Result
- c) Unit
- d) Equipment

Outfall Inspections

4. Physical Indicators - Flowing

- a) Indicator (odor, color, etc)
- b) Presence
- c) Description (sewage, sulfur, etc)
- d) Severity

Outfall Inspections



Outfall Inspections

5. Physical Indicators - Both

- a) Indicator (Damage, stains, etc)
- b) Presence
- c) Description (cracking, oily, etc)
- d) Comments

Outfall Inspections



Outfall Inspections

6. Overall Outfall Characterization

- a) Unlikely
- b) Potential
- c) Suspect
- d) Obvious

Outfall Inspections

7. Overall Outfall Characterization

- a) Sample collected
- b) Where

8. Non Illicit Discharge Concerns

- a) Trash
- b) Erosion
- c) Etc.

Outfall Inspections



Outfall Inspections

Section 4: Physical Indicators (Flowing Outfalls Only)					
INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Sulfide <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Laundry <input type="checkbox"/> Other:	<input type="checkbox"/> 1-Faint	<input type="checkbox"/> 2 – Easily detected	<input type="checkbox"/> 3 – Noticeable from a distance
Color (color chart)	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange/Red <input type="checkbox"/> Multi-Color <input type="checkbox"/> Other:	<input type="checkbox"/> 1-Faint colors in sample bottle	<input type="checkbox"/> 2 – Clearly visible in sample bottle	<input type="checkbox"/> 3 – Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1-Slight cloudiness	<input type="checkbox"/> 2 – Cloudy	<input type="checkbox"/> 3 – Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Suds and Foam <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Grease <input type="checkbox"/> Other:	<input type="checkbox"/> 1-Few/slight; origin not obvious	<input type="checkbox"/> 2 – Some; indications of origin	<input type="checkbox"/> 3 - Some; origin clear
Do physical indicators (flowing) suggest an illicit discharge is present (Y/N):					
Section 5: On-Site Sampling / Testing (Flowing Outfalls Only)					
PARAMETER	RESULT	ACCEPTABLE RANGE	WITHIN RANGE (Y/N)	EQUIPMENT	
Temperature		NA	NA	Thermometer	
pH		6 – 9		5-in-1 Test Strip	
Ammonia		<3 mg/L April – Oct < 8 mg/L Nov - March		Test Strip	
Free Chlorine		NA	NA	5-in-1 Test Strip	
Total Chlorine		< 0.05 mg/L		5-in-1 Test Strip	
Phenols		< 0.1mg/L		Test Kit	
Detergents as Surfactants		> 0.25 mg/L residential > 5 mg/L non-residential		Test Kit	
Copper		<0.025 mg/L		Test Strip	
Alkalinity		NA	NA	5-in-1 Test Strip	
Hardness		NA	NA	5-in-1 Test Strip	
Sample Location					
(Note NA values used for future tracing procedures)					
Section 6: Data Collection for Lab Testing (see flow chart)					
1. Sample for the lab? <input type="checkbox"/> Yes <input type="checkbox"/> No					
2. If yes, collected from: <input type="checkbox"/> Flow <input type="checkbox"/> Pool					
PARAMETER	RESULT (from lab)	ACCEPTABLE RANGE	WITHIN RANGE (Y/N)		
Fecal Coliform		400 per 100 mL			
Flouride		0.6 mg/l			
Potassium		Ammonium/Potassium ratio or > 20mg/l			
*note label sample with outfall number					
Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?					

Illicit Discharges - Examples

- Car Wash



Illicit Discharges

- Paint spills



Illicit Discharges

- Sanitary Sewer Overflows



Illicit Discharges

- Grass Clippings/Yard Waste



Illicit Discharges

- Motor Oil



Illicit Discharges

- Leaking Dumpster



Illicit Discharges

- Detergents



Illicit Discharges

- Animal Waste



Illicit Discharges

- Leaking Drums



Illicit Discharges

- Suds



Illicit Discharges

- Oil and Grease



Illicit Discharges

Sanitary Sewer Waste

- Gray Water



Illicit Discharges

Sanitary Sewer Waste

- Foam



Illicit Discharges

Sanitary Sewer Waste

- Staining



Illicit Discharges

Sanitary Sewer Waste

- Failing Septic System or cheater pipes



Illicit Discharges

- Petroleum Sheen



Illicit Discharges

- Spills



Illicit Discharges

Trash and Debris



Illicit Discharges Industrial

- Chemical Odor



Illicit Discharge: Outfalls



Illicit Discharge: Oil Sheen



Illicit Discharges Industrial

- Discolored water



Illicit Discharges

Agricultural Runoff

- Excessive Vegetation



Illicit Discharges Fertilizers

- Blue Green Algae



Illicit Discharges or Naturally Occurring?

- Fish kills



Illicit Discharges or Naturally Occurring?

- Foam or Suds



Illicit Discharges or Naturally Occurring?

- Staining and Discoloration



Illicit Discharges or Naturally Occurring?

- Algae Blooms



Illicit Discharges or Naturally Occurring?

- Sheens and Deposits



Illicit Discharges - Exemptions

- water line flushing
- landscape irrigation
- diverted stream flows
- rising ground waters
- uncontaminated ground water infiltration
- discharges from potable water sources
- foundation drains
- air conditioning condensation
- irrigation water
- springs
- water from crawl space pumps
- footing drains
- lawn watering
- individual residential car washing
- flows from riparian habitats and wetlands

Construction Site Runoff Control – During and Post

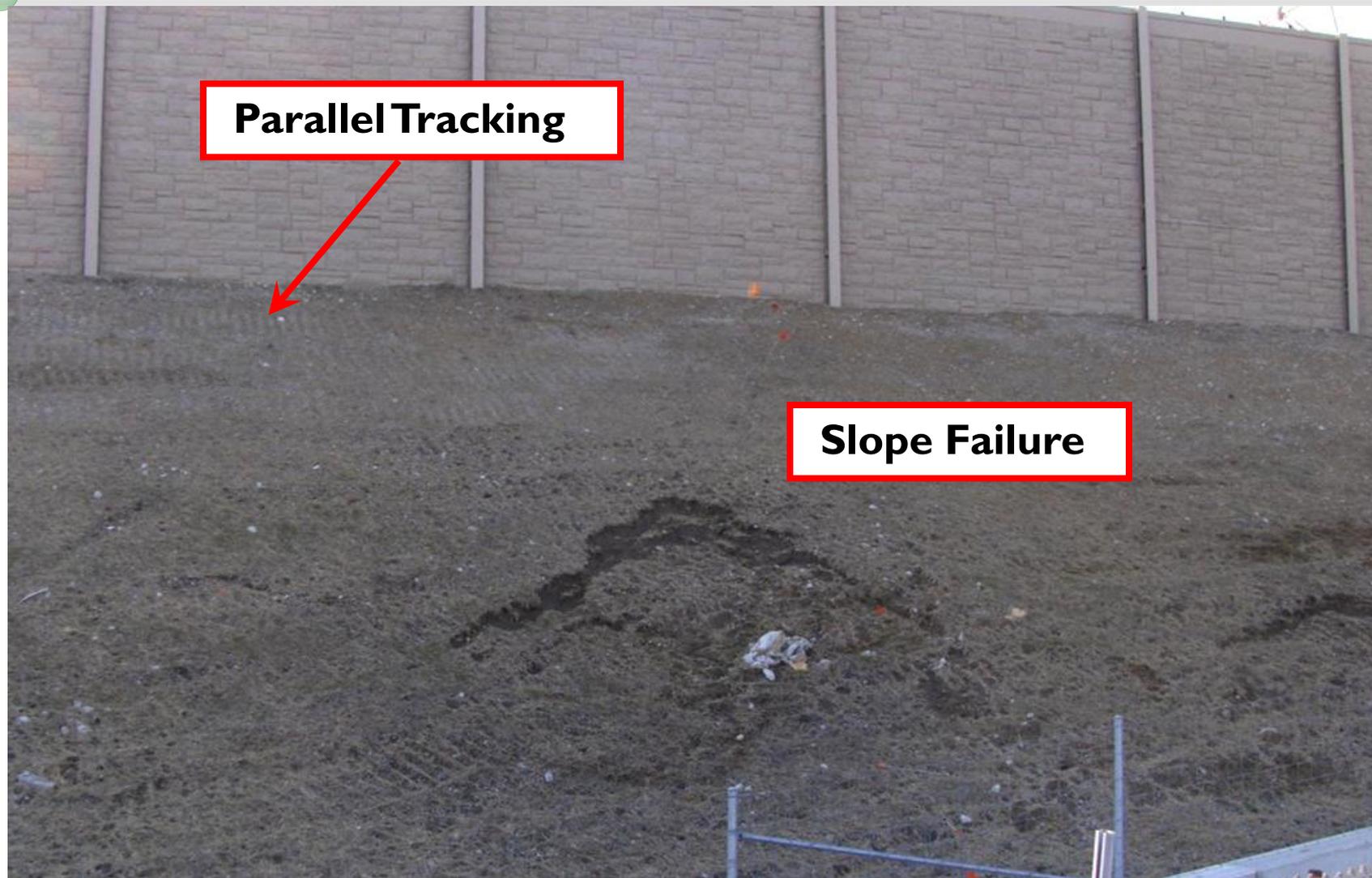
- A BMP is a method, device, or practice for removing, reducing, or preventing pollution in stormwater runoff from reaching receiving waters.
- Effectiveness of BMP's
 - Selection
 - Installation
 - Maintenance

Erosion, Sediment, & Sedimentation



- Erosion is the displacement of soil
- Sediment is the soil once becomes displaced
- Sedimentation occurs when sediment is deposited

Stabilization Practice: Straw Mulch



Stabilization Practice: Hydro-Mulch



Stabilization Practice: Temporary Seeding



Stabilization Practice: Bonded Fiber Matrix



Dust Control: Violation

- **Can trigger a regulatory inspection**
- Spraying water and tilling are simple ways to control dust



Erosion Control Blanket



Erosion Control Blanket



Silt Fence

- Tributary area to fence is appropriate
- Trenched into ground
- Backfilled
- Stake spacing w/ lath
- Wire Backing (if required)
- Not for Concentrated Flow
- **NOT A FIX ALL!**



Silt Fence Indicating an Erosion Problem...



Silt Fence Failure: Use Alternative



Wattles to Replace Straw Bales

- Can be used in different applications
 - Inlet Protection
 - Ditch Checks
 - Bank Stabilization
 - Perimeter Control



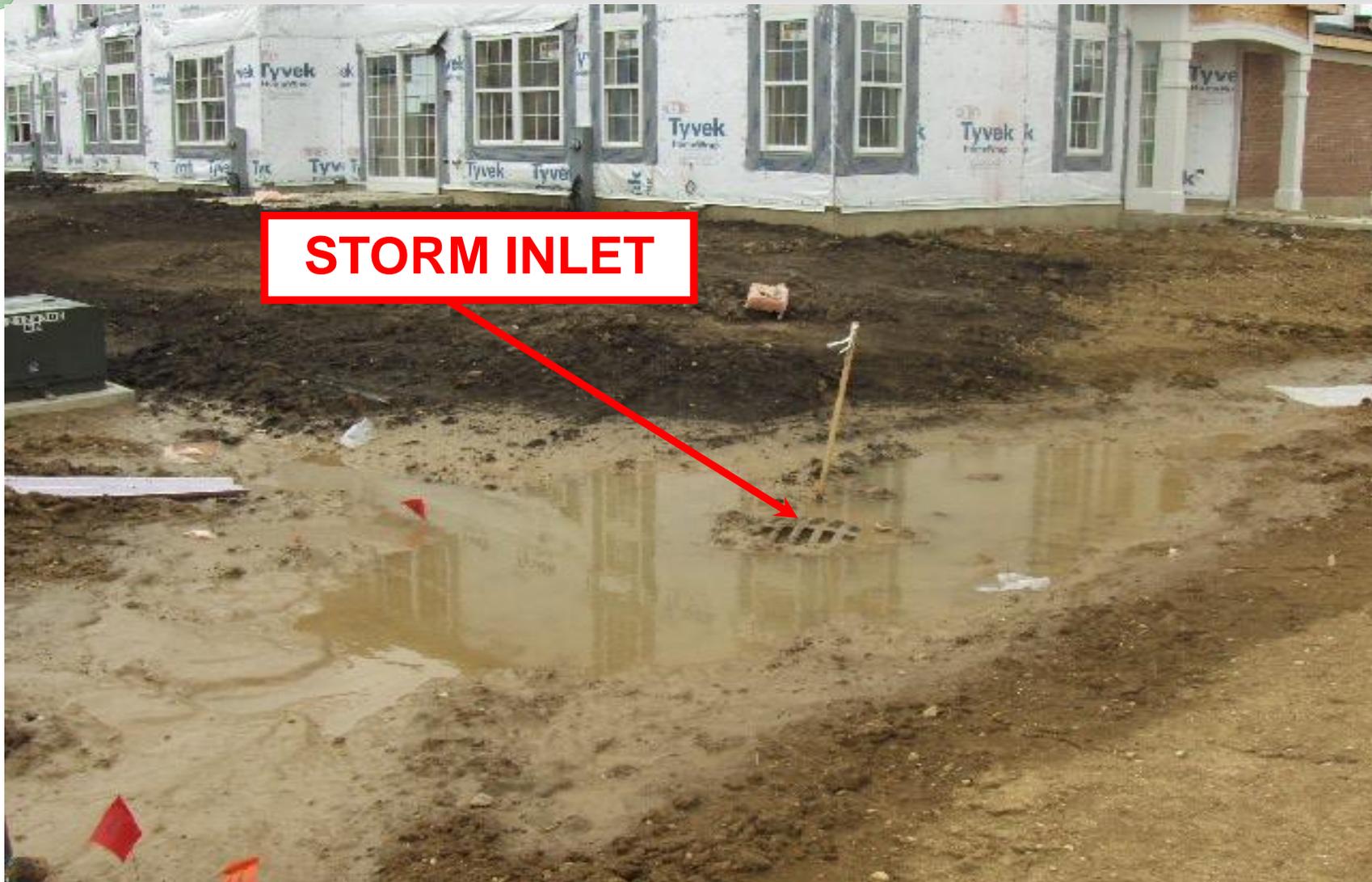
Wattles to Replace Straw Bales



Inlet Protection

- A variety of inlet protecting BMPs exist. Choose the appropriate BMP for each situation.
- Types of inlet protection include:
 - Filter fabric (Woven Monofilament)
 - Wattles
 - Pre-fabricated Devices
 - Filter Baskets
 - Silt fence
 - Stone
 - Vegetated Buffers
 - Any combination of the above

Inlet Protection



Inlet Protection



Result of Failing to Maintain Inlet Protection

Illicit Discharge



Inlet Protection: Wattles



Prefabricated: Long Term and High Flow



06/23/2007

Prefabricated: Long Term and High Flow



Street Inlet Protection



Street Inlets



Street Inlet Protection: Filter Fabric

- Woven Monofilament
- Low flow inlets
- Wrap around back
- Staple
- Don't puncture
 - May cause flooding
- Require Maintenance



Filter Basket



Filter Basket Cleanout



Stone Inlet Protection



Existing Vegetation Undisturbed

Vegetated Buffers

- Establish dense vegetation
- Width is determined by drainage area
- Combine with other BMPs
- Works well along paved roads/right of ways
- Not intended for concentrated flows

Should have been stabilized...



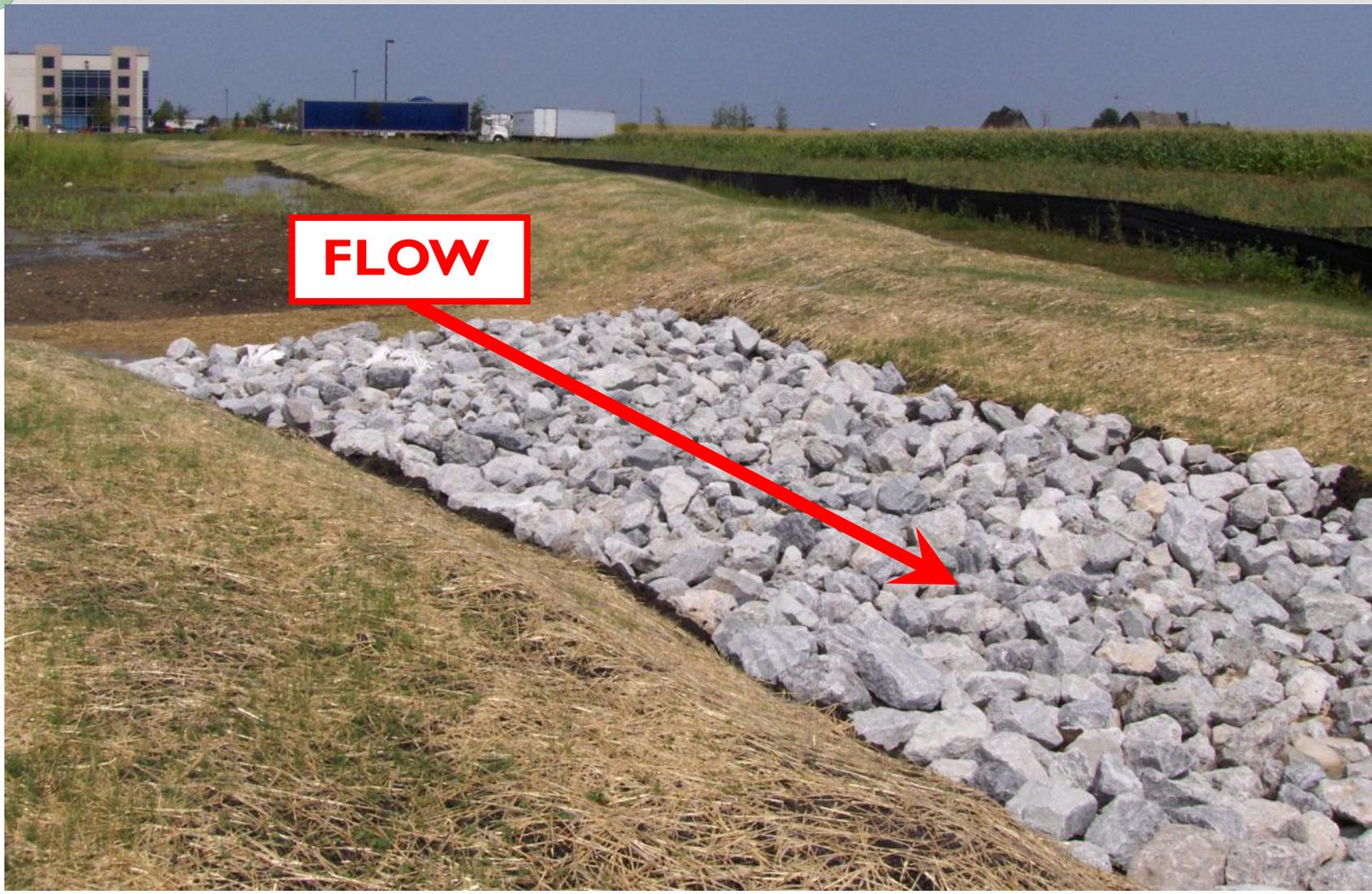
Not So Vegetated Buffer



Diversions



Diversion with Riprap Swale



Silt Dike Versatility

- Bale Alternative
- Durable
- Used in Direct Flows
- Perimeter Control
- Diversions
- Reusable



Check Dams...Looks Good?



Check Dams... Take Your Mulligan



Basin Management: Construction Phasing...Looks Good?



Basin Management: Construction Phasing



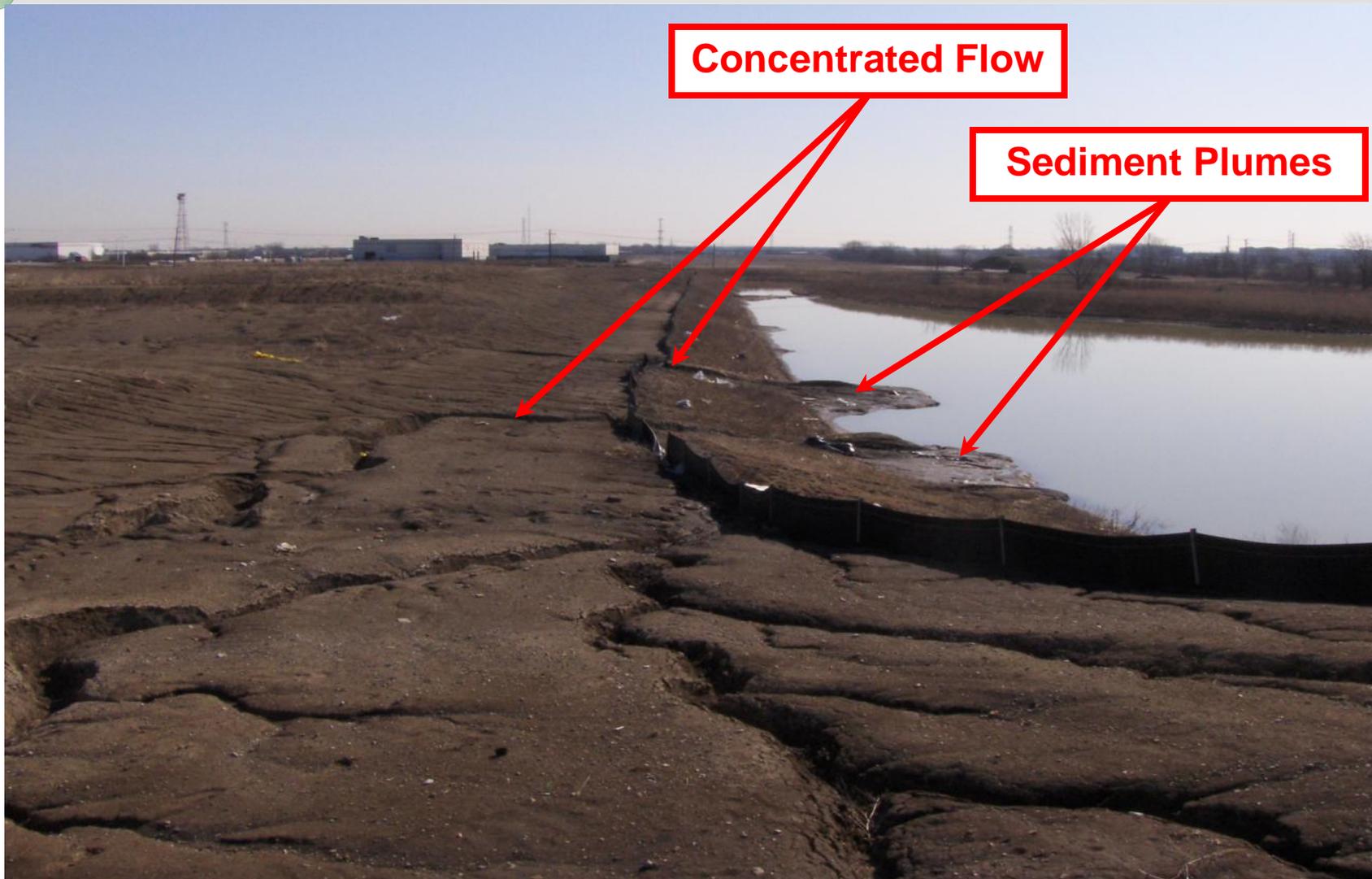
Stabilize Areas Upslope of Basins



Stabilize Areas Upslope of Basins



Basin Management



Control Overland Flow



Riprap Swale for Overland Flow



Slope Drains



Outlet Protection: Rip Rap



Sedimentation of Waterway



Riprap Outlet Protection

- Apron Sizing
- Stone Sizing
- Evidence of erosion, scour, slumping, etc?
- Sediment deposited on stone...check inlet protection?



Proper Outlet Protection



Sediment Traps/Basins



Notch for Overflow

Street Sweeping

- Streets are scraped, and swept to maintain sediment free roadways
- Curb ramps are constructed of non-erodible materials
- Removes dirt and debris before entering a stormwater management facility.
 - Reduces catch basin maintenance.



Dirt Ramps



Construction Entrance / Exit

- Install at:
 - Concrete Washout
 - Soil Stock Piles
 - Construction Roads
- Proper size
- Correct materials used to construct
 - **DO NOT CAP WITH GRAVEL**
 - **Fabric Installed**
- Remove accumulated sediment, install stone



Construction Entrance / Exit



Internal Access Location

Concrete/Construction Washouts



Concrete/Construction Washouts



Storm Inlet

Concrete/Construction Washouts

- Make the drivers aware
- Washout area is located at least **50'** from storm drains or drainageways
- Stone driveways don't count...

...Didn't Make the 50' Mark



Concrete/Construction Washouts



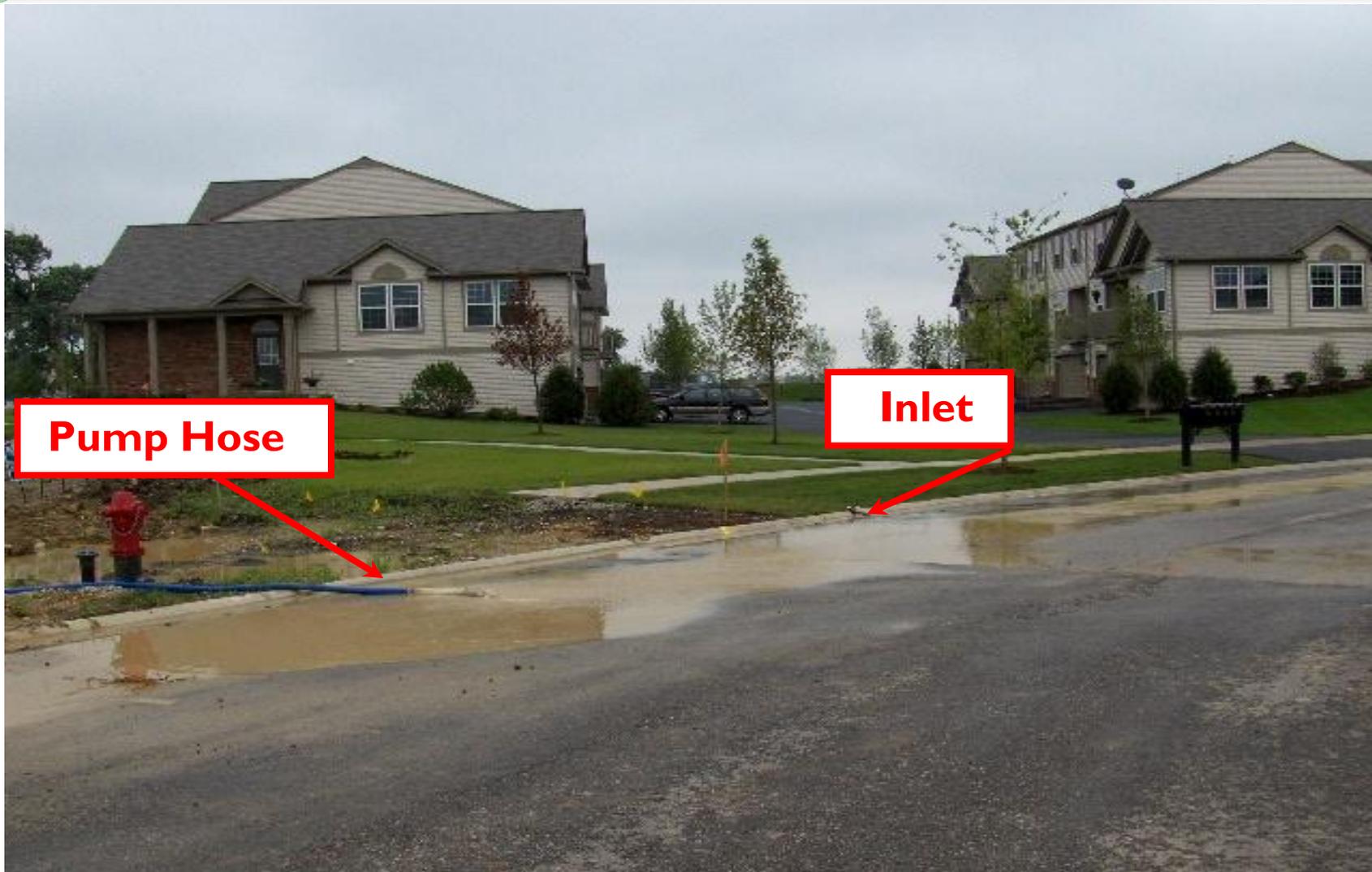
Concrete/Construction Washouts



Construction Washout



De-Watering Illicit Discharge



Dewatering...Floating the Pump



Anti-Freeze Jugs Are Not EPA Approved

Dewatering...Floating the Pump



Filter Bag...Onsite



Filter Bag...At Capacity



Filter Bag...Fine Clays



Filter Bag...Fine Clays



Sediment Discharge into Buffer

Dewatering Activities



Dewatering Activities



Illicit Discharge From Pumping



Non-Storm Water Runoff

Hydrant Flushing



Non-Storm Water Runoff

Water Main Flushing



Unprotected Inlet



Next Stop... Violationville



Illicit Discharge



Pollutant Storage

- Store possible pollutants in an upland area, away from inlets
- Have MSDS onsite
- Include storage area in SWPPP
- Document possible pollutants in SWPPP



Pollutant Storage

Designate chemical storage area(s) onsite to store:

- Fuel Trucks
- Fuel Tanks
- Form Oil
- Hydraulic Oil
- Tar Buckets
- Port-a-Potty's



Pollutant Storage Violation



Pollutant Storage Violation



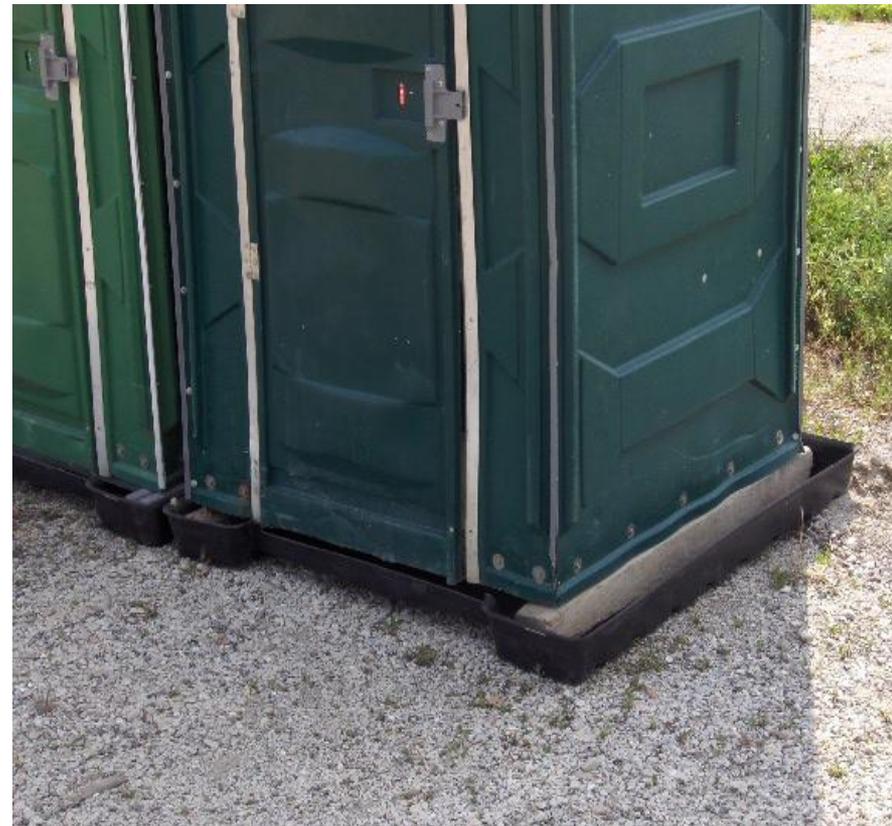
Pollutant Storage Example



Port-A-Potty



Pollutant Storage



Secondary Containment

Soil Stockpiles

- Stockpiles are surrounded by silt fence
- Stockpiles are stabilized
- Stabilized Entrances
- Location!



Stockpiles Are More Than Soil



Storm Inlet

Pollution Prevention and Good Housekeeping

- Procedures or activities that municipalities and their employees can do to prevent or reduce stormwater contamination from municipal operations.

Salt Piles



Pollution Prevention and Good Housekeeping



Pollution Prevention and Good Housekeeping



Salt Storage

- Store piles under a roof or impermeable layer
 - Minimize contact with precipitation and storm water runoff
- Out of 100 yr Floodplain
- Stored on impermeable surfaces
- Contained within a curb or berm
- Store at least 50 feet from wetlands or streams
- Can contaminate surface and ground water

Salt Application

- Identify Environmentally sensitive areas on salt routes
 - Wetlands, streams, drainage swales, prairies, lakes, ground water recharge...
- Install impermeable barriers along sensitive areas
- Reduce plowing speed
- Reduce application rates at sensitive areas
- Clean out storm drains before the spring rains

Pollution Prevention and Good Housekeeping

- Municipal project with no SE/SC measures



Pollution Prevention and Good Housekeeping

- Salt box next to inlet



Pollution Prevention and Good Housekeeping

- Uncovered drums



Pollution Prevention and Good Housekeeping

- Oil Recycling Storage Tanks



Pollution Prevention and Good Housekeeping

- Pet Waste Pick Up Station



Pollution Prevention and Good Housekeeping

- Demonstration Areas



Pollution Prevention and Good Housekeeping

- Clearly Marked Procedures and Equipment



FUEL SPILL RESPONSE PROCEDURE

**IN CASE OF FIRE OR EXPLOSION
EVACUATE IMMEDIATELY AND CALL 911
FROM A SAFE LOCATION**

**IF IT IS SAFE TO DO SO:
STOP THE SPILL, USE EMERGENCY SHUT-OFF
LOCATED ON BUILDING**

**USE MATERIALS FROM THE SPILL KIT TO:
(LOCATED BY THE STORAGE SHED)**

- CONTAIN THE SPILL
- PROTECT THE CATCH BASIN
- ABSORB THE SPILL

**CALL ENVIRONMENTAL HEALTH AND SAFETY
726-7273**

NOTIFY YOUR SUPERVISOR

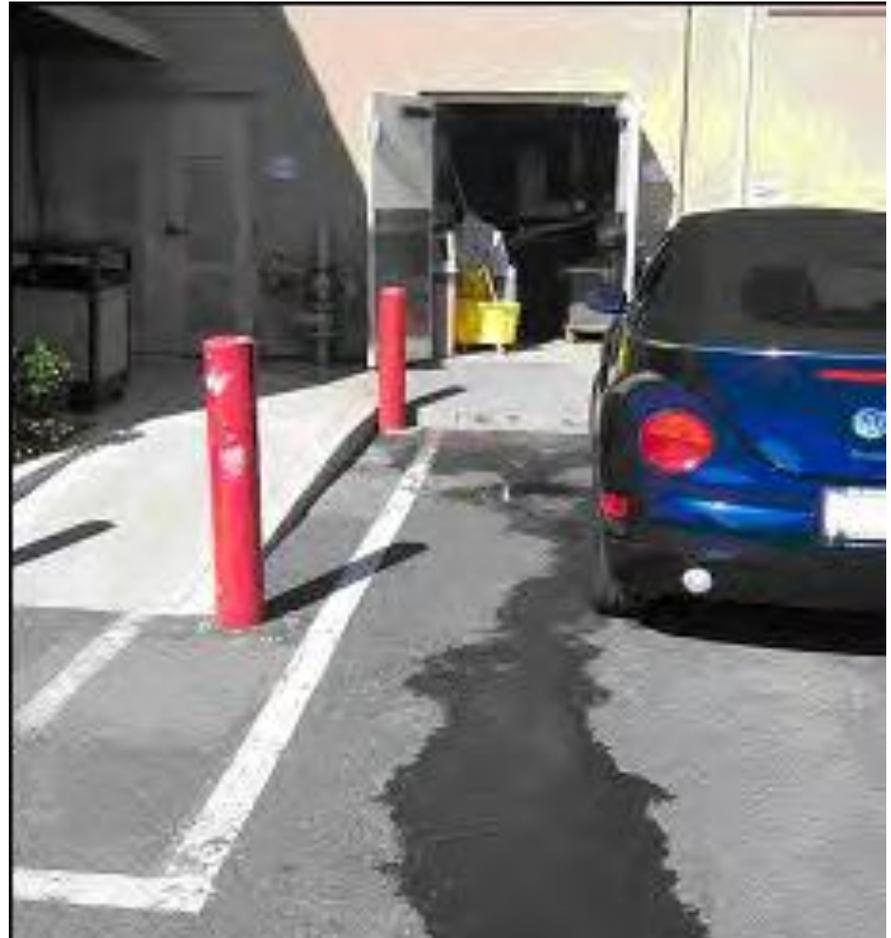
**IF YOU HAVE ANY QUESTIONS ABOUT PROPER SPILL
PROCEDURES CONTACT ENVIRONMENTAL HEALTH
AND SAFETY (726-7273) OR YOUR SUPERVISOR
PRIOR TO USING THIS FACILITY.**

Pollution Prevention and Good Housekeeping



Pollution Prevention and Good Housekeeping

- Proper Disposal of Municipal Generated Wastes



Pollution Prevention and Good Housekeeping



Pollution Prevention and Good Housekeeping



Pollution Prevention and Good Housekeeping



Pollution Prevention and Good Housekeeping



Pollution Prevention and Good Housekeeping



Pollution Prevention and Good Housekeeping



Pollution Prevention and Good Housekeeping

- Municipal Projects



How to Help

Identification – Be aware

Notification – Alert the appropriate person

Documentation – Photos, Work Orders, Emails

Elimination – React or Follow up

Failure to Comply

Dallas, Texas reached agreement with federal government May 10, 2006:



- City to spend over \$3.5 million to decrease amount of pollution entering city's stormwater system
 - Including SEP
 - Civil penalty of \$800,000
 - Fill staff positions
 - Inspect hundreds of industrial facilities and construction sites
 - Improve management systems at several facilities

Failure to Comply

Home Depot reached agreement with federal government Feb. 26, 2008:



- Home Depot to pay a \$1.3 million dollar penalty.
 - Discharged polluted storm water
 - 30 construction sites in 28 states
 - Didn't obtain proper NPDES permits
 - Failure to maintain SWPPP and BMPs
 - Develop an extensive compliance program

Questions ?



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