

# Village of Westchester

## Stormwater Management Program Plan

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Prepared for:

**Village of Westchester**  
**10300 West Roosevelt Road**  
**Westchester, IL 60154**

## EXECUTIVE SUMMARY

The Village of Westchester (Village) 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 Village has applied for and obtained coverage under the IEPA's General NPDES Permit for Discharges from Small Municipal Separate Storm Sewer Systems. Their permit number is ILR400468 and a copy of the general permit is provided in Appendix 9.

A central requirement of the NPDES Phase II Permit is the development and implementation of a program to reduce or prevent the meet the conditions and provisions of the ILR40 permit. To meet these requirements, the Village has developed this Stormwater Management Program Plan (SMPP) to detail the policies, plans and procedures in place to meet the conditions and requirements of the permit and serve as a resource for the implementation, interpretation and documentation of the Village's entire MS4 program. The SMPP encompasses all aspects of the Village's NPDES Phase II program and specifically addresses the following six minimum control measures:

1. Public Education
2. Public Participation and Involvement
3. Illicit Discharge Detection and Elimination
4. Construction Site Runoff Control
5. Post Construction Site Runoff Control
6. Pollution Prevention and Good Housekeeping

This SMPP details all of the Best Management Practices (BMPs), activities, policies, and procedures the Village of Westchester employs to protect water quality by reducing or preventing the introduction of contaminates into the municipal separate storm sewer system and to meet the requirements of their MS4 permit.

The SMPP is a living document that will be updated regularly based on changes within the Village and the NPDES regulations. If fully utilized, the SMPP provides the Village with a vital tool to meet the following goals of this program:

- Improve water quality,
- Provide cleaner and more aesthetically pleasing local waterbodies and streams,
- Enhance recreation opportunities
- Healthier environment for residents and wildlife.

The SMPP will be reviewed annually during the Village's Annual Facility Inspection as required by the NPDES Phase II Permit and will be kept onsite at 10300 West Roosevelt Road, Westchester, Cook County, IL 60154.

## **LIST OF APPENDICES**

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8. Village of Westchester Annual Facility Inspection Reports
9. IEPA General NPDES Permit No. ILR40
10. Salt Creek Watershed – Restoring Balance
11. Salt Creek Watershed: A Resource Worth Preserving
12. Sample Inspection Forms: ILR40 and ILR10
13. Sample Contractor Certification Forms
14. IEPA Forms – NOI, ION, and NOT
15. Outfall Screening Checklist, Forms, Instructions, and Reports
16. Sample Inspection Checklists
17. Typical Soil Erosion and Sediment Control Details
18. Example Public Education and Outreach Materials
19. Construction Site Inspection Forms
20. Outfall Inspection Data Forms and Reports
21. Detention Pond Checklists
22. Pre-Construction Meeting Forms

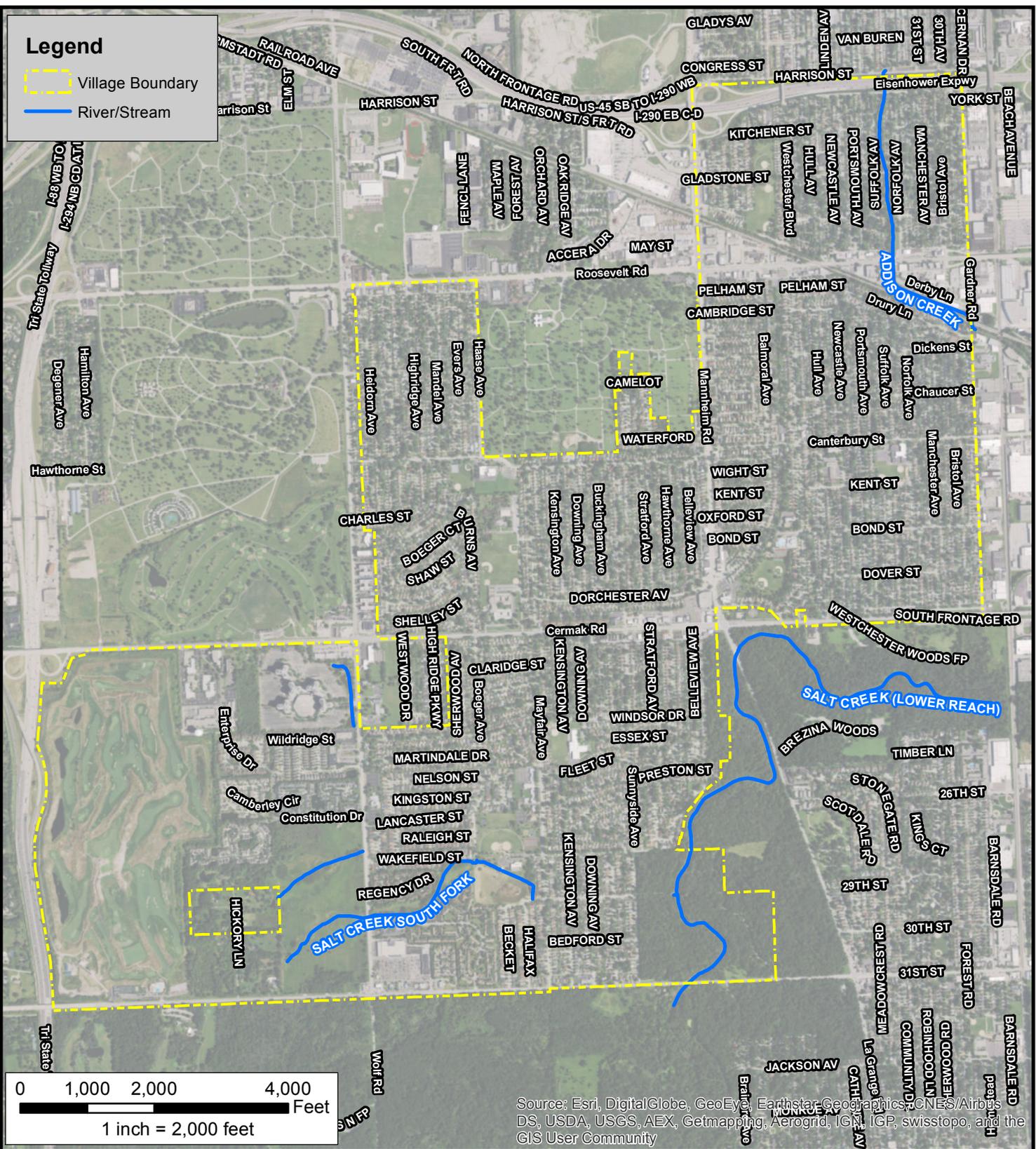
23. Employee Training Agendas or Course Information
24. Compliance Documentation – Public Education and Outreach
25. Compliance Documentation – Public Participation/Involvement
26. Compliance Documentation – Construction Site Runoff Control
27. Compliance Documentation – Post-Construction Runoff Control
28. Compliance Documentation – Pollution Prevention/Good Housekeeping

## **APPENDIX 1**

Village of Westchester Corporate Limits Exhibit

**Legend**

- Village Boundary
- River/Stream



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Document Path: N:\spaceco\160335\GIS\Exhibits\Corporate Limits.mxd



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

CLIENT



TITLE

CORPORATE LIMITS

DSGN.

BMK

CHKD.

JOB#

120326.00022



DATE

07/08/16

EXHIBIT

## **APPENDIX 2**

Village of Westchester Street Map



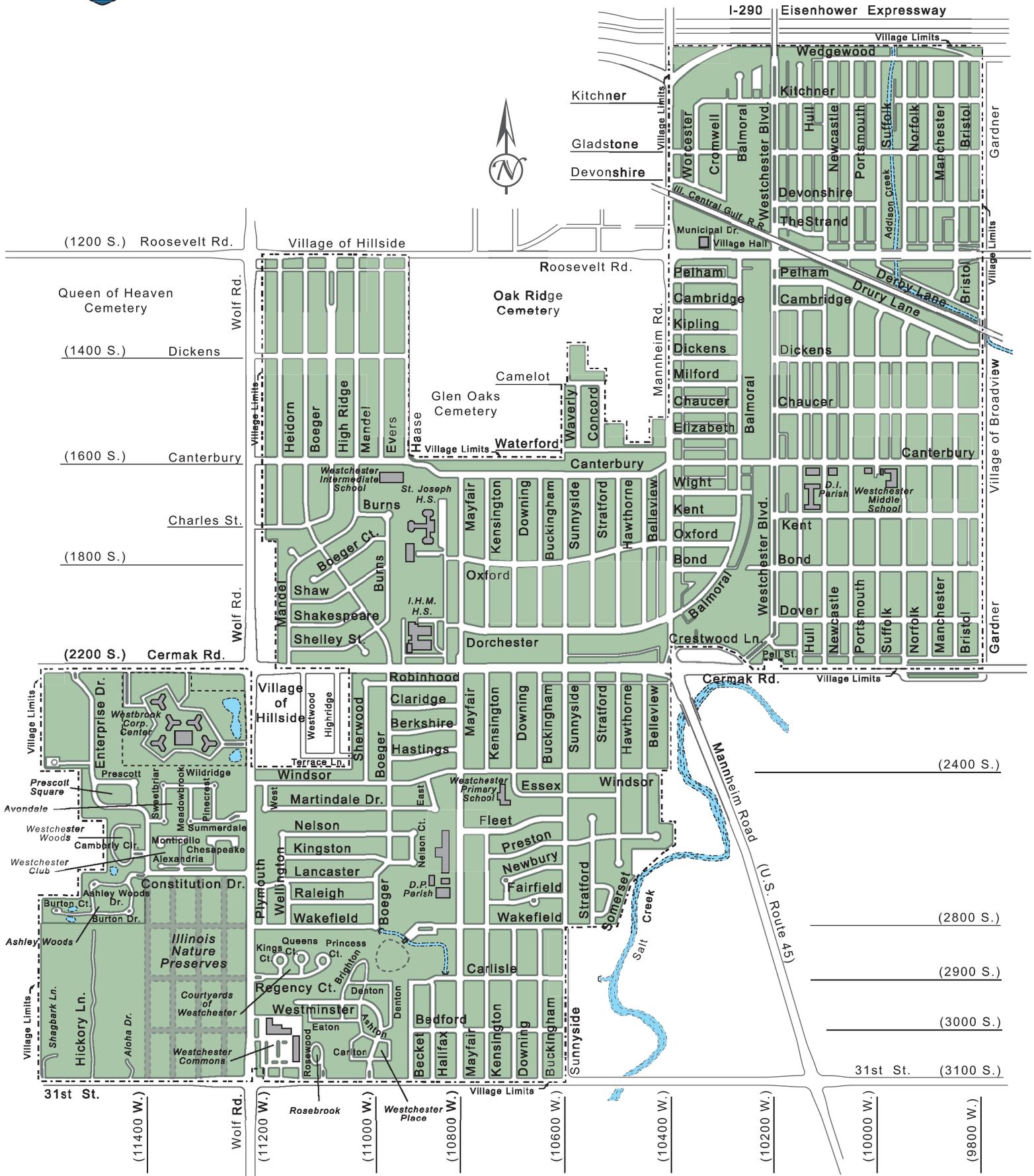
# Village of Westchester

10300 Roosevelt Rd. Westchester Il. 60154

Village Hall: (708) 345-0020

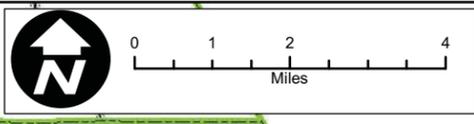
Police Dept. (708) 345-0060

Fire Dept. (708) 345-0433



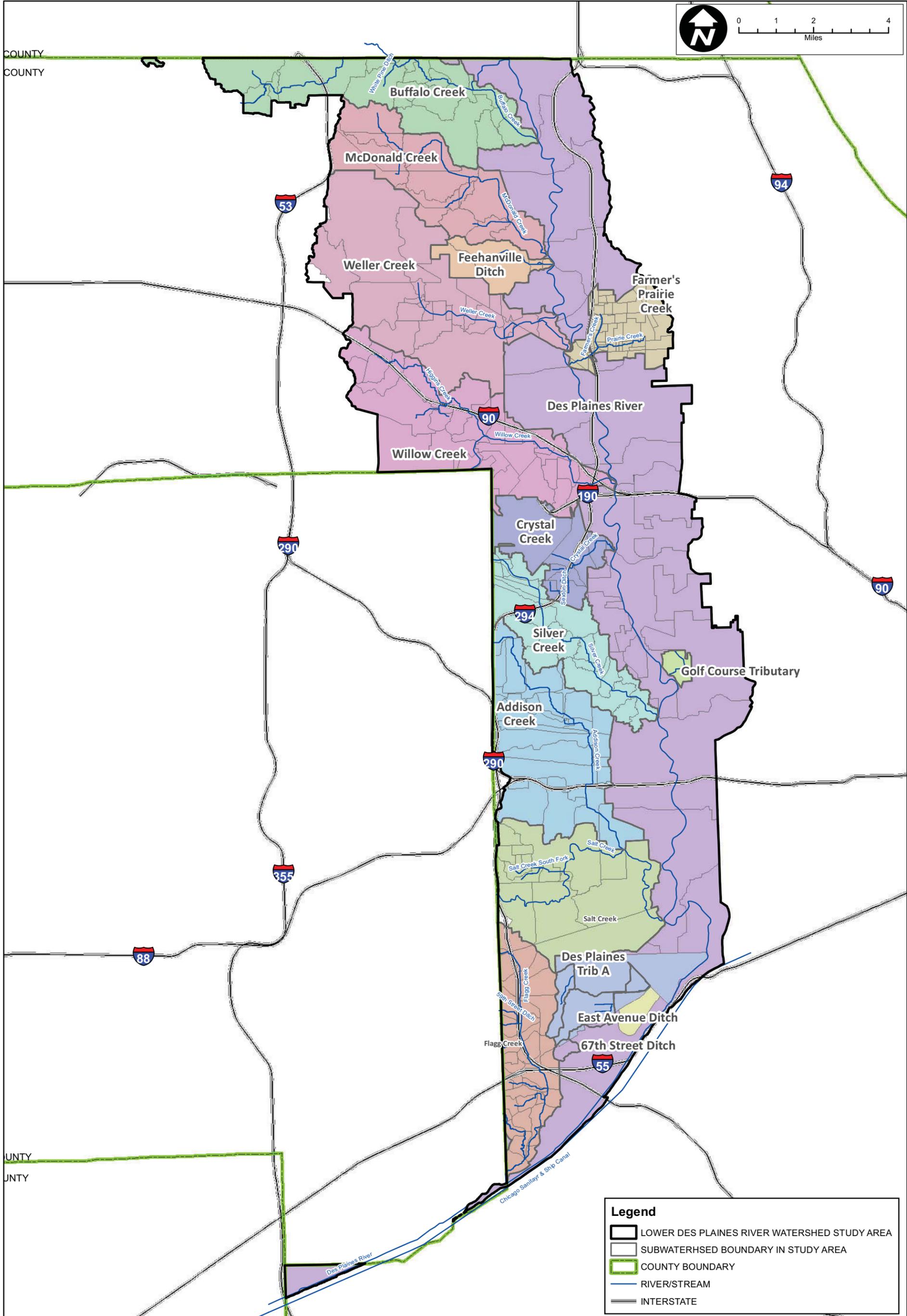
## **APPENDIX 3**

### Addison Creek Watershed Exhibit



COUNTY  
COUNTY

COUNTY  
COUNTY



**Legend**

- LOWER DES PLAINES RIVER WATERSHED STUDY AREA
- SUBWATERSHED BOUNDARY IN STUDY AREA
- COUNTY BOUNDARY
- RIVER/STREAM
- INTERSTATE

CLIENT:  
**METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO**

TITLE:  
**LOWER DES PLAINES RIVER WATERSHED SUBWATERSHED DELINEATION**

PROJ. NO. 080043  
DATE: 09-13-2009  
SHEET 1 OF 1  
DRAWING NO.

**FIGURE 2.3.2**

**CB** CHRISTOPHER B. BURKE ENGINEERING, LTD.  
9575 W. Higgins Road, Suite 600 · Rosemont, Illinois 60018 · (847) 823-0500

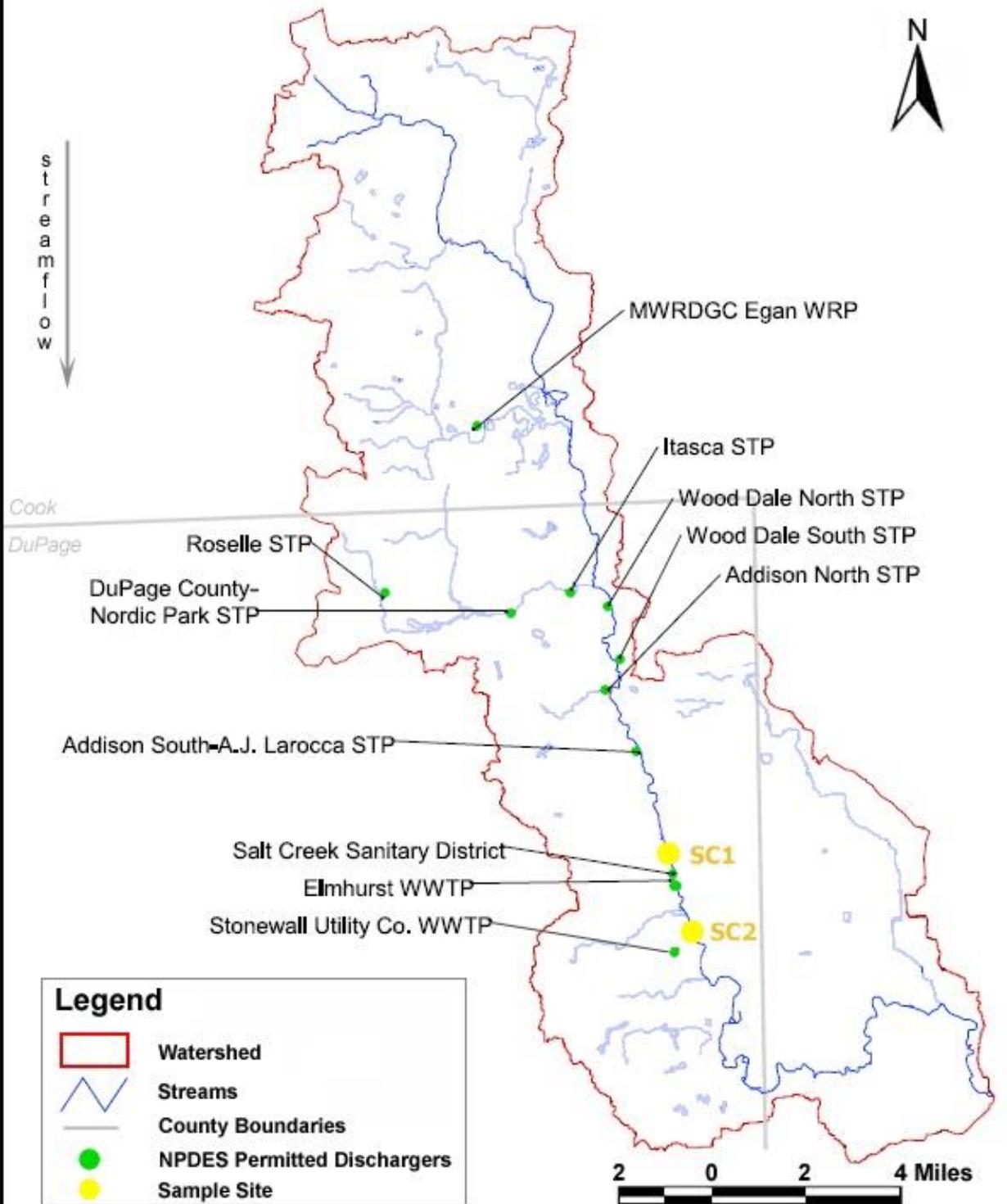
DSGN.		SCALE:	
DWN.		GIS USER	MHAYES
CHKD.		PLOT DATE	
FILE:			

Map Document: (Z:\MWRD\GC\08-0043 Phase B\Water\Des Plaines\exhibits\Subwatershed Delineation.mxd) 11/22/2010 -- 2:46:31 PM

## **APPENDIX 4**

### Salt Creek Watershed Exhibit

# Upstream Dischargers of Significance Salt Creek

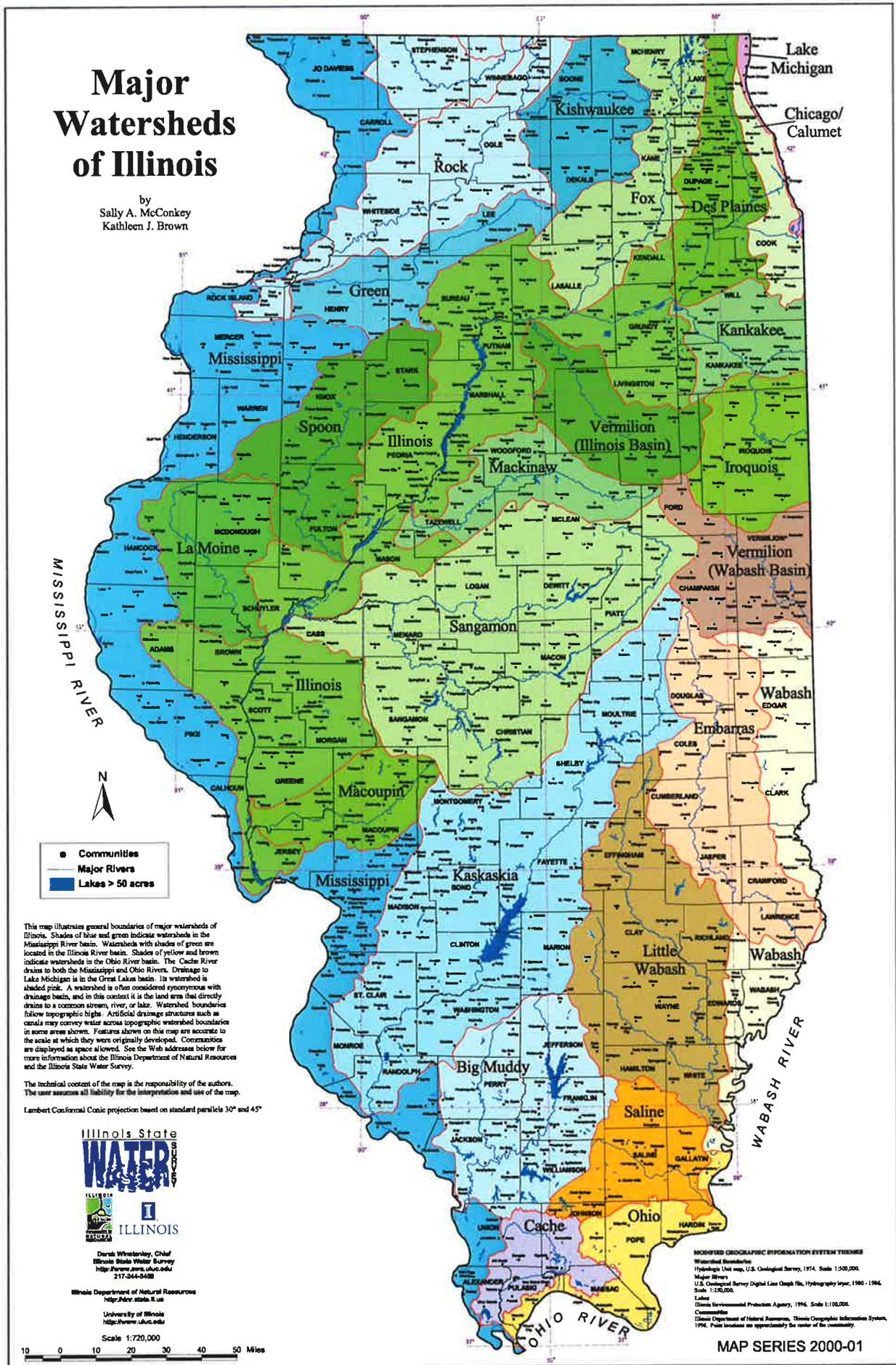


## **APPENDIX 5**

### Major Watershed of Illinois Map

# Major Watersheds of Illinois

by  
Sally A. McConkey  
Kathleen J. Brown



- Communities
- Major Rivers
- Lakes > 50 acres

This map illustrates general boundaries of major watersheds of Illinois. Shades of blue and green indicate watersheds in the Mississippi River basin. Watersheds with shades of green are located in the Illinois River basin. Shades of yellow and brown indicate watersheds in the Ohio River basin. The Cache River drains to both the Mississippi and Ohio Rivers. Drainage to Lake Michigan is in the Great Lakes basin. A watershed is often considered synonymous with drainage basin, and in this context it is the land area that directly drains to a common stream, river, or lake. Watershed boundaries follow topographic highs. Artificial drainage structures such as canals may convey water across topographic watershed boundaries in some areas shown. Features shown on this map are accurate to the scale at which they were originally developed. Communities are displayed as space allowed. See the Web address below for more information about the Illinois Department of Natural Resources and the Illinois State Water Survey.

The technical content of the map is the responsibility of the authors. The user assumes all liability for the interpretation and use of the map.

Lambert Conformal Conic projection based on standard parallels 30° and 45°

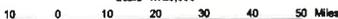


Derak Winstanley, Chief  
Illinois State Water Survey  
<http://www.issws.uiuc.edu>  
217-244-2428

Illinois Department of Natural Resources  
<http://dnr.state.il.us>

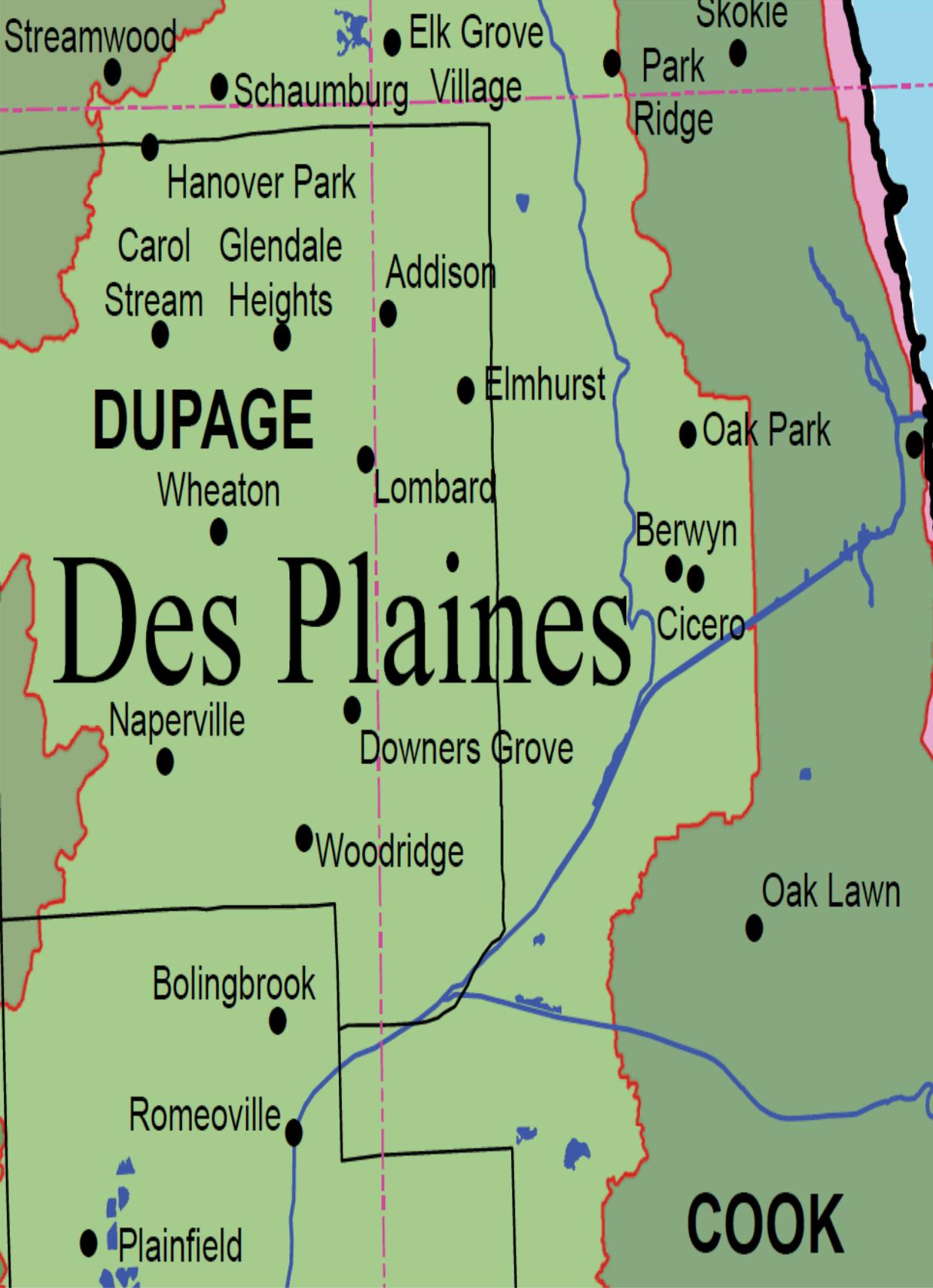
University of Illinois  
<http://www.uiuc.edu>

Scale 1:720,000



NOIUSERS GEOGRAPHIC INFORMATION SYSTEM TERMS  
Watershed Boundaries  
Hydrologic Unit map, U.S. Geological Survey, 1974. Scale 1:500,000.  
Major Rivers  
U.S. Geological Survey Digital Line Graph File, Hydrography layer, 1980 - 1984.  
Scale 1:250,000.  
Lakes  
U.S. Environmental Protection Agency, 1996. Scale 1:100,000.  
Communities  
Illinois Department of Natural Resources, Illinois Geographic Information System, 1999. Point locations are approximately the center of the community.

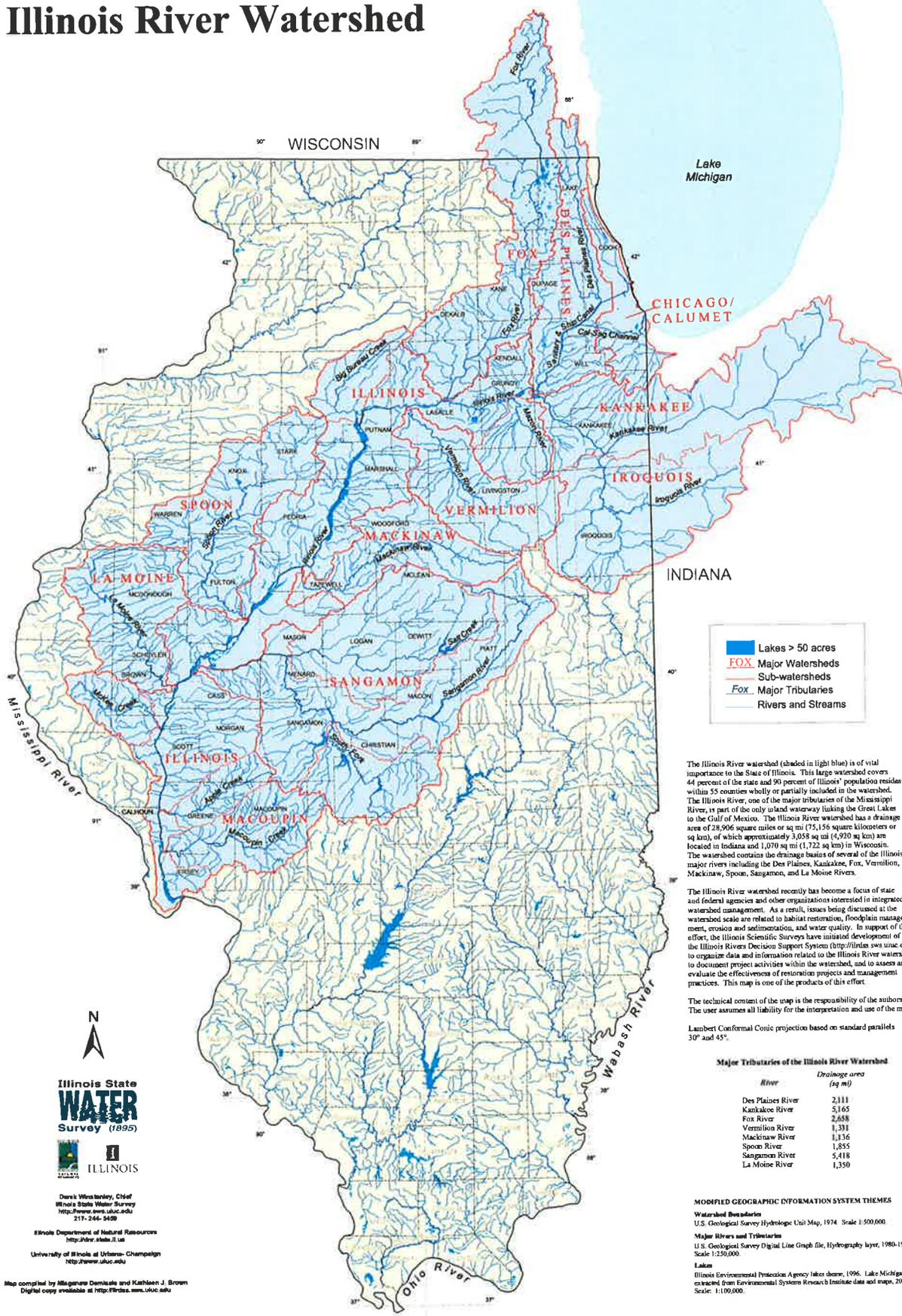
MAP SERIES 2000-01



## **APPENDIX 6**

### Illinois River Watershed Map

# Illinois River Watershed



**Legend**

- Lakes > 50 acres
- FOX Major Watersheds
- Sub-watersheds
- Fox Major Tributaries
- Rivers and Streams

The Illinois River watershed (shaded in light blue) is of vital importance to the State of Illinois. This large watershed covers 44 percent of the state and 90 percent of Illinois' population resides within 55 counties wholly or partially included in the watershed. The Illinois River, one of the major tributaries of the Mississippi River, is part of the only inland waterway linking the Great Lakes to the Gulf of Mexico. The Illinois River watershed has a drainage area of 28,906 square miles or sq mi (75,156 square kilometers or sq km), of which approximately 3,058 sq mi (4,920 sq km) are located in Indiana and 1,070 sq mi (1,722 sq km) in Wisconsin. The watershed contains the drainage basins of several of the Illinois' major rivers including the Des Plaines, Kankakee, Fox, Vermilion, Mackinaw, Spoon, Sangamon, and La Moine Rivers.

The Illinois River watershed recently has become a focus of state and federal agencies and other organizations interested in integrated watershed management. As a result, issues being discussed at the watershed scale are related to habitat restoration, floodplain management, erosion and sedimentation, and water quality. In support of this effort, the Illinois Scientific Surveys have initiated development of the Illinois Rivers Decision Support System (<http://indis.sws.uiuc.edu>) to organize data and information related to the Illinois River watershed, to document project activities within the watershed, and to assess and evaluate the effectiveness of restoration projects and management practices. This map is one of the products of this effort.

The technical content of the map is the responsibility of the authors. The user assumes all liability for the interpretation and use of the map. Lambert Conformal Conic projection based on standard parallels 30° and 45°.

**Major Tributaries of the Illinois River Watershed**

River	Drainage area (sq mi)
Des Plaines River	2,111
Kankakee River	5,165
Fox River	2,658
Vermilion River	1,331
Mackinaw River	1,136
Spoon River	1,855
Sangamon River	5,418
La Moine River	1,350

**MODIFIED GEOGRAPHIC INFORMATION SYSTEM THEMES**

- Watershed Boundaries**  
U.S. Geological Survey Hydrologic Unit Map, 1974. Scale 1:500,000.
- Major Rivers and Tributaries**  
U.S. Geological Survey Digital Line Graph file, Hydrography layer, 1980-1986. Scale 1:250,000.
- Lakes**  
Illinois Environmental Protection Agency lakes data, 1996. Lake Michigan extracted from Environmental Systems Research Institute data and maps, 2000. Scale: 1:100,000.

Illinois State  
**WATER**  
Survey (1895)



Doris Westensky, Chief  
Illinois State Water Survey  
<http://www.issws.uiuc.edu>  
217-244-5430

Illinois Department of Natural Resources  
<http://dnr.state.il.us>  
University of Illinois at Urbana-Champaign  
<http://www.uiuc.edu>

Map compiled by Magagnoli Demetris and Kathleen J. Brown  
Digital copy available at <http://files.mns.uiuc.edu>

Scale 1:850,000 (1 Inch = 13.4 miles)  
0 5 10 20 30 40 50 Miles

**MAP SERIES 2003-01**  
Printed by the authority of the State of Illinois (02-03-2491-144)

## **APPENDIX 7**

Village of Westchester 2016 Notice of Intent



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

Name: Robert Lewis Title: Public Works Director Phone: 708-345-0041

Area of Responsibility: Overall Implementation

Name: Christopher B. Burke Eng Ltd. Title: Village Consultant Engineer Phone: 847-823-0500

Area of Responsibility: Compliance Assistance

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**

Qualifying Local Programs:

The Village performs a variety of activities that meet the requirements of the Public Education and Outreach minimum control measure. These activities include BMP's: A.1, A.3 and A.6.

Measurable Goals (include shared responsibilities)

- A.1 Distributed Paper Material

Brief Description of BMP:

The Village will continue to produce and make available brochures on topics related to stormwater quality. These topics may include steps the public can take to reduce pollutants to stormwater runoff or the impacts of stormwater runoff on local water bodies.

Measurable Goals, including frequencies:

The brochures will be developed to target developers, commercial and industrial facility operators and residents. The goal of this program is to increase the awareness of impacts of storm water discharges on water bodies and the steps that the public can take to reduce pollutants in storm water runoff.

Milestones:

Go to Additional Pages

Year 1:

The Public Works Department will continue to produce and make the informational material and brochures.

Year 2:

The Public Works Department will continue to produce and make the informational material and brochures.

Year 3:

The Public Works Department will continue to produce and make the informational material and brochures.

Year 4:

The Public Works Department will continue to produce and make the informational material and brochures.

Year 5:

The Public Works Department will continue to produce and make the informational material and brochures.

- A.2 Speaking Engagement

Brief Description of BMP:

The Village will include a storm water and/or ambient water quality related article once a year in the Village's newsletter.

Measurable Goals, including frequencies:

The Village newsletter article will be developed to target developers, commercial and industrial facility operators and interested citizens. The goal of this program is to increase the awareness of impacts of storm water discharges on water bodies and the steps that the public can take to reduce pollutants in storm water runoff.

Milestones:

Year 1:

The Village will include a storm water and/or ambient water quality related article in the Village newsletter each year.

Year 2:

The Village will include a storm water and/or ambient water quality related article in the Village newsletter each year.

Year 3:

The Village will include a storm water and/or ambient water quality related article in the Village newsletter each year.

Year 4:

The Village will include a storm water and/or ambient water quality related article in the Village newsletter each year.

Year 5:

The Village will include a storm water and/or ambient water quality related article in the Village newsletter each year.

Go to Additional Pages

- A.4 Community Event
- A.5 Classroom Education Material
- A.6 Other Public Education

(You may need to go to the next page to fill in this information)

The Village has information on its website relating to recycling of waste, waste disposal, stormwater and/or water quality and provides contact information for residents to report any potential stormwater or water quality related issues.

The Village will create a website link on the Village's website to include information on the potential effects on storm water discharge due to climate change.

Measurable Goals, including frequencies:

The Village will continue to target developers, commercial and industrial facility operators and residents. The goal of this program is to increase the awareness of impacts of stormwater discharges on water bodies, the potential effects of climate change on storm water discharges and the steps that the public can take to reduce pollutants in storm water runoff.

Milestones:

Year 1:

The Village will continue to provide the website links and update as needed.

Year 2:

The Village will continue to provide the website links and update as needed.

Year 3:

The Village will continue to provide the website links and update as needed.

Year 4:

The Village will continue to provide the website links and update as needed.

Year 5:

The Village will continue to provide the website links and update as needed.

Go to Additional Pages

**B.Public Participation/Involvement**

Measurable Goals (include shared responsibilities)

Qualifying Local Programs:

The Village performs a variety of activities that meet the requirements of the Public Participation and Involvement minimum control measure. These activities include BMP's: B.2,B.3, B.6 and B.7.

B.2 Educational Volunteer

(You may need to go to the next page to fill in this information)

The Village Public Works staff attends the Annual Seniors Breakfast at the local high school to speak about Public Works role with stormwater quality and related activities. These discussions increase the public's knowledge and education related to the impacts of pollutants entering the Village's storm sewer system and their role in this process.

Measurable Goals, including frequencies:

The goal of this activity is to educate and encourage active public participation in ambient water quality programs and increase the visibility of water quality issues.

Milestones:

Year 1:

The Village will continue program and work to increase participation.

Year 2:

The Village will continue program and work to increase participation.

Year 3:

The Village will continue program and work to increase participation.

Year 4:

The Village will continue program and work to increase participation.

Year 5:

The Village will continue program and work to increase participation.

Go to Additional Pages

B.3 Stakeholder Meeting

(You may need to go to the next page to fill in this information)

The Village participates and coordinates with the Chicago Area Waterways Chloride Initiative work group led by the Metropolitan Water Reclamation District of Greater Chicago. The Village is a member of the DuPage River, Salt Creek Workgroup.

Measurable Goals, including frequencies:

The goal of this Initiative is to identify best management practices that are most appropriate and cost effective for the region to be used by municipalities. Participation in the Workgroup seeks to implement targeted watershed activities to resolve watershed problems.

Milestones:

Year 1:

The Village will continue to participate in the stakeholder meeting and Workgroup.

Year 2:

The Village will continue to participate in the stakeholder meeting and Workgroup.

Year 3:

The Village will continue to participate in the stakeholder meeting and Workgroup.

Year 4:

The Village will continue to participate in the stakeholder meeting and Workgroup.

Year 5:

The Village will continue to participate in the stakeholder meeting and Workgroup.

Go to Additional Pages

B.4 Public Hearing (You may need to go to the next page to fill in this information)

Brief Description of BMP:

The Village will hold a public meeting to discuss topics including steps the public can take to reduce pollutants to stormwater runoff or the impacts of stormwater runoff on local water bodies.

Measurable Goals, including frequencies:

The goal is to increase public education and involvement regarding the Village's stormwater management and NDPES program and their knowledge on ways they can help.

Milestones:

Year 1:

Hold a public meeting at least once a year.

Year 2:

Hold a public meeting at least once a year.

Year 3:

Hold a public meeting at least once a year.

Year 4:

Hold a public meeting at least once a year.

Year 5:

Hold a public meeting at least once a year.

Go to Additional Pages

B.5 Volunteer Monitoring

B.6. Program Involvement (You may need to go to the next page to fill in this information)

The Village coordinates with local groups to perform clean up activities. These activities directly reduce the amount of pollutants entering the Village's storm sewer system.

Measurable Goals, including frequencies:

This activity has the goal of encouraging active public participation in ambient water quality programs and increasing the visibility of water quality issues.

Milestones:

Year 1:

The Village will continue with the clean up activities and work to increase participation.

Year 2:

The Village will continue with the clean up activities and work to increase participation.

Year 3:

The Village will continue with the clean up activities and work to increase participation.

Year 4:

The Village will continue with the clean up activities and work to increase participation.

Year 5:

The Village will continue with the clean up activities and work to increase participation.

Go to Additional Pages

B.7 Other Public Involvement (You may need to go to the next page to fill in this information)

Brief Description of BMP:

The Public Works Department provides contact information on the Village website to allow residents to report stormwater or water quality related issues.

Measurable Goals, including frequencies:

The goal of this program is to provide active citizen participation in detection of illicit discharges to the storm sewer system and problems with drainage features. This program will also aid the Public Works Department in the detection of illicit discharges.

Milestones:

Year 1:

The Village will continue to provide the appropriate contact information to report illicit discharges or other stormwater issues.

Year 2:

The Village will continue to provide the appropriate contact information to report illicit discharges or other stormwater issues.

Year 3:

The Village will continue to provide the appropriate contact information to report illicit discharges or other stormwater issues.

Year 4:

The Village will continue to provide the appropriate contact information to report illicit discharges or other stormwater issues.

Year 5:

The Village will continue to provide the appropriate contact information to report illicit discharges or other stormwater issues.

Go to Additional Pages

**C. Illicit Discharge Detection and Elimination**

Qualifying Local Programs:

The Village and Cook County perform a variety of activities that meet the requirements of the Illicit Discharge Detection and Elimination minimum control measure. These activities include BMP's: C.1, C.2, C.3, C.4, C.5, C.6, C.7 and C.10.

Measurable Goals (include shared responsibilities)

C.1 Sewer Map Preparation (You may need to go to the next page to fill in this information)

Brief Description of BMP:

The Village currently has a storm sewer map of the Village and outfalls to receiving streams.

Measurable Goals, including frequencies:

The goal of this program is to develop a storm sewer map for the Village to allow for quicker, more accurate tracing procedures.

Milestones:

Year 1:

The Public Works Department will continue to update the map as needed.

Year 2:

The Public Works Department will continue to update the map as needed.

Year 3:

The Public Works Department will continue to update the map as needed.

Year 4:

The Public Works Department will continue to update the map as needed.

Year 5:

The Public Works Department will continue to update the map as needed.

Go to Additional Pages

C.2 Regulatory Control Program (You may need to go to the next page to fill in this information)

The Village and County have ordinances in place to prohibit non-stormwater discharges to the municipal separate storm sewer system.

Measurable Goals, including frequencies:

The goal of this program is to eliminate any non-storm water discharges to the storm sewer system.

Milestones:

Year 1:

The Village will continue to enforce the regulatory control measures to prohibit or eliminate non-stormwater discharges.

Year 2:

The Village will continue to enforce the regulatory control measures to prohibit or eliminate non-stormwater discharges.

Year 3:

The Village will continue to enforce the regulatory control measures to prohibit or eliminate non-stormwater discharges.

Year 4:

The Village will continue to enforce the regulatory control measures to prohibit or eliminate non-stormwater discharges.

Year 5:

The Village will continue to enforce the regulatory control measures to prohibit or eliminate non-stormwater discharges.

Go to Additional Pages

C.3 Detection/Elimination Prioritization Plan (You may need to go to the next page to fill in this information)

Brief Description of BMP:

The Village has procedures for handling the report of a possible illicit discharge to storm sewer systems. The Village also has procedures for tracking reports of illicit discharges and the enforcement measures to facilitate the elimination of illicit discharges once they are discovered, tracked and investigated.

Measurable Goals, including frequencies:

The goal of this program is to develop a procedure for receiving, tracking, investigating and eliminating illicit discharges to the storm sewer system.

Milestones:

Year 1:

The Village will continue the illicit discharge procedures.

Year 2:

The Village will continue the illicit discharge procedures.

Year 3:

The Village will continue the illicit discharge procedures.

Year 4:

The Village will continue the illicit discharge procedures.

Year 5:

The Village will continue the illicit discharge procedures.

Go to Additional Pages

C.4 Illicit Discharge Tracing Procedures (You may need to go to the next page to fill in this information)

The Village has procedures for handling the report of a possible illicit discharge to storm sewer systems. The Village also has procedures for tracking reports of illicit discharges and the enforcement measures to facilitate the elimination of illicit discharges.

Measurable Goals, including frequencies:

The goal of this program is to develop a procedure for tracking, investigating and eliminating illicit discharges to the storm sewer system.

Milestones:

Year 1:

The Village will continue the illicit discharge procedures.

Year 2:

The Village will continue the illicit discharge procedures.

Year 3:

The Village will continue the illicit discharge procedures.

Year 4:

The Village will continue the illicit discharge procedures.

Year 5:

The Village will continue the illicit discharge procedures.

Go to Additional Pages

C.5 Illicit Source Removal Procedures (You may need to go to the next page to fill in this information)

Brief Description of BMP:

The Village has procedures for handling the report of a possible illicit discharge to storm sewer systems. The Village also has procedures for tracking reports of illicit discharges and the enforcement measures to facilitate the elimination of illicit discharges once they are discovered, tracked and investigated.

Measurable Goals, including frequencies:

The goal of this program is to develop a procedure for tracking, investigating and eliminating illicit discharges to the storm sewer system.

Milestones:

Year 1:

The Village will continue the illicit discharge procedures.

Year 2:

The Village will continue the illicit discharge procedures.

Year 3:

The Village will continue the illicit discharge procedures.

Year 4:

The Village will continue the illicit discharge procedures.

Year 5:

The Village will continue the illicit discharge procedures.

Go to Additional Pages

C.6 Program Evaluation and Assessment (You may need to go to the next page to fill in this information)

The Village performs an annual audit of the NPDES program and Stormwater Management Program Plan to verify compliance with the permit requirements and overall effectiveness of the program. The Village will monitor the progress of watershed work groups and the establishment of any applicable TMDLs or other Watershed Management Plans.

Measurable Goals, including frequencies:

The goal of this activity to assess the Village's NPDES program for compliance and effectiveness as well as ensure compliance with applicable TMDLs and Watershed Management Plans.

Milestones:

Year 1:

The Village will continue to perform the annual evaluation and assessment.

Year 2:

The Village will continue to perform the annual evaluation and assessment.

Year 3:

The Village will continue to perform the annual evaluation and assessment.

Year 4:

The Village will continue to perform the annual evaluation and assessment.

Year 5:

The Village will continue to perform the annual evaluation and assessment.

Go to Additional Pages

C.7 Visual Dry Weather Screening (You may need to go to the next page to fill in this information)

Brief Description of BMP:

The Village will perform inspections of all MS4 outfalls during dry weather conditions or as determined by the inspection prioritization plan.

Measurable Goals, including frequencies:

The goal of this activity is to identify outfalls with potential illicit discharges.

Milestones:

Year 1:

The Village will continue to perform annual inspections.

Year 2:

The Village will continue to perform annual inspections.

Year 3:

The Village will continue to perform annual inspections.

Year 4:

The Village will continue to perform annual inspections.

Year 5:

The Village will continue to perform annual inspections.

Go to Additional Pages

C.8 Pollutant Field Testing

C.9 Public Notification

Brief Description of BMP:

The Village performs annual monitoring of the receiving waters upstream and downstream of all MS4 discharge points.

Measurable Goals, including frequencies:

The goal of this activity is to monitor receiving streams for potential changes due to the discharge of stormwater.

Milestones:

Year 1:

The Village will continue the monitoring program.

Year 2:

The Village will continue the monitoring program.

Year 3:

The Village will continue the monitoring program.

Year 4:

The Village will continue the monitoring program.

Year 5:

The Village will continue the monitoring program.

Go to Additional  
Pages

**D. Construction Site Runoff Control**

Measurable Goals (include shared responsibilities)

Qualifying Local Programs:

The Village performs a variety of activities that meet the requirements of the Construction Site Runoff Control minimum control measure. This program relates to BMP numbers D.1, D.2, D.4, D.5, and D.6.

The Village has ordinances and procedures in place that require construction site runoff controls. These procedures include review of the site development plans by qualified staff and inspection/enforcement procedures.

Measurable Goals, including frequencies:

The goal of these activities are to reduce or prevent the discharge of pollutants from construction sites to the municipal separate storm sewer system.

Milestones:

Year 1:

The Village will continue the construction site runoff control program.

Year 2:

The Village will continue the construction site runoff control program.

Year 3:

The Village will continue the construction site runoff control program.

Year 4:

The Village will continue the construction site runoff control program.

Year 5:

The Village will continue the construction site runoff control program.

Go to Additional Pages

D.2 Erosion and Sediment Control BMPs (You may need to go to the next page to fill in this information)

Brief Description of BMP:

The Village has ordinances and procedures in place that require construction site runoff controls. These procedures include review of the site development plans by qualified staff and inspection/enforcement procedures.

Measurable Goals, including frequencies:

The goal of these activities are to reduce or prevent the discharge of pollutants from construction sites to the municipal separate storm sewer system.

Milestones:

Year 1:

The Village will continue the construction site runoff control program.

Year 2:

The Village will continue the construction site runoff control program.

Year 3:

The Village will continue the construction site runoff control program.

Year 4:

The Village will continue the construction site runoff control program.

Year 5:

The Village will continue the construction site runoff control program.

Go to Additional Pages

D.3 Other Waste Control Program

D.4 Site Plan Review Procedures (You may need to go to the next page to fill in this information)

The Village has ordinances and procedures in place that require construction site runoff controls. These procedures include review of the site development plans by qualified staff and inspection/enforcement procedures.

Measurable Goals, including frequencies:

The Village will continue these activities to reduce or prevent the discharge of pollutants from construction sites to the municipal separate storm sewer system.

Milestones:

Year 1:

The Village will continue the construction site runoff control program.

Year 2:

The Village will continue the construction site runoff control program.

Year 3:

The Village will continue the construction site runoff control program.

Year 4:

The Village will continue the construction site runoff control program.

Year 5:

The Village will continue the construction site runoff control program.

Go to Additional Pages

D.5 Public Information Handling Procedures (You may need to go to the next page to fill in this information)

Brief Description of BMP:

The Village has procedures in place for addressing reports from residents related to construction site runoff.

Measurable Goals, including frequencies:

The Village will continue to address the reporting of problems related to construction site runoff.

Milestones:

Year 1:

The Village will continue the program to address reports related to construction site runoff control issues.

Year 2:

The Village will continue the program to address reports related to construction site runoff control issues.

Year 3:

The Village will continue the program to address reports related to construction site runoff control issues.

Year 4:

The Village will continue the program to address reports related to construction site runoff control issues.

Year 5:

The Village will continue the program to address reports related to construction site runoff control issues.

Go to Additional Pages

D.6 Site Inspection/Enforcement Procedures (You may need to go to the next page to fill in this information)

The Village has ordinances and procedures in place that require construction site runoff controls. These procedures include review of the site development plans by qualified staff and inspection/enforcement procedures.

Measurable Goals, including frequencies:

The Village will continue these activities to reduce or prevent the discharge of pollutants from construction sites to the municipal separate storm sewer system.

Milestones:

Year 1:

The Village will continue the construction site runoff control program.

Year 2:

The Village will continue the construction site runoff control program.

Year 3:

The Village will continue the construction site runoff control program.

Year 4:

The Village will continue the construction site runoff control program.

Year 5:

The Village will continue the construction site runoff control program.

[Go to Additional Pages](#)

D.7 Other Construction Site Runoff Controls

**E. Post-Construction Runoff Control**

Qualifying Local Programs:

The Village performs a variety of activities that meet the requirements of the Post-Construction Runoff Control minimum control measure. This relates to BMP numbers E.2, E.3, E.4, E.5, E.6 and E.7.

Measurable Goals (include shared responsibilities)

- E.1 Community Control Strategy
- E.2 Regulatory Control Program

Brief Description of BMP:

The Village has ordinances and procedures in place that protect water quality and reduce the discharge of pollutants by controlling post-construction site runoff. These procedures are amendable to modification due to climate change. These procedures include review of the BMP designs by qualified staff and inspection/enforcement during and after construction.

Measurable Goals, including frequencies:

The Village will continue these activities to reduce or prevent the discharge of pollutants from construction sites to the municipal separate storm sewer system.

Milestones:

Year 1:

The Village will continue the post construction runoff control program.

Year 2:

The Village will continue the post construction runoff control program.

Year 3:

The Village will continue the post construction runoff control program.

Year 4:

The Village will continue the post construction runoff control program.

Year 5:

The Village will continue the post construction runoff control program.

Go to Additional Pages

- E.3 Long Term O & M Procedures

(You may need to go to the next page to fill in this information)

The Village has ordinances and procedures in place that protect water quality and reduce the discharge of pollutants by controlling post-construction site runoff. These procedures include review of the BMP designs by qualified staff and inspection/enforcement during and after construction.

The Village in accordance with MWRDGC WMO guidelines has procedures in place requiring the identification and responsible entity for long term maintenance of post construction BMPs required for development and an ordinance in place to ensure the preservation of natural features on development sites including the preservation of depressional storage.

Measurable Goals, including frequencies:

The Village will continue these activities during the permitting process to identify and develop long term maintenance plans of BMPs and to reduce or prevent the discharge of pollutants from construction sites to the municipal separate storm sewer system.

Milestones:

Year 1:

The Village will continue the post construction runoff control program.

Year 2:

The Village will continue the post construction runoff control program.

Year 3:

The Village will continue the post construction runoff control program.

Year 4:

The Village will continue the post construction runoff control program.

Year 5:

The Village will continue the post construction runoff control program.

Go to Additional Pages

E.4 Pre-Construction Review of BMP Designs (You may need to go to the next page to fill in this information)

The Village has ordinances and procedures in place that protect water quality and reduce the discharge of pollutants by controlling post-construction site runoff. These procedures include review of the BMP designs by qualified staff and inspection/enforcement during and after construction.

Measurable Goals, including frequencies:

The Village will continue these activities to reduce or prevent the discharge of pollutants from construction sites to the municipal separate storm sewer system.

Milestones:

Year 1:

The Village will continue the post construction runoff control program.

Year 2:

The Village will continue the post construction runoff control program.

Year 3:

The Village will continue the post construction runoff control program.

Year 4:

The Village will continue the post construction runoff control program.

Year 5:

The Village will continue the post construction runoff control program.

Go to Additional Pages

E.5 Site Inspections During Construction (You may need to go to the next page to fill in this information)

Brief Description of BMP:

The Village has ordinances and procedures in place that protect water quality and reduce the discharge of pollutants by controlling construction site runoff. These procedures include review of the BMP designs by qualified staff and inspection/enforcement during and after construction.

Measurable Goals, including frequencies:

The Village will continue these activities to reduce or prevent the discharge of pollutants from construction sites to the municipal separate storm sewer system.

Milestones:

Year 1:

The Village will continue the post construction runoff control program.

Year 2:

The Village will continue the post construction runoff control program.

Year 3:

The Village will continue the post construction runoff control program.

Year 4:

The Village will continue the post construction runoff control program.

Year 5:

The Village will continue the post construction runoff control program.

Go to Additional Pages

E.6 Post-Construction Inspections

The Village has ordinances and procedures in place that protect water quality and reduce the discharge of pollutants by controlling post-construction site runoff. These procedures include review of the BMP designs by qualified staff and inspection/enforcement during and after construction.

Measurable Goals, including frequencies:

The Village will continue these activities to reduce or prevent the discharge of pollutants from construction sites to the municipal separate storm sewer system.

Milestones:

Year 1:

The Village will continue the post construction runoff control program.

Year 2:

The Village will continue the post construction runoff control program.

Year 3:

The Village will continue the post construction runoff control program.

Year 4:

The Village will continue the post construction runoff control program.

Year 5:

The Village will continue the post construction runoff control program.

Go to Additional Pages

E.7 Other Post-Construction Runoff Controls (You may need to go to the next page to fill in this information)

Brief Description of BMP:

The Village encourages and promotes the use of naturalized BMPs where possible to reduce sediment and absorb constituents of concern.

Measurable Goals, including frequencies:

The promotion of naturalized areas including wetland bottom detention areas reduce pollutants using long term post construction BMPs.

Milestones:

Year 1:

The Village will continue the post construction runoff control program.

Year 2:

The Village will continue the post construction runoff control program.

Year 3:

The Village will continue the post construction runoff control program.

Year 4:

The Village will continue the post construction runoff control program.

Year 5:

The Village will continue the post construction runoff control program.

Go to Additional Pages

**F. Pollution Prevention/Good Housekeeping**

Measurable Goals (include shared responsibilities)

Qualifying Local Programs:

The Village performs a variety of activities that meet the requirements of the Post-Construction Runoff Control minimum control measure. This relates to BMP numbers F.1, F.2, F.3, F.4, F.5, and F.6.

- F.1 Employee Training Program (You may need to go to the next page to fill in this information)

Brief Description of BMP:

The Village will continue provide the training and other presentations that provide guidance and procedures for employees to reduce or eliminate the discharge of pollutants from Village owned facilities and activities to the storm sewer system.

Measurable Goals, including frequencies:

The Village will continue to educate Public Works employees of current practices that contribute to storm water pollution and/or to develop new procedures and make revisions to existing procedures that will curtail the discharge of pollutants to storm sewer systems by Public Works employees, annually. The Village will also verify that contractors are meeting these training requirements.

Milestones:

Year 1:

The Village will continue the pollution prevention and good housekeeping program to reduce or prevent the discharge of pollutants from municipal activities to the storm sewer system.

Year 2:

The Village will continue the pollution prevention and good housekeeping program to reduce or prevent the discharge of pollutants from municipal activities to the storm sewer system.

Year 3:

The Village will continue the pollution prevention and good housekeeping program to reduce or prevent the discharge of pollutants from municipal activities to the storm sewer system.

Year 4:

The Village will continue the pollution prevention and good housekeeping program to reduce or prevent the discharge of pollutants from municipal activities to the storm sewer system.

Year 5:

The Village will continue the pollution prevention and good housekeeping program to reduce or prevent the discharge of pollutants from municipal activities to the storm sewer system.

Go to Additional Pages

- F.2 Inspection and Maintenance Program (You may need to go to the next page to fill in this information)

Brief Description of BMP:

The Village has procedures and inspection forms for the routine inspections of ponds, stream channels and storm sewer outfalls. The Village typically completes the inspection cycle once every three years or as funding allows.

Measurable Goals, including frequencies:

The Village will continue the inspection and maintenance program to identify and repair any stormwater issues with the municipal separate storm sewer system.

Milestones:

Year 1:

The Village will continue with the inspection and maintenance program.

Year 2:

The Village will continue with the inspection and maintenance program.

Year 3:

The Village will continue with the inspection and maintenance program.

Year 4:

The Village will continue with the inspection and maintenance program.

Year 5:

The Village will continue with the inspection and maintenance program.

Go to Additional Pages

F.3 Municipal Operations Storm Water Control (You may need to go to the next page to fill in this information)

Brief Description of BMP:

The Village has procedures and policies in place to prevent or reduce the discharge of pollutants from municipal operations and actions. The Village has installed sediment traps throughout the Public Works yard. The Village performs street sweeping on a daily basis in spring and summer.

Measurable Goals, including frequencies:

The Village will continue the municipal operations waste control program to curtail the discharge of pollutants to storm sewer systems by Public Works employees. The installation of catch basin sediment traps and street sweeping activities reduces sediment in storm sewers and improves water quality.

Milestones:

Year 1:

The Village will continue the municipal operations stormwater control program.

Year 2:

The Village will continue the municipal operations stormwater control program.

Year 3:

The Village will continue the municipal operations stormwater control program.

Year 4:

The Village will continue the municipal operations stormwater control program.

Year 5:

The Village will continue the municipal operations stormwater control program.

Go to Additional Pages

F.4 Municipal Operations Waste Disposal (You may need to go to the next page to fill in this information)

The Village has procedures and policies to require the appropriate disposal of municipal generated wastes.

Measurable Goals, including frequencies:

The Village will continue the municipal operations waste control program to curtail the discharge of pollutants to storm sewer systems by Public Works employees.

Milestones:

Year 1:

The Village will continue the municipal waste operations control program.

Year 2:

The Village will continue the municipal waste operations control program.

Year 3:

The Village will continue the municipal waste operations control program.

Year 4:

The Village will continue the municipal waste operations control program.

Year 5:

The Village will continue the municipal waste operations control program.

Go to Additional Pages

F.5 Flood Management/Assess Guidelines (You may need to go to the next page to fill in this information)

Brief Description of BMP:

The Village ordinances require the appropriate management of development and other uses within special flood hazard areas.

Measurable Goals, including frequencies:

The Village will continue to enforce the ordinance regarding potential uses of the special flood hazard area to limit potential for the discharge of contaminants to the storm sewer system.

Milestones:

Year 1:

The Village will continue the special flood hazard area development and use requirements.

Year 2:

The Village will continue the special flood hazard area development and use requirements.

Year 3:

The Village will continue the special flood hazard area development and use requirements.

Year 4:

The Village will continue the special flood hazard area development and use requirements.

Year 5:

The Village will continue the special flood hazard area development and use requirements.

Go to Additional Pages

F.6 Other Municipal Operations Controls (You may need to go to the next page to fill in this information)

The Village performs a variety of activities that reduce or prevent pollutants including pesticides, herbicides, fertilizers and trash from entering the storm sewer system and to minimize exposure. These activities are part of the Villages municipal operations.

Measurable Goals, including frequencies:

The Village will continue the municipal operations controls to reduce/minimize or prevent the discharge of pollutants to storm sewer systems by Public Works employees.

Milestones:

Year 1:

The Village will continue the municipal operations control program.

Year 2:

The Village will continue the municipal operations control program.

Year 3:

The Village will continue the municipal operations control program.

Year 4:

The Village will continue the municipal operations control program.

Year 5:

The Village will continue the municipal operations control program.

Go to Additional Pages

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)).

Robert Lewis

Director of Public Works

May 27, 2016

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 \_\_\_\_\_

Add Another BMP

Delete Last Entry

B. Public Participation/Involvement

BMP Number \_\_\_\_\_

Add Another BMP

Delete Last Entry

C. Illicit Discharge Detection and Elimination

BMP Number C2

Add Another BMP

Delete Last Entry

D. Construction Site Runoff Control

BMP Number \_\_\_\_\_

Add Another BMP

Delete Last Entry

E. Post-Construction Runoff

BMP Number \_\_\_\_\_

Add Another BMP

Delete Last Entry

Additional Info - Page 6

F. Pollution Prevention/Good

BMP Number \_\_\_\_\_

Add Another BMP

Delete Last Entry

## **APPENDIX 8**

Village of Westchester Annual Facility Inspection Report

**ILLINOIS ENVIRONMENTAL PROTECTION AGENCY  
ANNUAL FACILITY INSPECTION REPORT  
NPDES PERMIT FOR STORM WATER DISCHARGES  
FROM MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4)**

Complete each section of this report.

<b>REPORT PERIOD:</b>	<b>FROM: MARCH 2015</b>	<b>TO: MARCH 2016</b>
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**MS4 OPERATOR INFORMATION: (As it appears on the current permit)**

<b>NAME:</b> Village of Westchester		<b>TELEPHONE NUMBER:</b> 708-345-0041
<b>MAILING ADDRESS:</b> 10300 Roosevelt Road		
<b>CITY:</b> Westchester	<b>STATE:</b> IL	<b>ZIP:</b> 60154
<b>CONTACT PERSON:</b> Robert Lewis (Person responsible for Annual Report)		

**NAME(S) OF GOVERNMENTAL ENTITY(IES) IN WHICH MS4 IS LOCATED: (As it appears on the current permit)**

Cook County	

**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.

<b>SIGNATURE:</b> 	<b>DATE:</b> May 31, 2016
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Information required by this form must be provided to comply with 415 ILCS 5/39 (1996). Failure to do so may prevent this form from being processed and could result in your application being denied. This form has been approved by the Forms Management Center.

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## Part A. Changes to Best Management Practices

**Note:** X indicates BMPs performed that were proposed in your NPDES permit  
 ✓ indicates changes to BMPs proposed in your NPDES permit

Year 14	Year 15	Year 16	Year 17	Year 18	
<b>MS4</b>					
<b>A. Public Education and Outreach</b>					
X	X	X	X	X	A.1 Distributed Paper Material
					A.2 Speaking Engagement
					A.3 Public Service Announcement
					A.4 Community Event
					A.5 Classroom Education Material
X	X	X	X	X	A.6 Other Public Education
<b>B. Public Participation/Involvement</b>					
					B.1 Public Panel
					B.2 Educational Volunteer
					B.3 Stakeholder Meeting
					B.4 Public Hearing
					B.5 Volunteer Monitoring
					B.6 Program Coordination
X	X	X	X	X	B.7 Other Public Involvement
<b>C. Illicit Discharge Detection and Elimination</b>					
X	X	X	X	X	C.1 Storm Sewer Map Preparation
X	X	X	X	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
X	X	X	X	X	C.9 Public Notification
					C.10 Other Illicit Discharge Controls

Year 14	Year 15	Year 16	Year 17	Year 18	
<b>MS4</b>					
<b>D. Construction Site Runoff Control</b>					
					D.1 Regulatory Control Program
X	X	X	X	X	D.2 Erosion and Sediment Control BMPs
					D.3 Other Waste Control Program
X	X	X	X	X	D.4 Site Plan Review Procedures
					D.5 Public Information Handling Procedures
X	X	X	X	X	D.6 Site Inspection/Enforcement Procedures
					D.7 Other Construction Site Runoff Controls
<b>E. Post-Construction Runoff Control</b>					
					E.1 Community Control Strategy
					E.2 Regulatory Control Program
					E.3 Long Term O&M Procedures
					E.4 Pre-Const Review of BMP Designs
X	X	X	X	X	E.5 Site Inspections During Construction
X	X	X	X	X	E.6 Post-Construction Inspections
					E.7 Other Post-Const Runoff Controls
<b>F. Pollution Prevention/Good Housekeeping</b>					
					F.1 Employee Training Program
X	X	X	X	X	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 B. Status of Compliance with Permit Conditions**

*(Provide 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 maximum extent practicable [MEP], and your identified measurable goals for each of the minimum control measures.)*

The status of BMPs and measurable goals performed in Year 10 are described below.

### **1. Public Education and Outreach**

The Village of Westchester (Village) committed to conduct Public Education and Outreach as part of its permit. Public Education and Outreach requires implementation of a program to distribute educational material 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 to stormwater runoff. The Village committed to implementation of BMPs related to A.1 and A.6. The status or progress for each of the measurable goals related to these BMPs is presented below.

#### **A.1 Distributed Paper Material**

*Measurable Goals: The Village will continue to include information in the Village newsletter on a variety of storm water topics.*

**The Village has obtained informational brochures related to informing the public about stormwater and water quality issues and will continue to produce relevant information in the monthly Village newsletter.**

#### **A.6 Other Public Education**

*Measurable Goals: The Village will continue to include information in the Village website to promote green infrastructure relative to stormwater.*

**The Village has included information on the website related to rain barrels and additional promotion of green infrastructure through information from the Center for Neighborhood Technology.**

### **2. Public Participation/Involvement**

The Village committed to performing activities and services related to the Public Participation/Involvement minimum control measure under BMP number B.7. The status or progress for the measurable goals related to this BMP is presented below.

#### **B.7 Other Public Involvement**

*Measurable Goals: The Village will continue to appear at the local high school to provide information about stormwater management and BMPs.*

**The Village will continue to attend the Annual Seniors Breakfast to provide information about stormwater management and BMPs.**

### **3. Illicit Discharge Detection and Elimination**

The Village committed to perform some activities related to the Illicit Discharge Detection and Elimination minimum control under BMP numbers C.1, C.2, and C.9. The status or progress for each of the measurable goals related to these BMPs is presented below.

### **C.1 Storm Sewer Map Preparation**

*Measurable Goals: The Village will continue to update the storm sewer map based on new and redevelopment.*

**The Village has and will continue to update the Village storm sewer map to reflect new and redevelopment within the Village.**

### **C.2 Regulatory Control Program**

*Measurable Goals: The Village will review the Ordinance related to illicit discharge and dumping and update on a yearly basis to prohibit illegal connections and discharges to the Village storm sewer system.*

**The Metropolitan Water Reclamation District of Greater Chicago (MWRDGC) Sewage and Waste Control Ordinance prohibits the discharge of wastes of any kind to the waters of the state under the jurisdiction of the MWRD and the Village. The Village will work with the MWRD to enforce the Ordinance.**

### **C.9 Public Notification**

*Measurable Goals: The Village will publish ordinance changes and potential penalties on the Village website on a monthly basis.*

**The Village has published information related to changes in the ordinance on the website.**

## **4. Construction Site Runoff Control**

The Village committed to performing activities and services related to the Construction Site Runoff Control minimum control measure under BMP numbers D.2, D.4 and D.6. The status or progress for each of the measurable goals related to these BMPs is presented below.

### **D.2 Erosion and Sediment Control BMPs and D.4 Site Plan Review Procedures**

*Measurable Goal: The Village will continue the current program to review sediment and erosion measures and BMPs.*

**The Village has implemented the sediment and erosion control procedures for all projects in the Village.**

### **D.6 Site Inspection/Enforcement Procedures**

*Measurable Goal: The Village will inspect sediment and erosion control measures on all construction sites.*

**The Village has implemented the sediment and erosion control procedures for all projects in the Village and will continue to inspect and enforce the program.**

## **5. Post-Construction Runoff Control**

The Village committed to performing activities and services related to the Post-Construction Site Runoff Control minimum control measure under BMP numbers E.5 and E.6. The status or progress for each of the measurable goals related to these BMPs is presented below.

### **E.5 Site Inspections During Construction and E.6 Post Construction Inspection**

*Measurable Goal: The Village will inspect all permitted construction for BMP compliance.*

**The Village performs intermittent inspection of private construction sites for required compliance for all projects in the Village.**

## 6. Pollution Prevention/Good Housekeeping

This minimum control measure involves the development and implementation of an operation and maintenance program to reduce the discharge of pollutants from municipal operations. This program must include a training program for municipal employees. The Village committed to perform activities for BMP number F.2. The status or progress of the measurable goal related to this BMP is presented below.

### **F.2 Inspection and Maintenance Program**

*Measurable Goals: The Village will develop a program to directly reduce the amount of debris from entering storm sewer structures and entering the storm sewers.*

**The Village performs activities to reduce the introduction of pollutants to the storm sewer system and will continue the storm system inspection program. The Village cleans and televises 5% of the storm sewers annually or as budget allows.**

## **Part C. Information and Data Collection Results**

*(Provide information and water quality sampling/monitoring data related to illicit discharge detection and elimination collected during the reporting period.)*

No information or data was collected by the Village during Year 13.

## Part D. Summary of Year 14 Stormwater Activities

*(Present a summary of the storm water activities you plan to undertake during the next reporting cycle, including an implementation schedule in the sections following the table.)*

The table shown below summarizes the BMPs committed to for the next NPDES permitting cycle. Specific BMPs and measurable goals for future development activities are presented in the sections following the table.

**Note: X indicates BMPs committed to for Year 14.**

Year 14	
MS4	
<b>A. Public Education and Outreach</b>	
X	A.1 Distributed Paper Material
	A.2 Speaking Engagement
X	A.3 Public Service Announcement
	A.4 Community Event
	A.5 Classroom Education Material
X	A.6 Other Public Education
<b>B. Public Participation/Involvement</b>	
	B.1 Public Panel
X	B.2 Educational Volunteer
	B.3 Stakeholder Meeting
	B.4 Public Hearing
X	B.5 Volunteer Monitoring
X	B.6 Program Coordination
X	B.7 Other Public Involvement
<b>C. Illicit Discharge Detection and Elimination</b>	
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
	C.8 Pollutant Field Testing
	C.9 Public Notification
X	C.10 Other Illicit Discharge Controls

Year 14	
MS4	
<b>D. Construction Site Runoff Control</b>	
X	D.1 Regulatory Control Program
X	D.2 Erosion and Sediment Control BMPs
X	D.3 Other Waste Control Program
	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
<b>E. Post-Construction Runoff Control</b>	
	E.1 Community Control Strategy
X	E.2 Regulatory Control Program
X	E.3 Long Term O&M Procedures
	E.4 Pre-Const Review of BMP Designs
X	E.5 Site Inspections During Construction
X	E.6 Post-Construction Inspections
	E.7 Other Post-Const Runoff Controls
<b>F. Pollution Prevention/Good Housekeeping</b>	
X	F.1 Employee Training Program
X	F.2 Inspection and Maintenance Program
X	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

## 1. Public Education and Outreach

The Village is committing to conduct Public Education and Outreach as part of its permit. Public Education and Outreach requires implementation of a program to distribute educational material 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 to stormwater runoff. The Village commits to implementation of BMPs related to A.1 and A.6 as described below.

### A.1 Distributed Paper Material

*Measurable Goals:*     *The Village will continue to include information in the Village newsletter on a variety of storm water topics.*

**The Village has obtained informational brochures related to informing the public about stormwater and water quality issues and will continue to produce relevant information in the monthly Village newsletter.**

### A.6 Other Public Education

*Measurable Goals:*     *The Village will continue to include information in the Village website to promote green infrastructure relative to stormwater.*

## 2. Public Participation/Involvement

The Village will perform activities and services related to the Public Participation/Involvement minimum control measure. BMPs will be implemented under BMP numbers B.7 as described below.

### B.7 Other Public Involvement

*Measurable Goals:*     *The Village will continue to appear at the local high school to provide information about stormwater management and BMPs.*

## 3. Illicit Discharge Detection and Elimination

The Village commits to performing some activities related to the Illicit Discharge Detection and Elimination minimum control. BMPs will be implemented under BMP numbers C.1, C.2 and C.9 as described below.

### C.1 Storm Sewer Map Preparation

*Measurable Goals:*     *The Village will continue to update the storm sewer map based on new and redevelopment.*

**The Village has and will continue to update the Village storm sewer map to reflect new and redevelopment within the Village.**

### C.2 Regulatory Control Program

*Measurable Goals:*     *The Village will review the Ordinance related to illicit discharge and dumping and update on a yearly basis to prohibit illegal connections and discharges to the Village storm sewer system.*

**The Metropolitan Water Reclamation District of Greater Chicago (MWRDGC) Sewage and Waste Control Ordinance prohibits the discharge of wastes of any kind to the waters of the state under the jurisdiction of the MWRD and the Village. The Village will work with the MWRD to enforce the Ordinance.**

### **C.9 Public Notification**

*Measurable Goals:* The Village will publish ordinance changes and potential penalties on the Village website on a monthly basis.

## **4. Construction Site Runoff Control**

The Village will perform activities and services related to the Construction Site Runoff Control minimum control measure. BMPs will be implemented under BMP numbers D.2, D.4 and D.6 as described below.

### **D.2 Erosion and Sediment Control BMPs and D.4 Site Plan Review Procedures**

*Measurable Goal:* The Village will continue the current program to review sediment and erosion measures and BMPs.

**The Village has implemented the sediment and erosion control procedures for all projects in the Village.**

### **D.6 Site Inspection/Enforcement Procedures**

*Measurable Goal:* The Village will inspect sediment and erosion control measures on all construction sites.

## **5. Post-Construction Runoff Control**

The Village will perform activities and services related to the Post-Construction Site Runoff Control minimum control measure. BMPs will be implemented under BMP numbers E.5 and E.6 as described below.

### **E.5 Site Inspections During Construction and E.6 Post Construction Inspection**

*Measurable Goal:* The Village will inspect all permitted construction for BMP compliance.

**The Village performs intermittent inspection of private construction sites for required compliance for all projects in the Village.**

## **6. Pollution Prevention/Good Housekeeping**

This minimum control measure involves the development and implementation of an operation and maintenance program to reduce the discharge of pollutants from municipal operations. This program must include a training program for municipal employees. The Village will perform BMPs under BMP numbers F.1, F.2 and F.3 as described below.

### **F.2 Inspection and Maintenance Program**

*Measurable Goals:* The Village will develop a program to directly reduce the amount of debris from entering storm sewer structures and entering the storm sewers.

**The Village performs activities to reduce the introduction of pollutants to the storm sewer system and will continue the storm system inspection program. The Village cleans and televises 5% of the storm sewers annually or as budget allows.**

## **Part E. Notice of Qualifying Local Program**

The Village of Westchester Municipal Code (Code), Metropolitan Water Reclamation District of Greater Chicago (MWRDGC) Ordinances and Village of Westchester Public Works Department activities are considered Qualifying Local Programs (QLPs) that count towards satisfying the requirements of the six minimum control measures. Listed below is a summary of the activities performed by the QLPs during Year 13. In general, all activities performed by the QLPs during Year 13 will be continued in subsequent years.

### **1. Public Education and Outreach:**

The Village does not currently have a qualifying local program for public education and outreach.

### **2. Public Participation/Involvement:**

The Village coordinates with the Cook County Sheriff's Department to utilize the Sheriff's Work Alternate Program (SWAP) to perform clean up activities. This program relates to BMP B.5.

### **3. Illicit Discharge Detection and Elimination:**

The Metropolitan Water Reclamation District of Greater Chicago (MWRDGC) Sewage and Waste Control Ordinance prohibits the discharge of wastes of any kind to the waters of the state under the jurisdiction of the MWRD. The Village is also a member of the West Cook County Solid Waste Agency. These programs relate to BMPs C.2 and C.10.

### **4. Construction Site Runoff Control:**

The Village soil erosion and sediment control policies and procedures cover permit requirements, site design requirements and inspections for all sites greater than or equal to one acre. This program relates to BMP numbers D.1, D.4 and D.6.

### **5. Post-Construction Runoff Control:**

The Village post construction runoff control policies and procedures include the review, inspection and enforcement of completed construction sites to verify compliance with local soil erosion and sediment control requirements. These activities relate to BMP numbers E.2, E.3, E.5 and E.6.

### **6. Pollution Prevention/Good Housekeeping:**

The Public Works Department coordinates with the MWRD Small Streams to utilize their debris removal program from the local waterways. These activities relate to BMP F.2.

**Part F. Construction Projects Conducted During Year 13**

*(Provide a list of construction projects your entity has paid for during the reporting period.)*

There were no projects funded by the Village during Year 13 over 1 acre.

## **APPENDIX 9**

IEPA General NPDES Permit No. ILR40



# 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

NPDES/Hutton/stormwater/MS4/MSFinal2-9-16.daa

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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](mailto: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.

## General NPDES Permit No. ILR40

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.

## General NPDES Permit No. ILR40

- 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;

## General NPDES Permit No. ILR40

- 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](mailto: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).

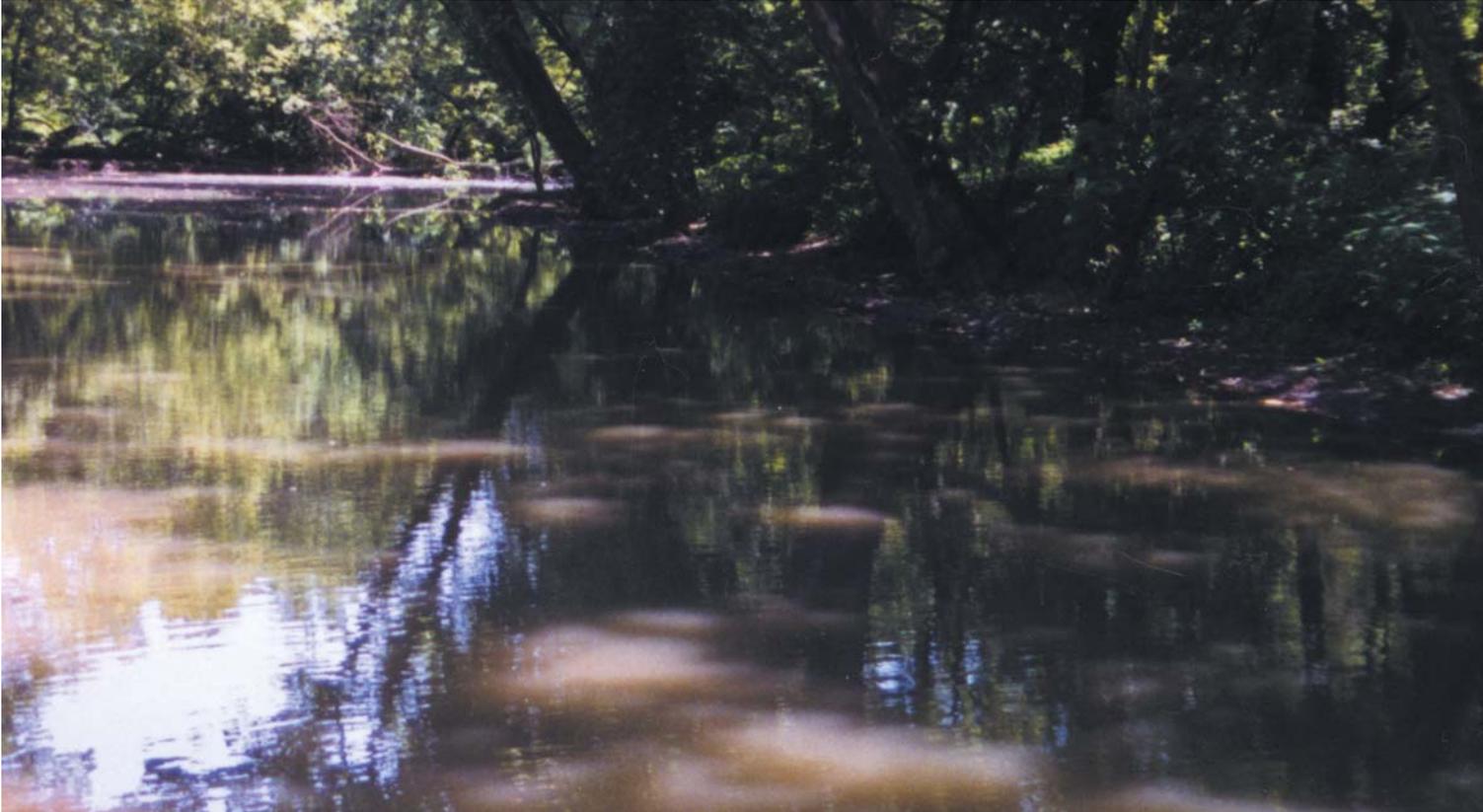
- (2) If the permittee monitors any pollutant more frequently than required by the permit, using test procedures approved under 40 CFR 136 or as specified in the permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR.
- (3) Calculations 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 10**

Salt Creek Watershed – Restoring Balance



# Salt Creek Watershed Restoring Balance

Citizens' Concerns about Natural Resource  
Issues in the Lower Salt Creek Watershed





dredging pollution channelization  
erosion flood control water alteration  
**The Salt Creek TODAY....**  
surface runoff sediment dredging



# A HISTORY OF THE SALT CREEK WATERSHED

Fourteen thousand years ago, huge glaciers carved out the Great Lakes and excavated the entire landscape down to the bedrock—drastically altering the Midwest. The subsequent glacial debris rebuilt the landscape by forming hills, valleys and plains, while the melt water formed the region's lakes, wetlands and streams.

Over time, woodland, wetland and riparian ecosystems reestablished themselves comprised of plants and animals that further built the landscape in an interdependent relationship with their environment. The soils that developed in the Chicagoland area—while at first influenced by geologic and topographic factors—were mostly shaped by the variety of natural plant and animal communities that provided the lush biomass necessary for the formation of thick, organic-rich soils.

The topography in conjunction with local weather conditions determined the shape of watersheds and the size of streams, flood plains and wetlands. Rainfall and snow melt would first infiltrate the soil, thereby recharging the groundwater. Plants held the soil in place and returned water to the atmosphere via evapotranspiration. Any excess water in the system was

managed in wetlands and flood plains. All of these natural processes worked together to achieve a long-term equilibrium in the water cycle.

When Native Americans settled in the area they found a balanced ecosystem that they, too, managed to live with in harmony. Europeans found abundant natural resources and fertile soils suitable for extraction and agricultural purposes, which supported Chicago's great financial success and provided the catalyst for expanded settlement throughout the region. This development, like the glaciers before them, drastically altered the landscape and disturbed the delicate relationship between geology, topography, soil, climate, and native plant and animal communities.

Today, the Salt Creek watershed is highly urbanized and densely populated. Human activities of all kinds place tremendous strains on the natural environment, which are evidenced by air pollution, soil erosion, flooding, water pollution, habitat loss, and decreased species diversity. Citizens living throughout the Salt Creek watershed are becoming more aware of this imbalance and are looking for ways to improve conditions.

This document represents the efforts of a group of concerned citizens to identify problem areas and share a vision of Salt Creek's future. The group envisions people making better decisions about how they manage the land, how they manage the water that flows off the land, and what they can do to participate in the enhancement, protection and preservation of the creek. They understand that the Salt Creek watershed will not be what it was 10,000 or even 200 years ago. But it is a natural resource suitable for fishing, recreating, and deserving respect and proper management in order to improve the quality of life in an area that many people call home.



tributaries network cleanup  
*...and tomorrow*  
stream bank management  
resource habitat recreation

# LIFE THROUGHOUT THE SALT CREEK WATERSHED

As we all know, water flows downhill. A watershed is simply the total area of land that drains into a given stream, river or wetland. The entire Salt Creek watershed drains about 150 square miles. This includes the land that drains into Addison Creek and Spring Brook, two of the creek's major tributaries. The creek itself is about 50 miles long and has a vertical drop of about 225 feet along this distance. As of 1996, land cover in the watershed consisted of 77% urban and built-up land, 15% forest and woodland, 4% wetland, and 4% other. The map on the next page shows the municipalities of the watershed.

Everyone lives in a watershed, and everyone lives upstream. For instance, Salt Creek flows into the Des Plaines River. The Des Plaines River flows into the Illinois River, which then flows into the Mississippi River. Ultimately, we are all residents—and therefore stewards—of the Gulf of Mexico. But it is more reasonable to manage surface water resources if they are on the scale of a local watershed, which is why the focus of this document is on the lower Salt Creek watershed.

## The Lower Salt Creek Watershed

Salt Creek is dammed in Elk Grove Village creating Busse Lake, which forms a boundary between the highly urbanized lower watershed and the still developing upper watershed. This document focuses primarily on the lower watershed, downstream from the Busse Lake reservoir, because the resource concerns and management issues are similar for this geographic area.

From Busse Lake, the creek flows south and east about 45 miles to its confluence with the Des Plaines River in Lyons. Including Spring Brook and Addison Creek, the lower watershed drains about 130 square miles of urbanized landscape composed of 26 municipalities in two counties. Land use in the lower watershed is primarily residential mixed with commercial, followed by light manufacturing and county forest preserves.

According to the U.S. Geological Survey (USGS), 19 sewage treatment plants supply the main water discharge for the Salt Creek watershed, seven of which are actually on the creek. The Illinois Environmental Protection Agency (IEPA) ranks Salt Creek water quality as “fair.” The main problems stem from non-point source pollution (from rainwater and melt water runoff), channelization (straightening of the

creek), and habitat changes (building in the floodplain, stormwater discharges).

Nearly all the problems facing Salt Creek, however, are related to rainwater in the watershed. Specifically, runoff from the urban landscape picks up a variety of chemicals and pollutants from lawns and roadways that directly discharge—untreated—into the creek. The manmade surfaces throughout the watershed convey a greater volume of rainwater than the creek evolved to hold. Furthermore, development in the floodplain has eliminated the creek's ability to handle this greater volume of water, which results in more frequent floods and increased property damage. Finally, in older communities, raw sewage enters the creek during heavy rains because of the manner in which the infrastructure was built. These are some of the major resource management issues facing the creek today.

# THE MISSION OF SALT CREEK WATERSHED NETWORK

The Salt Creek Watershed Network (SCWN) was formed in March 1998 as a grass roots organization to bring people together, raise awareness of the issues facing the creek, and find ways to make the creek an enjoyable resource for people. SCWN recognized that various groups with common goals were operating throughout the watershed, but local efforts needed a regional perspective to ensure long-term and watershed-wide improvements.

As a result, SCWN's mission is to seek a common vision and provide coordination and promote communication among the various volunteer groups, citizens, businesses, agencies and others operating and living within the watershed. By facilitating, partnering and conducting public education throughout the watershed, SCWN promotes the improvement of water quality, recreation, and the use of best management practices and ecosystem enhancements.

During its first year, SCWN organized a watershed bus tour, coordinated several creek cleanups, elected a board of directors, and co-hosted an IEPA public meeting. SCWN then initiated the watershed planning process in an effort to bring together people throughout the watershed to discuss the issues facing Salt Creek.

## History of the Watershed Planning Process

In early 1998, concerned citizens from the Salt Creek watershed came together to find common ground from which they could improve the quality of the watershed. Those stakeholders became participants of the Watershed Planning Team. In February 1999, IEPA awarded SCWN funds to develop this document. The Natural Resource Conservation Service facilitated the process, which included brainstorming sessions and a discussion of the issues over a 24-month period. While a variety of concerns were voiced, eight major resource categories were identified and prioritized:

- Water Quality
- Streambank Maintenance
- Habitat
- Flooding
- Land Use
- Public Policy
- Public Awareness/Education
- Recreation

The Watershed Planning Team divided into three working subcommittees to develop specific concern statements and goals for the eight categories, which are presented in the next section.

In February 2000, a Technical Advisory Team (A-Team) met to discuss the points raised by the Watershed Planning Team. Technical comments received by A-Team members were incorporated into this document in August 2000. Between December 2000 and March 2001, this document was written, revised and formatted.

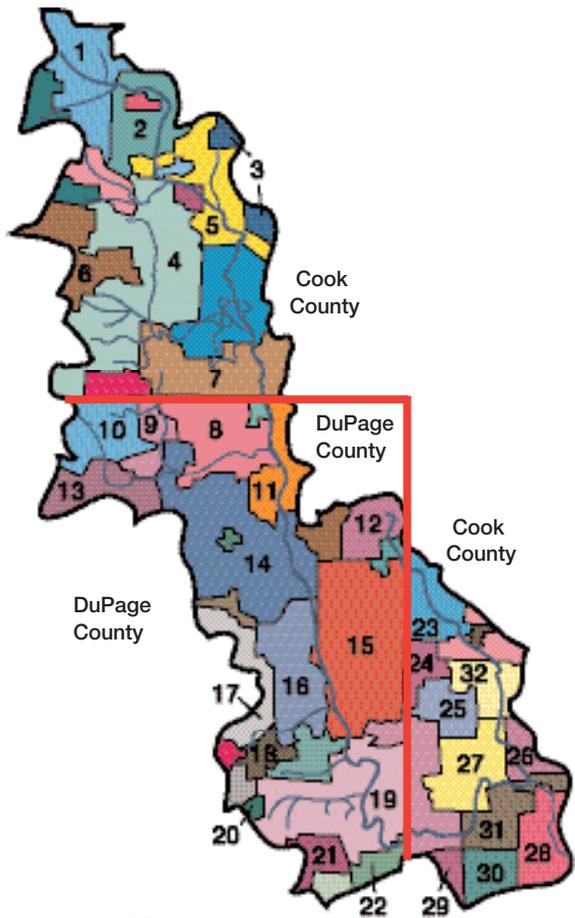
# SALT CREEK WATERSHED MUNICIPALITIES

- Northern Cook County Municipalities:**
- Inverness 1
  - Palatine 2
  - Arlington Heights 3
  - Schaumburg 4
  - Rolling Meadows 5
  - Hoffman Estates 6
  - Elk Grove Village 7

- DuPage County Municipalities:**
- Itasca 8
  - Medinah 9
  - Roselle 10
  - Wood Dale 11
  - Bensenville 12
  - Bloomington 13
  - Addison 14
  - Elmhurst 15
  - Villa Park 16
  - Lombard 17
  - York Center 18
  - Oakbrook 19
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County Boundary

Watershed Boundary



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## ISSUES AND ACTIONS

The Watershed Planning Team identified the following eight issues in order to define a future vision for the watershed and create a list of actions needed to restore balance in the watershed. The concerns, vision and actions are identified for each issue.

### ISSUE: Water Quality

**Concern:** Salt Creek was once a swimming and boating recreational asset. Now water quality has deteriorated because of non-point sources of pollution, destruction of habitat along the creek, development and flooding.

**Vision:** The water quality of Salt Creek is improved so that its ranking is changed from “fair” to “good,” and all citizens and wildlife living within the watershed enjoy the benefits.

#### Actions

- Understand the sources of impairment, which will be articulated in a Total Maximum Daily Load (TMDL) study.
- Communicate findings of the TMDL study throughout watershed. Work with municipalities to implement solutions to water-quality issues.
- Educate people about their positive and negative impacts on water quality and how to reduce point and non-point sources of pollution.
- Work toward restoring natural aquatic habitats that support a diverse, native, aquatic community.
- Evaluate then remove or modify unnecessary dams to restore natural flow and improve fish passage and flood-water management.
- Work with watershed constituents to strengthen and enforce ordinances that prevent water-quality impairments.

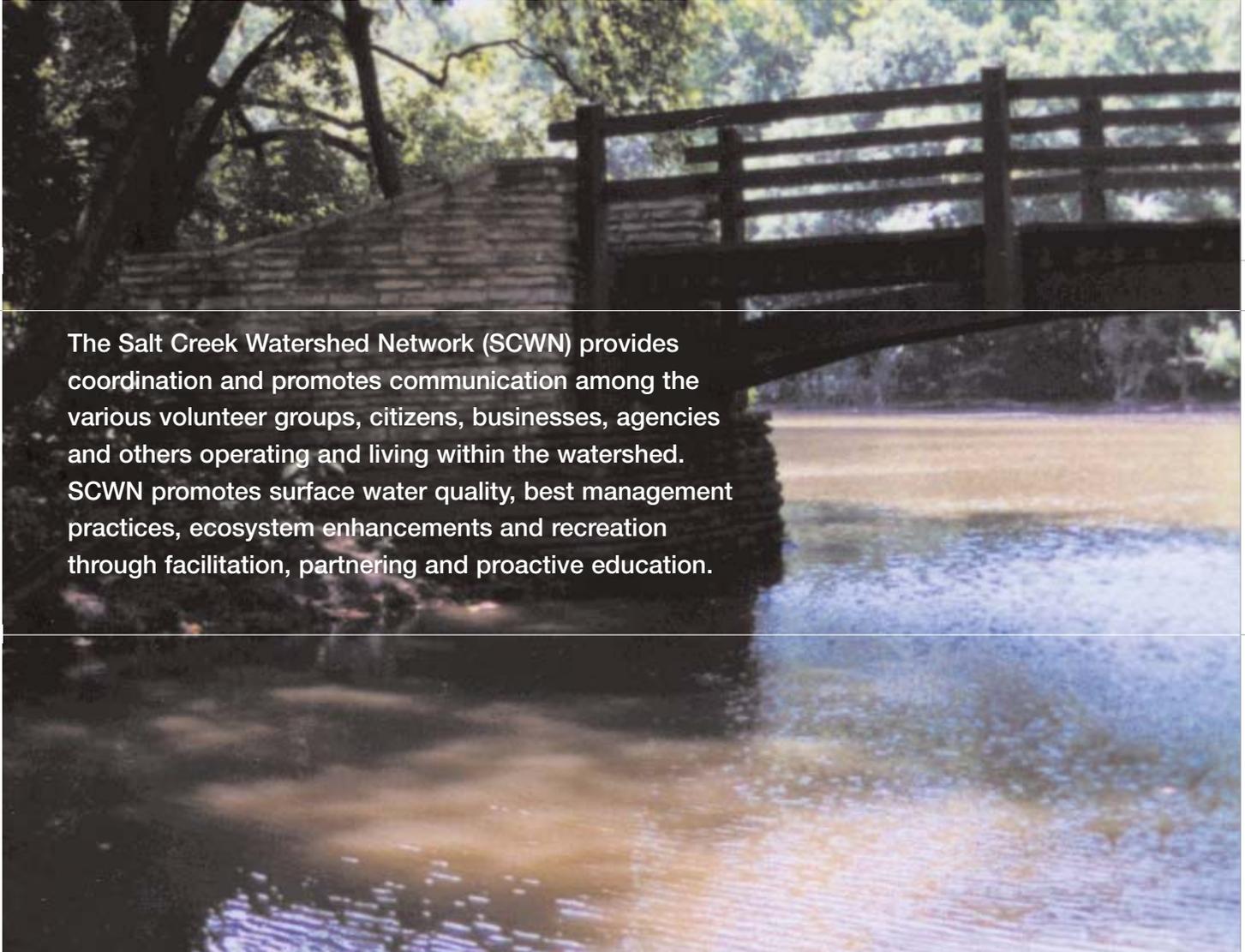
### ISSUE: Streambank Maintenance

**Concern:** Salt Creek streambanks have eroded due to flooding and poor streamside management which has left them bare and less functional. Numerous jurisdictions along the creek have resulted in no consistent maintenance process.

**Vision:** Restored streambanks that are stable, support vegetation, and provide habitat for wildlife.

#### Actions

- Identify jurisdictions along the creek to determine responsibility for maintenance of such things as log jams.
- Identify existing projects that can serve as models for other communities.
- Develop educational information about streambank erosion and appropriate best management practices, then distribute this information to all streambank landowners.
- Develop a list of critical agencies/commissions within the watershed making decisions about dam and stream maintenance, then get on their mailing list.
- Develop a method to mobilize Salt Creek Watershed Network and citizens to publically support and actively participate in streambank stabilization, dam maintenance and other related issues.



The Salt Creek Watershed Network (SCWN) provides coordination and promotes communication among the various volunteer groups, citizens, businesses, agencies and others operating and living within the watershed. SCWN promotes surface water quality, best management practices, ecosystem enhancements and recreation through facilitation, partnering and proactive education.



### ISSUE: Habitat

**Concern:** Salt Creek no longer supports a diversity of plants and animals due to urbanization and the effects of erratic stormwater discharges (unstable hydrologic conditions). Channelized areas have a uniform gradient, no riffle or pool development, no meanders (curves) and very steep banks. During low-flow periods in the summer, many channelized streams have low dissolved-oxygen levels. Under these conditions, they provide poor habitat for fish or other stream organisms, such as benthic macroinvertebrates.

**Vision:** The effects of urbanization are minimized and better managed. The riverine ecosystem is in balance with healthy aquatic and terrestrial habitats that support a diversity of plants and animals.

### Actions

- Educate people about the value of a diverse ecosystem consisting of abundant native plants and wildlife.
- Work with biologists to complete the watershed-wide survey of existing terrestrial and aquatic habitats and species.
- Develop strategies that protect and enhance existing terrestrial and aquatic habitat and species variety.
- Work with stakeholders to remove or modify unnecessary, non-functional dams in an effort to restore the natural flow of water, thereby improving fish passage.

### ISSUE: Flooding

**Concern:** Urbanization has changed the hydrology of the watershed by increasing impervious surfaces and modifying or developing the flood plain. This has increased direct flow to the creek and the frequency and severity of flood events, thus worsening the erosion problem. Building in the flood plains has been a very expensive proposition, due to losses during floods.

**Vision:** When feasible, the man-made infrastructure is removed from the flood plain to allow natural systems to renew themselves. Floodwaters are less destructive as there has been a watershed-wide effort to encourage better flood-plain management practices and reduce erratic flows into the creek.

### Actions

- Educate the public on the causes of flooding in order to encourage public support for ordinances that improve flood-plain usage.
- Work with watershed jurisdictions to amend policies and ordinances that impact urbanized flood plains.
- Educate the public on actions individuals can take to reduce the amount of rainwater flow from their property into storm-drain systems.
- Partner with stormwater specialists to help restore natural stormwater processes and flood-plain processes to the maximum extent possible.

### ISSUE: Land Use

**Concern:** The way we manage the land has changed and the impacts on the land are greater. Many land-use policies support continued development. Each community within the watershed has its own focus on land use without broader vision toward the entire watershed.

**Vision:** All local governments and agencies work together to create land-use policies that are consistent throughout the watershed and protect environmental quality.

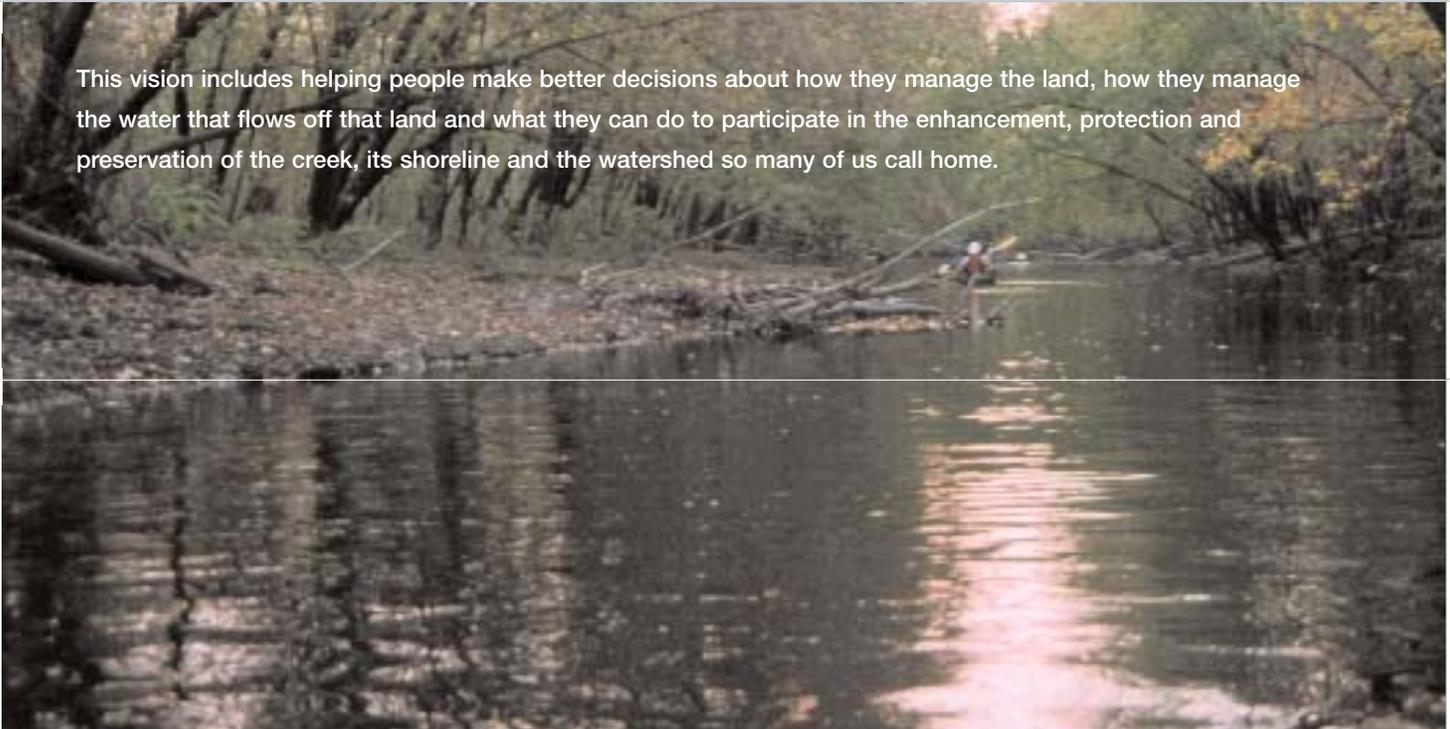
### Actions

- Implement stormwater and flood-plain ordinances that minimize or eliminate development in flood plains.
- Educate landowners about land-management issues and identify ways they can better care for and protect the watershed.
- Educate policy makers on how to minimize the negative impacts of land-use changes and land-management practices within their jurisdiction.
- Amend ordinances to protect and improve riparian environments.
- Improve communications among stakeholders to increase consistent best management practices across the watershed.

## A VISION FOR THE SALT CREEK WATERSHED

- > People recreating on and relaxing by the creek.
- > Municipalities working together to better manage the Salt Creek as a natural resource.
- > Citizens, businesses and municipalities understanding the sources and impacts of non-point pollution.
- > A riverine ecosystem that supports a diversity of life.

This vision includes helping people make better decisions about how they manage the land, how they manage the water that flows off that land and what they can do to participate in the enhancement, protection and preservation of the creek, its shoreline and the watershed so many of us call home.





### ISSUE: Public Policy

**Concern:** Salt Creek flows through numerous jurisdictional boundaries and is home to a large population of individuals, landowners and agencies, many with overlapping and possibly conflicting viewpoints.

**Vision:** The numerous jurisdictions, individuals, landowners, and agencies work in coordination to best manage and improve the water resources in the watershed.

#### Actions

- Create an advisory board with representatives from each watershed jurisdiction and stakeholder group to coordinate policies throughout the watershed, addressing water-quality and stormwater management.
- Establish a clearinghouse of exemplary ordinances and best management practices.
- Promote a forum for sharing successes and experiences that encourage jurisdictions to learn from one another.
- Advocate public involvement in policy changes and in implementing those changes.

### ISSUE: Public Awareness/Education

**Concern:** Much of the land in the Salt Creek watershed was developed decades ago, and its current poor condition has become “acceptable” or considered “the way it is.” A majority of the public is unaware of the issues facing the environmental quality in the watershed and lacks an understanding of the solutions.

**Vision:** The watershed is home to informed citizens, policy makers and other stakeholders who appreciate the environmental assets in the watershed, foresee its long-term value, understand how their actions affect it, and make individual decisions necessary to reduce negative impacts.

#### Actions

- Develop a strategic outreach communication plan that includes message points, action steps and evaluation strategies.
- Heighten awareness for, deepen appreciation of, and promote action on behalf of Salt Creek throughout the watershed.
- Identify priority target audiences and then determine the most effective education program for each group.
- Utilize existing networks to get the word out.

### ISSUE: Recreation

**Concern:** Because few people have a connection to Salt Creek, or they perceive it as inaccessible and unhealthy, it is an underutilized recreational resource.

**Vision:** More and more people visit the public areas of the watershed to enjoy the benefits of healthy natural resources, including recreational activities on the creek.

#### Actions

- Evaluate current recreational opportunities and identify ways to create more.
- Promote the development of access points and portages for paddlers.
- Identify barriers that keep people from utilizing Salt Creek.
- Develop safe access along the shores that encourage responsible recreational use of the creek.
- Promote change in the legal status of Salt Creek to “navigable” waterway.
- Promote changing the “designated use” of the creek from “general” to “secondary contact.”
- Work in conjunction with the Salt Creek portion of the NIPC-sponsored regional Water Trails Plan.
- Do what is necessary to restore the natural flow to the creek and provide safe passage for recreation.
- Establish a communication program that informs citizens of safety issues associated with the creek’s recreational uses.

## APPENDIX A: GLOSSARY



**Action Teams or Subcommittees:** these are the ongoing or temporary groups that are formed to carry out specific tasks of a more specialized nature, including planning special events or investigating specific issues such as wetlands preservation or best management practices.

**Benthic Macroinvertebrates:** bottom dwelling (benthic) invertebrates that can be seen by the unaided eye (macro). Most benthic macroinvertebrates in flowing water are aquatic insects or the aquatic stage of insects, such as stonefly nymphs, mayfly nymphs, caddisfly larvae, dragonfly nymphs and midge larvae. They also include such things as clams and worms. The presence of benthic macroinvertebrates that are intolerant of pollution is a good indicator of good water quality.

**Best Management Practices (BMPs):** practices or techniques that are used to prevent or ameliorate damage to natural resources; some BMPs used in urban areas may include urban stormwater wetlands, dust control, urban filter strip, porous pavement, silt fence and vegetative streambank stabilization.

**Bioengineering (or Soil Bioengineering):** techniques for stabilizing eroding or slumping river banks that rely on the use of plants and plant materials, such as live willow posts, brush layering, coconut logs and other “greener” or “softer” techniques in contrast to techniques that rely on creating “hard” edges with riprap, concrete and sheet piling (metal and plastic).

**Channelized Stream:** a stream that has been artificially straightened, deepened, or widened to accommodate increased stormwater, to increase the amount of adjacent land that can be developed or used for urban development, agriculture or navigation purposes.

**Collaboration:** a mutually beneficial and well-defined relationship entered into by two or more organizations to achieve results they are more likely to achieve together than alone.

**Combined Sewer Overflow (CSO):** in older communities, the storm sewers and sanitary sewers were combined. In newer communities the two sewers are separate. During heavy rains, the volume of water is so high that raw sewage is discharged directly to a surface water body.

**Consensus:** an inclusive form of decision making in which all of the parties discuss and debate the issues prior to reaching an agreement. All parties must either agree with the decision or at least agree that they can live with it. Any one party may block an agreement.

**Geographic Information System (GIS):** a computer system that inputs, assembles, stores, manipulates and displays (usually in the form of maps) geographically referenced information.

**Impervious Surfaces:** the land in a watershed—expressed in an area or percentage—covered by hard surfaces that prevent the infiltration of water into the soil. Impervious surfaces are the asphalt or concrete roads, parking lots, buildings or other “hard surfaces” that are relatively impenetrable to the movement of water.

**Non-point Source Pollution:** the diffuse, intermittent runoff of pollutants from various sources. Precipitation moving over and through the ground picks up pollutants from these various sources and carries them into rivers, lakes and groundwater.

**Partner:** the watershed stakeholders who take an active role in the watershed management planning process.

**Planning Committee:** the group of stakeholders responsible for creating the watershed-management plan.

**Sewershed:** an area of land where stormwater drains into a common storm sewer.

**Stakeholder:** a person who has a legal, economic, personal or professional interest in the watershed.

**Technical Advisory Team (A-Team):** the group of technically qualified ecologists, biologists, hydrologists, engineers, planners and others who advise the planning committee in performing the assessment and analysis phase and developing the best management practices and policies in the action plan.

**Urban Runoff:** water from rain or snow that runs over surfaces such as streets, lawns, parking lots and directly into storm sewers before entering the river—rather than infiltrating the land upon which it falls.

**Watershed:** an area of land that drains into a given stream, river, lake or wetland.

## RESTORING BALANCE:

### Citizens' Concerns about Natural Resource Issues in the Lower Salt Creek Watershed

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*the first steps to  
restoring balance*

## GETTING INVOLVED

With the completion of this planning document comes the excitement of sharing it with as many people in the watershed as possible. SCWN needs people to share this story, promote these causes and move this plan into action. To implement this plan, everyone must get involved—writers, educators, fisherman, paddlers, designers, residents, business leaders and municipalities—to achieve a balanced and healthy ecosystem for future generations.

**To learn more about SCWN or to get directly involved contact us:**

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Web site: [www.saltcreek.org](http://www.saltcreek.org)

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## **APPENDIX 11**

Salt Creek Watershed – A Resource Worth Preserving



# Salt Creek: A Resource Worth Preserving

Best Management Practices  
for Reducing Non-Point Source Pollution

**June, 2004**



Salt Creek has a rich history and, with your help, a bright future as a healthy and valuable asset to our communities. Protecting and enhancing Salt Creek and its watershed can provide numerous benefits:

- Floodwater detention that reduces property damage.
- Business and tourism revenue from recreation.
- Increasing property values.
- Erosion control and water quality protection.
- Better fishing, canoeing, and enjoying the creek.
- Habitat for native plants and animals.

Municipalities, park districts, and other local governments can manage public property and guide development and land use to minimize impact to the creek. Stormwater, in particular, can be a problem because much of it eventually flows into the creek. Impervious (impenetrable) surfaces such as rooftops, parking lots, roads, and sidewalks do not allow stormwater to seep into the ground, which can lead to flooding. Rainwater flowing across these hard surfaces picks up pollutants such as oil and grease, dirt, fertilizers, pesticides, road salt, and bacteria. These pollutants from across the landscape are called non-point source pollution. These materials cause water contamination, toxicity, and algae growth making the creek unsuitable for fishing, swimming, and aquatic life, and reducing its value as a community amenity.

This manual provides local governments and other landowners with cost-effective techniques to improve the quality of Salt Creek. The Best Management Practices (BMPs) described here can effectively and naturally improve water quality and the natural environment, and reduce the volume of stormwater runoff.

These BMPs are important because a healthy Salt Creek is an asset to communities, a recreational amenity for residents, and an essential component of a healthy environment. BMPs can reduce development costs and long-term maintenance costs for stormwater management. They can also help communities meet the Salt Creek Total Maximum Daily Load (TMDL) standards that specify how much pollution the creek can carry, as well as National Pollution Discharge Elimination System (NPDES) Phase 2 permit requirements for eliminating significant sources of water pollution from municipal stormwater systems and construction activities.

This manual is a first step for increasing awareness of the need for better management of stormwater in the Salt Creek watershed, but it is not intended as an in-depth "how-to" technical resource. Many additional resources are provided in the back of this manual for those seeking technical information. The practices are arranged in order beginning with those easier and less costly to implement. If you have never tried any of these practices, consider one of the first few techniques and then move on to more complex projects, which may



*A low-head dam on Salt Creek.*

require additional time and resource investments and outside funding sources. However, the order of this manual is not an indicator of effectiveness. Simpler BMPs can be as effective as more complicated ones. The key is to use the right BMP for the job.

In many communities, outdated ordinances and other standards are barriers to the use of BMPs. For example, many community weed ordinances do not allow vegetation greater than a few inches in height, thereby outlawing the use of beneficial native plants that grow taller. Local regulations should be adopted or updated to encourage or at least allow the techniques covered in this manual.

BMPs covered in this manual:

- Public green space management.
- Natural landscaping, buffers, swales, and filter strips.
- Rain barrels, cisterns, and rain gardens.
- Reduced road salt impacts.
- Bioengineered streambank stabilization.
- Naturalized detention basins.
- Infiltration practices.
- Green roofs.

This manual is one part of a larger educational effort by the Salt Creek Watershed Network, the Illinois Environmental Protection Agency, and the Northeastern Illinois Planning Commission to work with local government entities, residents, businesses, and other landowners to improve water quality and environmental conditions in Salt Creek and its watershed.

## Public Green Space Management – Be Kind to the Land

### Why is this Important?

Turf grass covers a portion of the Salt Creek watershed's public green space, from parks and playing fields and golf courses to the lawns around municipal buildings and business campuses. When managed in a traditional fashion using fertilizers and pesticides, turf grass is a primary contributor to runoff pollution. Turf grass areas absorb much less runoff than might be expected; most rainfall runs off turf grass into storm sewers. Pesticides, fertilizers, and the bacteria found in pet waste flow easily off of turf during rainstorms and end up in lakes and streams. Proper land management and maintenance can minimize negative environmental impacts, particularly from stormwater runoff and non-point source pollution.

### Ideas for Implementation

Though there are many ways to protect the creek from runoff and non-point source pollution, some of the easiest and most significant ways involve simply changing management practices on public land. Though costs are difficult to estimate, the majority of these practices present cost savings, some short term and others over the long term, over traditional management approaches.

**Convert turf grass into native plants.** Where possible, convert turf grass into native groundcover, shrubs, trees, or meadow plantings (also see section on natural landscaping). Replace grass under mature trees with shade-tolerant groundcover. Where turf grass is difficult to grow, native groundcover and shrubs can thrive. Use turf grass selectively for a particular function such as a children's play area or soccer field.

**Check the soil.** Test the soils to determine pH and fertility; lime or fertilizer may not be necessary. Also test for soil compaction. If the soil is compacted, aerate it.

**Choose the right grass.** If you must use turf, choose a grass that is adapted to northeastern Illinois' climate such as a fine fescue. Consider new species of slow-growing, low-input dwarf grass mixes that reduce the need for mowing and fertilizers. Check with your local nurseries for information on these new "no-mow" or "low-mow" mixes.

**Allow grass to grow taller.** Mowing height affects the depth of the root system; the longer the cut the deeper the roots and the stronger and healthier the turf. Set mowing height as high as possible, at least one setting higher than you normally do, and don't mow too often; this allows the grass to grow in thicker with deeper roots and will help crowd out weeds reducing the need for fertilizers and pesticides. Leave some of the grass clippings on the lawn (or better yet use a mulching mower) to provide nutrients and hold in moisture. Recycle or compost the rest of the grass clippings.

**Use appropriate amounts of fertilizer.** Heavy use of fertilizers, particularly those with high nitrogen and phosphorous content, is one of the leading causes of excessive algae growth in Salt Creek. Fertilizers not absorbed by plant roots often run directly into the water, where the nutrients intended to grow grass provide food for the algae. Not only are algae unsightly, when they die the decomposition process consumes oxygen in the water that is needed by other plants and animals. It also blocks light needed by aquatic plants growing in the bottom of the creek. To reduce the effects of fertilizers on the creek:

- Fertilize only if soil tests indicate that it is necessary; some soils are fertile enough.
- Apply low-nitrogen, encapsulated nitrogen, or zero phosphorous fertilizers or an organic product.
- Follow application instructions; more is not better.
- Maintain natural vegetative strips at least 25 feet wide along streamside property to filter out excess fertilizer (see section on buffers, swales, and filter strips.)
- Avoid placing lawn clippings directly along creek banks.
- Don't fertilize before a rain.
- Ensure grounds maintenance personnel follow these guidelines.

**Accept some weeds.** Healthy, full grass will crowd out most weeds. Get comfortable with the idea that some weeds are ok, as long as they don't dominate. Employ least toxic methods to reduce weeds such as herbicidal soap and rapidly biodegradable or biological pest controls.



***Insects are a necessary part of the landscape.***

**Accept some pests.** Bugs are a natural part of the environment, and they serve important functions in the food chain. Applying poisons designed to kill bugs will also kill birds, butterflies, fish, and other wildlife. If you

have an overabundance of insects, try removing or trapping them, introducing biological control agents such as bugs that prey on your pests, or by applying low toxic chemical controls like insecticidal soaps. You can also try to attract natural predators such as birds that eat those pesky bugs.

**Be smart with water.** The turf grass most of us associate with an attractive lawn is not adapted to our hot summers and heavy watering to keep it green is highly wasteful and can also be expensive. Use landscaping techniques that don't require a lot of water, or, if you must irrigate, try watering the lawn well in the early morning or late in the evening.

**Manage golf courses naturally.** Golf courses can be a significant source of water pollution, but they also present great opportunities for good land management. Courses that have incorporated natural features are receiving increasing attention and acclaim from golfers and environmentalists alike, and some are certified as Audubon Cooperative Sanctuary courses by Audubon



***Golf courses, such as this one in Olympia Fields, provide good opportunities for natural landscaping.***

International and the United States Golf Association. (See resources section for a listing of Illinois golf courses that are Audubon certified.)

Incorporating natural characteristics into course design can reduce the course's impact on natural resources. For example, small woods, wetlands, and stream buffers can be designated as unplayable rough while providing good habitat for wildlife. Long, broad fairways are significant sources of runoff pollution. Keep cart paths away from the streams and minimize stream crossings. Fertilizers and pesticides are also a serious concern. Swales, streamside buffers, and infiltration trenches can help remove fertilizers and pesticides from fairway runoff before it enters the stream.

**Landscape golf courses naturally.** Intensive irrigation of golf course turf grass, which is not adapted to north-eastern Illinois' climate, can reduce the water level in streams and groundwater and cause serious problems for the stream. Native vegetation for course landscaping and drought and disease resistant turf for greens and fairways can reduce water consumption.

**Manage animal waste.** One deceptive contributor to water quality impairments, especially in heavily urbanized watersheds such as Salt Creek, is pet and animal waste. When allowed to enter the water via stormwater runoff, this waste causes high nutrient and bacterial levels, which can lead to excessive algae growth and damage to plants and animals. Leash and pick-up rules, appropriate signage, and the provision of pet waste bags at streamside parks have proven effective in mitigating pet waste's negative effects. Goose waste, found in abundance on turf areas around detention basins, is another significant source of pollution for streams.

Natural landscaping, covered in the next section, is helpful for reducing the number of geese, especially around detention basins, because tall plants make geese uncomfortable causing them to seek out other areas.

## Success Stories

In 1998, the DuPage County Forest Preserve District purchased the erosion-plagued Oak Meadows Golf Course in Addison. In 2001, the county's Master Plan for Golf Course Reconfiguration called for shoreline and bank toe stabilization to curtail erosion along Salt Creek, as well as bridge modifications to make the creek more suitable for recreation. The project, begun in autumn of 2002, stabilized 6,619 linear feet of streambank. The Illinois Department of Natural Resources contributed approximately 75% of the project total cost of \$2.2 million, with the DuPage County Forest Preserve District and Department of Environmental Services picking up the rest. Golf course administrators reduced the slope of the streambanks, replaced shallow-rooted vegetation with deep-rooted native grasses, shrubs, and trees, and removed the stonework stabilization measures previously installed in favor of more aesthetic, below-water A-Jacks to stabilize the streambank toe. The project, which cost approximately \$124 per linear foot, is widely regarded as a success. (See section on bioengineered streambank stabilization for more on practices mentioned here.)



***Native landscapes are beautiful and functional.***

## Natural Landscaping, Buffers, Swales, and Filter Strips – Filter, Infiltrate, and Stabilize

### Why is this Important?

Using native plant materials in landscaped areas on a development site is a low-cost and environmentally beneficial alternative to traditional landscaping. Native plants are far superior to turf grass for stabilizing soil, reducing erosion, infiltrating stormwater, and filtering and absorbing pollutants. The root structures of native vegetation are 3 to 10 feet deep for prairie vegetation versus 4 to 6 inches for turf grass. Native plants require no mowing, fertilizers, or pesticides, thereby eliminating a source of pollution and saving money. Native plants also play a key role in the filtration capacities of many of the other best management practices discussed in this manual including swales, buffers, filter strips, and natural detention areas.

### Ideas for Implementation

Natural landscaping is appropriate on nearly all sites, especially large common areas, stormwater facilities (e.g., detention basins), drainage ways, and buffers along sensitive natural areas. It is particularly well-suited to low density residential and multi-family residential developments, institutions, office and industrial campuses, government property, and public land. Existing natural features should be preserved whenever possible.

Natural landscaping costs significantly less than conventional landscaping to install and maintain. Though prairie and wetland planting costs are similar to turf grass seeding (approximately \$2,000 to \$4,000 per acre),

turf irrigation systems can double its cost, and sod (\$10,000 or more per acre) and ornamental trees and shrubs are even more costly. Only annual mowing or controlled burning and occasional spot spraying to control invasive weeds is typically needed.

Controlled burning is a specific management tool that requires some additional attention. Professionally trained burn crews must be used, all state and local permits must be secured prior to using controlled burning as a management tool, and the group undertaking the burn must coordinate with local fire districts and should also coordinate with other local governments to help avoid misunderstandings and conflicts.

Maintenance costs range from one half to one-fifth of the amount for conventional landscaping. However, it can take slightly longer to fully establish a diverse native plant community (2 – 4 years.)

**Buffers, swales, and filter strips** are areas of land comprised of deep-rooted native plants that help protect water by filtering pollutants from runoff. Buffers are typically used along waterways, and filter strips are used adjacent to impervious areas. They are recommended for use between developed areas and sensitive aquatic environments, especially along roads, parking lots, and construction sites. Swales are somewhat different from buffers and filter strips. They are vegetated channels used to transport and temporarily store runoff. Swales can be alternatives to storm sewers in some areas.

The longer water takes to move across these treatments, the better cleansing and infiltration will occur. Filter strips, swales, and buffers are particularly effective at reducing pollutants through settling and filtration. Road



***Native plant buffer in Wood Dale.***

salt, however, is not well removed by filters, buffers, or swales and can harm native plants, which are not adapted to salty conditions. These practices also can reduce surface runoff volumes by up to 40 percent for small storm events, and may reduce the need for storm sewers in less densely developed areas.

Installation of buffers and filter strips begins by removing existing plants and turf grass and then immediately planting with native species to minimize opportunities for erosion. Planting live plants in combination with seeds is preferred because it results in rapid establishment of vegetative cover. Live plants, however, are more expensive than seed. Where seeding is done on bare soil it is important to protect the seed and soil from washing away by raking the seed into the ground and covering the soil with an erosion blanket or hydro mulch.

Along streams, native vegetation should begin at or below normal water level with aquatic or wetland species and continue up the bank with water-tolerant and finally upland species. Any amount of native vegetation can be beneficial, but to be most effective, a

buffer should be at least 25 feet wide on each side of the stream and should cover the entire bank to provide maximum soil stabilization.

Filter strips and buffers can cost approximately \$2,000 to \$3,000 per acre to seed, not including soil erosion prevention. Maintenance within the first two growing seasons, as with most natural landscaping, may require prescribed burns, removal of invasive species, and additional planting to control undesirable plants from invading and taking over newly planted areas. After



***Managing natural landscapes with controlled burns.***

establishment, mowing and/or prescribed burns every 2 – 3 years will provide most of the subsequent maintenance needs. Fertilizer and pesticides are typically not necessary. However, herbicide may be necessary if invasive species are allowed to colonize.

**Swales**, open, vegetated drainage channels, can be used as alternatives to enclosed storm sewers and concrete-lined channels where there is some undeveloped land between buildings or paved areas. However, in denser,

more urbanized settings they usually must be used in conjunction with storm sewers. Like buffers and filter strips, swales function best on gentle slopes and when planted with abundant native vegetation. They should be shallow and wide, with gentle side slopes, and evenly graded to avoid ponding of water. Swales generally cost up to \$13 per linear foot less to install than curb and gutter storm sewers, and can often be installed faster, though it may take some time for the natural vegetation to become fully established. Swales may require occasional mowing and debris and sediment removal, but cost much less to maintain than storm sewers which require periodic maintenance, repair, and replacement. One type of swale, a depressed median, can be used within paved areas such as parking lots to collect and infiltrate stormwater (see section on infiltration practices.)

## Success Stories

Save the Prairie Society is using all plant materials to stabilize and restore approximately 1900 feet of stream-bank along Salt Creek. Invasive and non-native tree and plant species have been removed to allow sunlight to reach the streambanks where native grasses, forbs, and sedges create a dense, deeply rooted vegetative cover. Trees, while they do have deep root systems, do not protect the banks from erosion and can shade out ground cover leaving bare banks. The native vegetation will provide food and shelter for various types of wildlife including the Henslow's Sparrow, Kingfisher, and the Monarch Butterfly. Maintenance of the area includes prescribed burning and selective herbiciding and cutting of invasive species. The native planting along the stream also acts as a buffer to absorb pollutants before they reach the waterway.



***Stabilized Salt Creek canoe launch in Elmhurst.***

In 2002, the Elmhurst Park District completed the installation of a naturally vegetated streambank buffer near a canoe launch on Salt Creek. This buffer is helping to stabilize steep, eroding streambanks and provide a protective filter for water running off the adjacent landscape. A couple hundred feet of buffer area along the creek was regraded to a more gentle slope and replanted with prairie plants. The entire project, including the canoe launch, cost approximately \$100,000. It was important to plant both upland species and wet prairie species on the site because during high water periods the canoe launch is under water. The water-tolerant prairie plants help maintain the integrity of the banks during high flow conditions, saving land from eroding and protecting the canoe launch.

### Rain Barrels, Cisterns, and Rain Gardens – Using Rain as a Resource

#### Why is this Important?

In urban areas, impervious surfaces dominate the landscape and less rainwater is naturally absorbed into the

ground. Most roof runoff is collected in gutters and discharged onto the ground or into storm sewers, picking up debris and pollutants and discharging them into nearby streams. Reducing the volume of stormwater by managing it onsite reduces the flow of pollutants to the stream.

#### Ideas for Implementation

Downspouts that normally transport rainwater from the roof to the ground or storm sewer can be disconnected and directed into rain barrels, cisterns, or rain gardens, where it can be stored for irrigation or slowly infiltrated into the ground. Sump pumps can also be redirected. Rain barrels and cisterns are most often positioned at building corners. A 1200-square-foot residential roof, for example, could use 55-gallon barrels to collect rainwater. Rain barrels and cisterns must be emptied regularly and cleaned to remove debris such as leaves or branches. Installing mesh screens on top of the barrels can prevent debris buildup. Barrels should be covered during summer months to prevent mosquito breeding and should be emptied before winter to avoid freezing. Normal costs



***Rain barrels, such as this one in Chicago, capture roof runoff for other uses.***

for pre-made rain barrels range from \$20 to \$150, but homeowners can reduce this cost by making their own.

Rain gardens collect runoff water, which the garden's soil and plants then slowly absorb. Plants can filter out many of the pollutants in runoff water and reduce runoff volume. Rain gardens are typically 6- to 18-inch deep depressions filled with attractive, native plants and wildflowers, which also serve as habitat for birds, butterflies, and dragonflies, which eat mosquitoes. Like rain barrels, rain gardens function best during small to moderate storms and should be constructed at least 10 feet away from building foundations. Weeding and planting needs are similar to that for typical gardens, and costs are similar to those for ordinary gardens (\$3 – 4 per square foot per year).

## Success Stories

Thanks to funding from the Illinois Environmental Protection Agency, the Brookfield Zoo was able to plant demonstration rain gardens at various locations around the park. At the Reptile House, water from the roof was eroding soil and washing it onto the pathway. With the roof's downspout now turned into a low area planted with native plants, the rain garden absorbs the excess



*Brookfield Zoo's new rain garden after planting.*

rain. At the North Gate, a rain garden helps absorb excess water before it reaches the storm drain. At Hamill Family Play Zoo, a small garden is being converted to a wet garden using some rainwater from the roof downspout.

Homeowners with wet areas in yards also are learning to go with the flow and build rain gardens. This was the case in Brookfield where one resident suffering from flooding on a portion of his yard constructed a 20-foot by 25-foot rain garden planted with native plants and shrubs and a few boulders between his driveway and neighbor's yard. In its first growing season, the rain garden flowered and attracted a variety of birds and butterflies, and even hosted a bathing Coopers Hawk. Summer downpour storms generate a surge of water that is collected in the rain garden and absorbed into the soil within 12 hours. The project took approximately one day to design and four days to install, costing approximately \$1,400 for materials.

## Reduced Road Salt Impacts – Salt Creek Shouldn't be Salty

### Why is this Important?

Here in the Midwest, salt is heavily depended upon to melt ice and snow from roadways, driveways, and parking lots. However, dissolved salt collects in puddles on paved surfaces where its corrosive effects damage roadways, bridges, and vehicles. It also runs off into road side ditches, sewers, and water bodies. As a result, soils, groundwater aquifers used for water supply, and fish and other aquatic organisms, plant communities, and wetland systems are all negatively impacted. Few species

of plants and wildlife can tolerate salty water, but impacts are greatest in smaller water bodies and streams.

### Ideas for Implementation

Rock salt is the most typical material used to clear ice and snow, primarily due to its low cost. However, a number of alternatives exist.

- Calcium chloride, typically used in combination with regular salt, is an effective alternative. Unfortunately, it is three to ten times more expensive than salt and because it is highly corrosive it is not the most feasible alternative.
- Calcium magnesium acetate and abrasives have both proven to be more benign alternatives to road salt. Calcium magnesium acetate costs \$600 to \$700 per ton versus about \$25 per ton for road salt and is less corrosive.
- Abrasives such as sand or cinders can be used to improve traction in snowy conditions. They are significantly less costly but also less effective than salt, and they don't melt ice. Abrasives also may build up in water bodies and also may contribute to dust and associated air quality concerns.

Anti-icing, or preventative salting, involves the application of ice control chemicals before a storm to prevent ice from forming on roads. Approximately 70 percent less salt is needed to prevent icing than is needed to melt ice once it has formed. The material stays on pavement with little or no dispersion, and the anti-icing effects can last for a few days. The downside is that anti-icing measures may be taken in anticipation of a storm event that never materializes.

If road salt still proves to be the most feasible solution for snow and ice removal in your community, these practices can help reduce the environmental impacts:

- Provide adequate training for road work staff on minimizing the over-application of salt. The American Public Works Association provides training opportunities.
- Use correctly calibrated salt truck spreaders to apply only what is needed for expected temperature and precipitation conditions. Deicing agents should be applied at a rate that is governed by truck speed so that piles of salt do not accumulate at stop lights and signs.
- Prioritize heavily-traveled roads and intersections for salting. On less-traveled roads, switch to straight plowing and/or abrasives.
- Apply salt only to loosen snow and ice from the road, and follow with repeated plowing to remove it. Do not continue to apply salt without clearing the accumulated snow and ice first.
- Minimize salt and use alternative methods in especially sensitive areas such as near streams and wetlands, remnant prairies, and groundwater recharge zones. Even a small amount of salinity can seriously affect sensitive plant species.
- Store salt as far as possible from water bodies and other sensitive areas and recharge zones, outside of the floodplain, and on impermeable soils. Storage facilities should be built on an impervious surface to prevent infiltration. Salt piles should be placed on a concrete pad and covered, and any spillage during truck loading should be promptly cleaned up.

## Success Stories

Elk Grove Village is replacing old salt trucks with new, computerized trucks that are calibrated to spread salt according to conditions and truck speed. This reduces the amount of salt used, the amount of salt being carried into Salt Creek during winter months, and the cost of salt to the Village.

## Bioengineered Streambank Stabilization – Nature Does it Best

### Why is this Important?

Salt Creek's banks experience unnaturally high erosion due to high water velocities and fluctuating water levels. Trees along streambanks shade out deep-rooted ground cover, weakening the bank and leading to erosion. Some invasive plant species such as reed canary grass have shallow root systems that do not stabilize stream banks. These impacts destroy natural habitats, impair water quality, damage property, and threaten infrastructure.

The conventional solution to bank erosion has been to armor channels with concrete, steel, or rock. While such techniques may reduce erosion locally, they destroy water habitat, and push water volume and velocity problems downstream. Natural stabilizing approaches reduce streambank erosion and failure through natural, vegetative and bioengineered methods, so-called because they incorporate living plant material rather than concrete or rip rap. Native plants have deep root systems that grow into soil and hold it in place. While conventional stabilization measures are strongest when installed and get weaker over time, bioengineered



***Streambank stabilization using bioengineering methods.***

installations get stronger over time. Natural, vegetative bank stabilization is self-sustaining and self-repairing, since the plants are adapted to grow along streambanks. It also provides much needed stream habitat for wildlife, and is a more attractive alternative to concrete or rock. Bioengineered stabilization methods are also substantially less expensive than conventional methods, most often costing significantly less than the \$100 or more per linear foot for conventional methods.

### Ideas for Implementation

A variety of factors including severity of erosion, bank slope, water flow velocities, adjacent land uses, and aesthetic considerations will determine which methods to use. The following techniques can be used alone or in combination.

**Vegetative stabilization** involves planting appropriate native vegetation along streambanks and in shallow

water. It is most effective on relatively flat slopes (less than 30 percent) where erosion problems are not severe. This practice may be used as a preventive measure to replace conventional turf grass before serious erosion occurs, and in conjunction with other structural bioengineering techniques for heavier erosion.

To be successful, the shade canopy along the stream bank must be reduced (to 50 percent or less) to allow more sunlight to penetrate and encourage plant growth. Plants can be introduced as plugs or seeds, though plugs are recommended for lower bank areas because they provide quicker stabilization and are less likely to wash away. Temporary soil stabilization measures such as erosion control matting should be used until the plants are fully established, particularly if seed is used. Vegetative stabilization can often be installed by volunteers and is relatively inexpensive, typically \$10 to \$20 per linear foot.

In stream corridors where water velocities are low, wetland plants can be useful in stabilizing bank toes and slopes to a depth of about one foot. Stream-adapted shrubs such as willow and dogwood can provide a substantial degree of streambank stabilization and erosion prevention. Their deep root systems bind soil and their thick vegetation deflects stream flows away from banks. They are often planted as dormant cuttings or live fascines stakes harvested and planted during winter months when the shrubs are dormant. Dormant cuttings are very cost-effective when compared to traditional techniques, costing only \$10 to \$20 per linear foot. Vegetative stabilization measures may need occasional maintenance over time so that sprouting stumps and shrub plantings do not grow into larger trees that overshadow the creek and banks.

In areas with heavier erosion potential and higher stream velocity, cuttings often function best when used in conjunction with structural bank stabilization techniques such as fiber rolls. Roughly the diameter of a basketball, **fiber rolls** are cylinders of compacted coconut husk fiber wrapped in coconut fiber mesh used to stabilize the toe of the bank. They are placed in shallow water at the base of the streambank, staked securely in place, and planted with water-tolerant shrubs and sedges. Fiber rolls trap eroding bank soils and keep larger sediment particles out of the stream, as well as provide a good medium for native plant growth. They are more effective at erosion control than vegetation alone, and can be used for areas with moderate erosion. The cost of fiber roll installations ranges from \$25 to \$35 per linear foot.

**A-Jacks** also provide bank toe stabilization and are appropriate for moderate-to high-velocity stream flow areas and steep slopes. A-Jacks are comprised of pre-cast concrete pieces that are fitted together and can be nested in a shallow trench along an eroding stream bank. After they are installed, spaces around them are filled with soil planted with water-tolerant shrubs and grasses. Over time, the roots of these plants wrap around the buried A-Jacks structures, creating a living erosion control system. Though A-Jacks installations are more expensive than fiber rolls, costing between \$30 and \$75 a linear foot, they are still significantly less expensive than traditional stabilization methods.



***A single A-Jacks piece.***



***Stabilization using A-Jacks, fiber rolls, and erosion control matting.***

**Lunkers**, used primarily for fish habitat and secondarily as a stabilization measure, provide a significant degree of bank toe stabilization in moderate to heavy erosion areas. Lunkers are 4 to 8 foot long structures comprised of oak or Eco-wood (recycled plastic) planks stabilized by rebar stakes. They are installed in trenches at bank toes, which are then backfilled with soil, and they should always be under water, even during low flow conditions. Lunkers function best when used in conjunction with other bank stabilization practices, such as native vegetation, and benefit from relatively shallow grading (30 percent) on the streambanks above them. Due to their structure and placement at the bank toe, they also provide shelter and habitat for aquatic species. The material components of lunkers typically cost approximately \$15 per linear foot, but excavation and installation makes their installation significantly more expensive.

## Success Stories

Numerous private backyards in Elk Grove Village were eroding into Salt Creek during flooding events. Water quality was diminishing due to increased sedimentation

and fallen trees were creating snags that blocked water flow and required frequent removal by the Village. By the late 1990s, Village staff began looking into regulations and funding for remediation. An engineering study determined that a two-phase, \$1.5 million program to use bioengineering to stabilize 14,700 linear feet of streambank was needed. Phase 1 of the project stabilized approximately 12,000 feet of streambank with A-Jacks, fiber rolls, lunkers, erosion control matting,



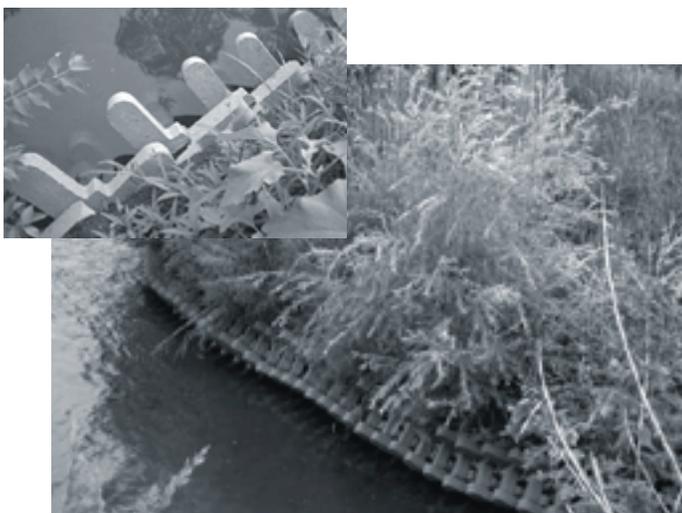
***Elk Grove stabilization before new growth.***



***Elk Grove stabilization after new growth.***

seeding and sod, and bank regrading. The Village also worked to educate property owners on the merits of maintaining vegetated buffers along the creek instead of typical turf grass lawns. Overall the project has been a success, and the Village hopes that the stabilized streambanks will continue to preserve private yards and improve water quality, fish habitat, and aesthetics. The first phase of the project, which is partially funded by the Illinois Environmental Protection Agency, cost \$791,000, approximately \$66 per linear foot.

The City of Wood Dale began its streambank stabilization work in 1992, when the degree of erosion damage by flood waters along public and private properties became too severe to ignore. A 1996 preliminary study by DuPage County called for a three-phase project to design and install appropriate bioengineering techniques



***A-Jacks stabilizing a streambank in Wood Dale.***

to stabilize 5,650 feet of streambank. The Illinois Environmental Protection Agency supplied \$600,000 of project costs, while the City of Wood Dale, DuPage County, and the Kane-DuPage Soil and Water

Conservation District picked up the rest of the total \$1,000,000 cost. Wood Dale is currently setting aside funds for long-term maintenance of the newly-stabilized banks. The project has been a success on many levels: improved water quality, attractive private yards, and reduced sediment pollution to help the city comply with stormwater management regulations. This project, which employed A-Jacks, lunkers, fiber rolls, erosion control matting, live stakes, seed, sod, trees, and shrubs, resulting in a cost of approximately \$177 per linear foot.

## Naturalized Detention Basins – Improving the Function

### Why is this Important?

Naturalized detention basins are similar to typical wet detention basins containing a permanent pool of water, but areas along the water's edges and the side slopes are planted with native plant buffers. Some naturalized detention basins include water of varying depth and wetland vegetation planted in the bottom and near the edges.

Like conventional detention basins, naturalized detention basins can effectively control runoff rates and volumes from both small and very large storm events. Unlike conventional detention, however, naturalized basins are more effective at filtering, settling, and absorbing stormwater runoff pollution. Some pollutants can be reduced by up to 90 percent. In addition to runoff remediation, naturalized detention basins provide valuable habitat for wildlife and aesthetic benefits for nearby property owners. Native vegetation planted around naturalized detention basins also discourages geese, whose unpleasant waste contributes a substantial amount of phosphorous to water.

## Ideas for Implementation

Naturalized detention basins are appropriate for almost all development types requiring stormwater storage, but on very small sites rain gardens or infiltration practices may be more appropriate. Existing detention basins can be retrofitted to include features of a naturalized detention basin. However, these basins may be restricted to using the existing engineering specifications and design, though riprap and other artificial bank stabilization can be replaced with gentle slopes and native vegetation.



***Natural detention basin at Prairie Stone business park in Hoffman Estates.***

New detention basins present a good opportunity to use a highly natural design up front, including such elements as a basin bottom of varying depths, which replicates a natural pond. Wet detention basins should include sedimentation basins at major inlets, an area of open water at the basin outlet, and fairly flat, irregularly graded bottoms, all or part of which can be planted with wetland vegetation. Using native vegetation in these basins requires a good understanding of the hydroperiod

(water depth and duration for a specific storm event) to determine which plants can survive in the basin, and where to plant aquatic wetland or upland species.

Naturalized detention basins often cost less than other basin techniques that utilize riprap for stabilization. Average cost ranges from \$17,000 to \$22,000 per acre-foot of active detention storage. Naturalized detention basins require annual mowing or burning of native vegetation around the edges, which, with the assistance of natural areas management personnel, typically costs roughly \$500 per acre. Due to their substantial sediment removal capabilities, naturalized detention basins may require dredging, though this should only be necessary every 10 to 15 years.

## Infiltration Practices – Let the Soil do its Thing

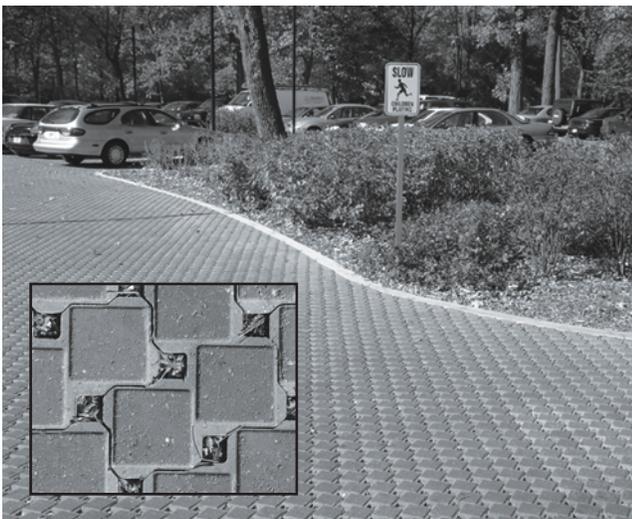
### Why is this Important?

Runoff and non point source pollution are directly related to the amount of impervious surface in a watershed. Stormwater flows over asphalt and cement without being absorbed by the soil, picking up pollutants such as fertilizer, pet waste, and oil and grease on its way to nearby bodies of water. Well-designed infiltration practices can reduce the volume of stormwater runoff by allowing it to slowly infiltrate into the ground naturally and improve its quality. This can reduce the need for stormwater detention, reduce flooding, and enhance groundwater recharge. Infiltration practices can reduce both surface runoff volume and pollutants by up to 95 percent.

## Ideas for Implementation

Techniques for minimizing the area of impervious surfaces, such as clustered development, narrower streets, and reduced setbacks, usually occur during the design stages of new development. However, it is often difficult to significantly reduce impervious area in urbanized watersheds such as Salt Creek, so reducing the effects of impervious surfaces by capturing, filtering, and infiltrating runoff becomes an important practice.

**Permeable paving** with blocks made of concrete, stone, or plastic allows rain and snowmelt to soak into the ground. Paving blocks contain openings that are filled with sand or soil to support grass or other vegetation. Runoff is trapped in the blocks' depressions and filters through the vegetation into the soil below. The benefits of permeable paving vary according to the size of the block openings and the infiltration capacity of the soil below; sandy soils are better. Runoff volumes from the blocks should be lower than from conventional pavement, but higher than from totally pervious areas.



***Permeable pavers such as these at Dominican University are attractive and functional.***



***The DuPage County government complex uses permeable paving techniques for an emergency access road.***

Because paving blocks are less strong and durable than normal paving, they are best suited to areas which receive relatively lightweight or infrequent traffic such as emergency access roads, walkways, and supplemental parking. Though experience in this region is limited, national usage indicates that paving blocks may cost as much as two to three times more than normal paving techniques, and most likely take longer to install. However, because they can substantially reduce runoff volume, stormwater infrastructure costs are lower, which can offset the higher installation costs. They also may require more frequent repair, and snow plowing may require extra care due to the slightly uneven surface of the blocks.

Though the complete removal of parking lots is often unfeasible, especially in a heavily urbanized watershed, the large amount of impervious area of parking lots makes them a good target for **parking lot retrofit** efforts. Reduced parking stall dimensions allow more cars to fit into existing space, lessens the demand for large parking lots. Shared parking between businesses

also can result in decreased demand for total parking area. For example, a bank parking lot can serve as parking for a restaurant in the evening hours.

One technique for reducing the impact of parking lots is to direct runoff into depressional medians or islands planted with native plants or through curb cuts into naturally landscaped areas instead of into storm sewers. This increases infiltration, reduces runoff pollution, and adds aesthetic features to parking facilities, and can be done on a small scale for nearly any parking lot. These medians also can be planted with trees that shade the lot in summer reducing the urban heat island effect. Parking lot retrofits are relatively inexpensive if the medians already exist, more expensive if they have to be installed. Maintenance requirements of these features are minimal – typically only weeding and debris removal are required.

## Success Stories

The DuPage County government complex in Wheaton installed permeable paving blocks on an emergency access roadway. The roadway now produces less runoff and blends in with adjacent turf grass areas.

The Village of Brookfield Runoff Pollution Prevention project will reduce non point source pollution by treating runoff from the parking lot and the roof of the Village Hall (approximately 2.28 acres.) The Village is constructing a swale planted with native vegetation to filter pollutants and reduce the volume and velocity of runoff. A manufactured treatment system of oil and grit separators will further filter suspended sediment, metals, oil and grease, and nutrients and reduce pollutant loading in Salt Creek.

## Green Roofs – The Earth above your Head

### Why is this Important?

Green roofs are living systems of soil and vegetation that absorb stormwater and filter up to 95 percent of pollutants found in the atmosphere and rainwater. They also insulate the building below, reduce cooling and heating costs, and reduce the urban heat island effect of reflective roof materials. As an added bonus, roof life can be extended by 2 to 3 times with a green roof due to less exposure to the sun's radiation and fluctuating temperatures. In built up areas and properties with small lot sizes, green roofs can provide compensatory storage needed to comply with local stormwater management ordinances.

### Ideas for Implementation

Green roofs can be implemented on many types of buildings, but the major considerations for selecting a green roof system are the structural integrity and load-bearing capability of the building, types of plants, soil depth and weight, waterproofing, and drainage system. The load-bearing capacity of the roof is usually the determining factor.

Two different types of green roofs are common. In *extensive systems* soil is 2 to 4 inches deep and weighs 12 to 40 pounds per square foot. Plants are short, have shallow root systems, and are easy to maintain. *Intensive systems* are more similar to typical residential gardens, with 6 to 12 inches of soil weighing 80 to 150 pounds per square foot. Plants can be deeper-rooted than for extensive systems, and trees and shrubs may be used.

Intensive systems absorb more stormwater and provide more insulation and water filtration than extensive systems.

Once established green roofs need little maintenance beyond that for a typical garden such as watering, weeding, and replanting. The roof waterproof membrane and drainage system should be inspected periodically to ensure proper function. Green roofs typically cost between \$18 and \$24 per square foot. Initial capital costs are offset by long-term cost savings for roof maintenance and heating and cooling costs. They can be installed as a retrofit to existing buildings or built as part of new construction.

### Success Stories

The Villa Park Police Station was designed to be a model "green" building using innovative stormwater management practices. The site's stormwater management system features a porous paver parking area with an underground infiltration system to allow stormwater to percolate back into the groundwater table. The system also contains natural rain gardens to help maintain, cleanse, and infiltrate stormwater on site. A green roof will utilize plants in a lightweight growing medium to hold water in place for slow release through evaporation back into the air. The goal of the system is to produce zero runoff of stormwater from the site, which helps the development meet DuPage County stormwater runoff regulations. The project is budgeted to cost the same as a conventional design. The only identifiable cost which exceeded expectations was the porous pavers, but in light of their long-term durability as compared to asphalt, they were considered a valued addition to the project. The opportunity to show how these techniques

for stormwater management could be used in infill development led to an Illinois Environmental Protection Agency grant to help design, build, and exhibit the techniques. In addition, DuPage County Department of Environmental Concerns awarded a grant to help quantify the runoff reduction resulting from the stormwater practices. The project will be an important opportunity to monitor these ideas and show their value in future developments in the region.

## Resources

### 1. The Northeastern Illinois Planning Commission produces numerous resources related to water resource protection and natural resource management. Call the NIPC Publications Department at 312.454.0400 to order copies, or visit [www.nipc.org](http://www.nipc.org).

- The Best Management Practice Guidebook for Urban Development (NIPC, 1992) provides proven techniques for reducing the impact of urban development on natural resources.
- The Conservation Design Resource Manual (NIPC, 2003) presents guidelines and language for updating municipal ordinances to incorporate conservation design.
- Draft Technical Policy Directive for Maintenance and Monitoring of Naturalized Stormwater Management Facilities Vegetated with Wetland and Prairie Plantings (NIPC and the Butterfield Creek Steering Committee, 1999) provides information on maintaining naturalized detention basins.
- Environmental Considerations in Comprehensive Planning – A Manual for Local Officials (NIPC, 1994) provides information on incorporating environmental protection into comprehensive plans.
- A Guide to Illinois Lake Management (NIPC, 1991) describes Illinois' lake ecosystems, problems and solutions, and costs and benefits of lake management.
- Landscaping Techniques and Materials for Urban Illinois Stream Corridors and Wetland Edges (NIPC, 1991) provides basic information, via case studies, about stream management and bank stabilization, buffer strips, greenway planning, landscape design, stream restoration, and recommended plant materials for such projects.
- Pavement Deicing: Minimizing the Environmental Impact (NIPC) provides information about the effects of and alternatives to ice as a deicing agent.
- Protecting Nature in Your Community (NIPC, 2000) provides numerous tools and techniques for preserving and enhancing local habitats, green space, and water quality.
- Reducing the Impacts of Urban Runoff: The Advantages of Alternative Site Design Approaches (NIPC, 1997) presents alternative development techniques that help protect water quality.
- Restoring and Managing Stream Greenways: A Landowner's Handbook (NIPC, 1998) provides information for stream management and protection.
- The Tool Kit on Natural Landscaping (NIPC, 1997) contains an attractive poster-brochure that summarizes benefits and principles of natural landscaping; a slide show; and Natural Landscaping for Public Officials: A Sourcebook (NIPC, 1996 and updated in 2004) that explains the principles, benefits and feasibility of natural landscaping, the role of local governments and leadership, tools and techniques for installation of natural landscapes, and case studies.
- The Urban Stormwater Best Management Practices for Northeastern Illinois (NIPC, 2000) is a course curriculum for designing and installing stormwater BMPs.

### 2. NIPC also publishes a number of model ordinances to help local governments protect water resources:

- Model Floodplain Ordinance (Illinois Department of Natural Resources and NIPC, 1996.)
- Model Stormwater Drainage and Detention Ordinance (NIPC, 1994.)
- Model Stream and Wetland Protection Ordinance for the Creation of a Lowland Conservancy Overlay District (NIPC, 1988.)
- Model Soil Erosion and Sediment Control Ordinance. NIPC 1991.
- Model Watershed Management Strategy for the Control of Urban Waterbody Use Impairments in Lake County, Illinois. NIPC 1994

### 3. Information is also available at the Salt Creek Watershed Network website at [www.saltcreekwatershed.org](http://www.saltcreekwatershed.org).

### 4. The United States Environmental Protection Agency National Pollutant Discharge Elimination System (NPDES) website contains a number of fact sheets related to pollution control. The factsheets can be viewed at [cfpub.epa.gov/npdes/stormwater/menuof-bmps](http://cfpub.epa.gov/npdes/stormwater/menuof-bmps).

For *Post-Construction Storm Water Management in New Development & Redevelopment*, the following topics are addressed:

- Dry extended detention ponds
- Wet ponds
- Storm Water Wetlands
- Wet Detention Ponds

- Infiltration basin
- Infiltration trench
- Porous pavement
- Bioretention
- Storm water wetland
- Grassed swales
- Vegetative Swales
- Grassed filter strip
- On-Lot treatment
- Buffer zones
- Open space design
- Urban forestry
- Conservation easements
- Infrastructure planning
- Narrower residential streets
- Eliminating curbs and gutters
- Green parking
- Alternative turnarounds
- Alternative pavers
- BMP inspection and maintenance
- Ordinances for post construction runoff
- Zoning

For *Pollution Prevention and Good Housekeeping for Municipal Operations*, the following topics are addressed:

- Pet waste collection
- Automobile maintenance
- Vehicle washing

- Illegal dumping control
- Landscaping and lawn care
- Pest control
- Parking lot and street cleaning
- Roadway and bridge maintenance
- Septic system controls
- Storm drain system cleaning
- Alternative discharge options for chlorinated water
- Materials management
- Alternative products
- Hazardous materials storage
- Road salt application and storage
- Spill response and prevention
- Used oil recycling
- Materials management
- Environmental Effects from Highway Ice and Snow Removal Operations

5. **The Low Impact Development (LID) Urban Design Tools website at [www.lid-stormwater.net](http://www.lid-stormwater.net) provides tools and techniques for water protection including bioretention, green roofs, permeable pavement, rain barrels and cisterns, soil amendments, and tree box filters.**

6. **The Stormwater Managers Resource Center at [www.stormwatercenter.net](http://www.stormwatercenter.net) provides a good selection of resources related to water quality protection and best management practices. The topic areas and specific resources are as follows:**

#### **Aquatic Buffers**

- Buffer Zones Factsheet
- Stream Buffer Ordinances
- Practice articles on Aquatic Buffers
- Aquatic Buffers Slideshow

#### **Better Site Design**

- Better Site Design Factsheets
- Introduction to Better Site Design Slideshow
- Practice articles on Better Site Design

#### **Erosion & Sediment Control**

- Erosion and Sediment Control Factsheets
- Erosion and Sediment Control Ordinances
- Practice articles on Erosion and Sediment Control
- Erosion and Sediment Control Slideshow

#### **Impacts of Urbanization**

- Impacts of Urbanization Slideshow
- Indicator Profiles
- RSAT
- Simple Method
- Practice articles on the Impact of Urbanization

#### **Land Conservation**

- Open Space Ordinances
- Conservation Easements Factsheet
- Practice articles on Land Conservation

### Land Use

- Introduction to the Eight Tools of Watershed Protection Slideshow
- Watershed-Based Zoning Factsheet
- Impervious Cover Model
- Practice articles on Land Use

### Non-Stormwater Discharges

- Septic Systems Factsheet
- Illicit Detection Ordinances
- Practice article on Non-Stormwater Discharges

### Restoration Practices

- Stream Restoration Factsheets
- Assessment of Urban Stream Restoration Practices Slideshow

### Stormwater Management Practices

- The Manual Builder Section
- The Sizing of Stormwater Treatment Practices Slideshow
- Stormwater Retrofitting: The Art of Opportunity Slideshow
- Design of Stormwater Ponds and Wetlands
- Design of Vegetative Filtering Systems: Open Channels and Filter Strips Slideshow
- Stormwater Management Practices Factsheets
- Post-Construction Stormwater Management Ordinances
- Operation and Maintenance Criteria Ordinances
- Resource Protection Templates

- Practice articles on Stormwater Management Practices
- Stormwater Practices for Cold Climates

### Watershed Stewardship

- Pollution Prevention Factsheets
- Practice articles on Watershed Stewardship
- Watershed Education Program Resources
- Watershed Education Slideshow

## 7. Additional Resources

- Better Site Design: A Handbook for Changing Development Rules in Your Community (Center for Watershed Protection, 1998) presents principles for reducing impervious cover, conserving natural areas, and reducing stormwater pollution from new development. See [www.cwp.org](http://www.cwp.org).
- Chicago's Green Rooftops: A Guide to Rooftop Gardening. (City of Chicago Department of Environment, 2001) and other information. See [www.cityofchicago.org/Environment/rooftopgarden](http://www.cityofchicago.org/Environment/rooftopgarden).
- A Citizen's Streambank Restoration Handbook (The Izaak Walton League of America, 1995) helps residents and local government planners and officials plan and implement stream restoration projects. Visit [www.iwla.org](http://www.iwla.org) for more information.
- Controlling Urban Runoff: A Practical Manual for Planning and Designing Urban BMPs (Metropolitan Washington Council of Governments, 1987) provides detailed guidance for engineers and site planners on how to plan and design urban best management practices (BMPs) to remove pollutants and protect stream habitats. Visit [www.mwcog.org](http://www.mwcog.org) for details.

- Deicing Salt and Our Environment (The Salt Institute, 1990) and The Snowfighter's Handbook (The Salt Institute, 1991) can be downloaded from [www.saltinstitute.org](http://www.saltinstitute.org).
- Fight Winter and Win: A Survival Guide for Public Officials (American Public Works Association, 1992) can be ordered from [www.state.me.us/mdot/mlrc/mlrc-pubs.php](http://www.state.me.us/mdot/mlrc/mlrc-pubs.php).
- The Greenroof Industry Resource Portal is the international greenroof industry's resource and online information portal and can be accessed at [www.greenroofs.com](http://www.greenroofs.com).
- The City of Chicago's online Guide to Disconnecting Downspouts can be viewed at [www.cityofchicago.org/environment/html/DownspoutDisconnect.html](http://www.cityofchicago.org/environment/html/DownspoutDisconnect.html).
- A Guide to Stormwater Best Management Practices: Chicago's Water Agenda (City of Chicago, 2003) can be downloaded from [www.cityofchicago.org/Environment/html/WhatsNew.html](http://www.cityofchicago.org/Environment/html/WhatsNew.html).
- The Illinois Urban Manual: A Technical Manual Designed for Urban Ecosystems Protection and Enhancement (Natural Resources Conservation Service, 2003) provides detailed BMP information for soil erosion and sediment control, stormwater management, and special area protection. The manual can be viewed at [www.il.nrcs.usda.gov/engineer/urban/index](http://www.il.nrcs.usda.gov/engineer/urban/index).
- The Indiana Drainage Handbook (Indiana Department of Natural Resources Department of Water, 1996) provides detailed information on drainage, including BMPs. The document can be downloaded at [www.in.gov/dnr/water/surface\\_water/DrainageHandbook/](http://www.in.gov/dnr/water/surface_water/DrainageHandbook/).
- The Lake County Watershed Development Ordinance (Lake County Stormwater Management Commission, 1999) demonstrates one regulatory means of implementing water resource protection measures. [www.co.lake.il.us/smc/regulatory/wdo/default.asp](http://www.co.lake.il.us/smc/regulatory/wdo/default.asp)
- Living With Wetlands. A Handbook for Homeowners in Northeastern Illinois (The Wetlands Initiative, 1998) is designed to provide basic information about wetlands as natural systems, wetland protection, and wetland management techniques. The handbook can be downloaded from [www.co.lake.il.us/smc/publications](http://www.co.lake.il.us/smc/publications).
- The United States Golf Association and the Audubon International are partnering to support the Audubon Cooperative Sanctuary Program for Golf Courses, and environmental stewardship program highlighting habitat and water resource protection on golf courses. Visit [www.usga.org/green/environment/audubon\\_program.html](http://www.usga.org/green/environment/audubon_program.html) for more information. The following golf courses in Illinois are currently enrolled in the program:
  - Aldeen Golf Club in Rockford
  - Arrowhead Golf Club in Wheaton
  - Aurora Country Club in Aurora
  - Biltmore Country Club in North Barrington
  - Brae Loch Golf Course in Grayslake
  - Cantigny Golf Club in Wheaton
  - Countryside Golf Course in Mundelein
  - Elgin Country Club in Elgin

- Emerald Hill Golf & Learning Center in Sterling
- Flossmoor Country Club in Flossmoor
- Forest Hills Country Club in Rockford
- Heritage Bluffs Public Golf Course in Channahon
- Jackson Park Golf Course in Chicago
- The Ivanhoe Club in Ivanhoe
- Kemper Lakes Golf Course in Long Grove
- Naperville Country Club in Naperville
- North Shore Country Club in Glenview
- Olympia Fields Golf Club in Olympia Fields
- Park Hills Golf Club in Freeport
- Pottawatomie Golf Course in St. Charles
- Prairie Landing Golf Club in West Chicago
- Rock River Country Club in Rock Falls
- Sandy Hollow Golf Course in Rockford
- Settlers Hill Golf Course in Batavia
- St. Charles Country Club in St. Charles
- Silver Lake Country Club in Orland Park
- Skokie Country Club in Glencoe
- The Den in Bloomington
- Village Links of Glen Ellyn in Glen Ellyn
- The Urban Small Sites Best Management Practice Manual (Metropolitan Council Environmental Services, 2001) provides details on 40 BMPs that are aimed at managing stormwater pollution for small urban sites in a cold-climate setting. View the manual at [www.metrocouncil.org/environment/watershed/bmp/manual.htm](http://www.metrocouncil.org/environment/watershed/bmp/manual.htm).
- The Native Plant Guide for Streams and Stormwater Facilities in Northeastern Illinois (United States Department of Agriculture, Natural Resources Conservation Service, 1997) provides information for selection and placement of native species and species mixes along streams and stormwater facilities. Contact 847.468.0071 in north Cook County or 630.584.7961 in DuPage County for the Soil and Water Conservation District.
- Nonpoint Source Pollution: A Handbook for Local Governments (American Planning Association Planning Advisory Service Report Number 476, 1998) provides officials with strategies and approaches to reduce the effects of nonpoint source pollution. Visit [www.planning.org](http://www.planning.org).
- The Practice of Watershed Protection (Center for Watershed Protection, 2000) is a manual covering many aspects of watershed protection and can be ordered from the Center's website at [www.cwp.org](http://www.cwp.org).
- Rain Gardens of West Michigan provides good general information on rain gardens at [www.rain-gardens.org](http://www.rain-gardens.org).
- Rain Gardens: A household way to improve water quality in your community (brochure) and Rain Gardens: A how-to manual for homeowners (technical manual) are available for downloading from the University of Wisconsin-Extension website at [clean-water.uwex.edu/pubs/raingarden/](http://clean-water.uwex.edu/pubs/raingarden/).
- Site Planning for Urban Stream Protection (Schueler, T.R., for the Metropolitan Washington Council of Governments, 1995) can be downloaded from [www.cwp.org/SPSP/TOC.htm](http://www.cwp.org/SPSP/TOC.htm) or purchased from the Center for Watershed Protection at 410.461.8323.

- The United States Environmental Protection Agency natural landscaping website provides information on landscaping with native plants. See [www.epa.gov/greenacres](http://www.epa.gov/greenacres).
- Wild Ones-Natural Landscapers is a non-profit organization that provides information and support for those interested in natural landscaping. Visit [www.for-wild.org](http://www.for-wild.org).

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Other Salt Creek Documents include:

Guide for Funding Watershed Improvements and Projects  
Salt Creek Watershed Map

**Northeastern Illinois Planning Commission**

222 South Riverside Plaza  
Suite 1800  
Chicago, Illinois 60606  
(312) 454-0400  
[www.nipc.org](http://www.nipc.org)

**Salt Creek Watershed Network**

8738 Washington Avenue  
Brookfield, Illinois 60513  
(708) 485-4190  
[www.saltcreekwatershed.org](http://www.saltcreekwatershed.org)

**Illinois Environmental Protection Agency**

1021 North Grand Avenue East  
P.O. Box 19276  
Springfield, Illinois 62794-9276  
(217) 782-3397  
[www.epa.state.il.us](http://www.epa.state.il.us)

This document was prepared using Illinois Environmental Protection Agency funds under Section 319 of the Clean Water Act.

## **APPENDIX 12**

Sample Inspection Forms: ILR40 and ILR10



## NPDES Site Audit Report for ILR10

General Information		Approximate Acreage
Project Name		
Operator		
Project Location		
Date of Site Visit	NPDES Permit No. ILR10	
Observer's Name(s) & Title(s)		
Construction phase(s) at time of visit	<input type="checkbox"/> Pre-Construction <input type="checkbox"/> Land Development <input type="checkbox"/> Vertical Construction <input type="checkbox"/> Roadway Construction <input type="checkbox"/> Post Construction <input type="checkbox"/> Other: _____	
Type of Site Visit: <input type="checkbox"/> Initial Visit <input type="checkbox"/> Follow-up <input type="checkbox"/> Other: _____		
Weather Information		
Weather conditions during the site visit:		
SWPPP/Soil Erosion and Sediment Control (SESC) Plan		
1. Has the SWPPP been updated/amended as required by the NPDES Permit and/or local requirements? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
2. Is the Operator Certification Form signed and maintained with SWPPP? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
3. Are Contractor Certification Forms signed and maintained with SWPPP? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
4. Have inspection reports been completed and signed every 7 calendar days and after ≥0.5 inch precipitation events? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
SWPPP/SESC Plan Comments: _____		





## NPDES Site Audit Report for ILR40

General Information	
Project Name	Approximate Acreage
Operator	
Project Location	
Date of Site Visit	NPDES Permit No. ILR10 (If Applicable)
Observer's Name(s) & Title(s)	
Construction phase(s) at time of visit	<input type="checkbox"/> Pre-Construction <input type="checkbox"/> Land Development <input type="checkbox"/> Vertical Construction <input type="checkbox"/> Roadway Construction <input type="checkbox"/> Post Construction <input type="checkbox"/> Other:
Type of Site Visit: <input type="checkbox"/> Initial Visit <input type="checkbox"/> Follow-up <input type="checkbox"/> Other: _____	
Weather Information	
Weather conditions during the site visit:	
SWPPP/Soil Erosion and Sediment Control (SESC) Plan	
1. Is an NPDES Permit required for construction site activities? (e.g., Does the construction activity disturb $\geq 1$ acre?)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
2. Is the SWPPP on site (or accessible with location posted)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
3. Is the SWPPP/SESC Plan updated/amended as required by the NPDES Permit and/or local requirements?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
4. Are Operator and Contractor Certification Forms signed and maintained with SWPPP?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
5. Have inspection reports been completed and signed every 7 calendar days and after $\geq 0.5$ inch precipitation events?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
SWPPP/SESC Plan Comments: _____	



**CHRISTOPHER B. BURKE ENGINEERING, LTD.  
CBBEL NPDES REPORT**

**Date of Site Visit:** \_\_\_\_\_

Date of Last Site Visit: \_\_\_\_\_

NPDES Permit No.: \_\_\_\_\_

Client: \_\_\_\_\_

Site Name: \_\_\_\_\_

CBBEL Project Number: \_\_\_\_\_

CBBEL Staff Member & Title: \_\_\_\_\_

Estimated Date of Last Significant Rain Event: \_\_\_\_\_

**Response to Previous Report(s):**

**Erosion and Sedimentation**

Minor  Moderate  Severe  N/A

Observations/Recommended Action: \_\_\_\_\_

**Condition of Site Discharge Point(s)**

Good  Fair  Poor  N/A

Observations/Recommended Action: \_\_\_\_\_

**Condition of Roadways and Locations where vehicles enter or exit the site**

Good  Fair  Poor  N/A

Observations/Recommended Action: \_\_\_\_\_

**Silt Fence**

Good  Fair  Poor  N/A

Observations/Recommended Action: \_\_\_\_\_

**Inlet/Outlet Protection**

Good  Fair  Poor  N/A

Observations/Recommended Action: \_\_\_\_\_

**Ditch Checks/Check Dams**

Good  Fair  Poor  N/A

Observations/Recommended Action: \_\_\_\_\_

**Concrete Washouts**

Good  Fair  Poor  N/A

Observations/Recommended Action: \_\_\_\_\_

**Housekeeping/Material Storage**

Good  Fair  Poor  N/A

Observations/Recommended Action: \_\_\_\_\_

**General Comments:**

"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 submitting false information, including the possibility of fine and imprisonment for knowing violations."

Printed Name & Title: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

PLEASE CALL IF YOU NEED ADDITIONAL INFORMATION -- PHONE: (847) 823-0500

FAX (847) 823-0520

## **APPENDIX 13**

### Sample Contractor Certification Forms

## SWPPP CERTIFICATION

*Insert Name of Project*

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 submitting false information, including the possibility of fine and imprisonment for knowing violations.

\_\_\_\_\_  
Signature of Operator

\_\_\_\_\_  
Date

\_\_\_\_\_  
Printed Name of Operator

**CONTRACTOR CERTIFICATION**

I certify under penalty of law that I understand the terms and conditions of the general National Pollutant Discharge Elimination System (NPDES) permit (ILR10) that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification.

**Project:**     *Insert Project Name*

**Permit #:**    *Insert NPDES Permit Number*

\_\_\_\_\_  
Contractor's Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Printed Name & Title

\_\_\_\_\_  
Telephone Number

\_\_\_\_\_  
Name of Contracting Firm

\_\_\_\_\_  
Street Address

\_\_\_\_\_  
City, State, Zip Code

Trade/Responsibilities:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## **APPENDIX 14**

IEPA Forms – NOI, ION, and NOT

**ILLINOIS ENVIRONMENTAL PROTECTION AGENCY**  
**NOTICE OF INTENT (NOI)**  
**GENERAL PERMIT TO DISCHARGE STORM WATER**  
**CONSTRUCTION SITE ACTIVITIES**

**OWNER INFORMATION**

COMPANY/ OWNER NAME:		OWNER TYPE: <b>SELECT ONE</b> State MS4 Community <input type="checkbox"/> Yes <input type="checkbox"/> No	
MAILING ADDRESS:		PHONE: Area Code (     ) Number     ext.	
CITY:	STATE:	ZIP CODE:	FAX: Area Code (     ) Number
CONTACT PERSON:		EMAIL:	

**CONTRACTOR INFORMATION**

CONTRACTOR NAME:		PHONE: Area Code (     ) Number     ext.	
MAILING ADDRESS:		STATE:	ZIP CODE:
CITY:			

**CONSTRUCTION SITE INFORMATION**

SELECT ONE:	<input type="checkbox"/> NEW SITE <input type="checkbox"/> CHANGE OF INFORMATION FOR: <b>ILR10</b>									
PROJECT NAME:								COUNTY:		
STREET ADDRESS/ LOCATION						CITY:		IL	ZIP CODE:	
LATITUDE:	DEG.	MIN.	SEC.	LONGITUDE:	DEG.	MIN.	SEC.	SECTION:	TOWNSHIP:	RANGE:
APPROX CONST START DATE /  /	APPROX CONST END DATE /  /			TOTAL SIZE OF CONSTRUCTION SITE IN ACRES: _____ If less than 1 acre, is site part of larger common plan of development? <input type="checkbox"/> YES <input type="checkbox"/> NO						

**STORM WATER POLLUTION PREVENTION PLAN INFORMATION**

HAS STORM WATER POLLUTION PREVENTION PLAN BEEN SUBMITTED TO AGENCY? <input type="checkbox"/> YES <input type="checkbox"/> NO (SUBMIT SWPPP ELECTRONICALLY TO: <a href="mailto:epa.constilr10swppp@illinois.gov">epa.constilr10swppp@illinois.gov</a> )		
WILL STORM WATER POLLUTION PREVENTION PLAN BE AVAILABLE AT SITE? <input type="checkbox"/> YES <input type="checkbox"/> NO		
LOCATION OF SWPPP FOR VIEWING: ADDRESS:	CITY:	
SWPPP CONTACT INFORMATION: NAME:	INSPECTOR QUALIFICATIONS: <b>SELECT ONE</b> P.E.	
PHONE: (     )	FAX: (     )	EMAIL:
PROJECT INSPECTOR, IF DIFFERENT THAN ABOVE: NAME:	INSPECTOR QUALIFICATIONS: <b>SELECT ONE</b> Other	
PHONE: (     )	FAX: (     )	EMAIL:

# INSTRUCTIONS FOR COMPLETION OF CONSTRUCTION ACTIVITY NOTICE OF INTENT (NOI) FORM

Please adhere to the following instructions:

Submit original, electronic or facsimile copies. Facsimile and/or electronic copies should be followed-up with an original signature copy as soon as possible. Please write "copy" under the "For Office Use Only" box in the lower right hand corner.

< **Submit completed forms to:**

Illinois Environmental Protection Agency  
Division of Water Pollution Control  
Permit Section  
Post Office Box 19276  
Springfield, Illinois 62794-9276  
or call (217)782-0610  
[www.epa.state.il.us](http://www.epa.state.il.us)

< **Reports must be typed or printed legibly and signed.**

< Any facility that is not presently covered by the General NPDES Permit for Storm Water Discharges From Construction Site Activities is considered a new facility.

< **If this is a change in your facility information, renewal, etc., please fill in your permit number on the appropriate line, changes of information or permit renewal notifications do not require a fee.**

< **NOTE: FACILITY LOCATION IS NOT NECESSARILY THE FACILITY MAILING ADDRESS, BUT SHOULD DESCRIBE WHERE THE FACILITY IS LOCATED.**

< **Use the formats given in the following examples for correct form completion.**

	<u>Example</u>	<u>Format</u>
SECTION	12	1 or 2 numerical digits
TOWNSHIP	12N	1 or 2 numerical digits followed by "N" or "S"
RANGE	12W	1 or 2 numerical digits followed by "E" or "W"

< **For the Name of Closest Receiving Waters, do not use terms such as ditch or channel. For unnamed tributaries, use terms which include at least a named main tributary such as "Unnamed Tributary to Sugar Creek to Sangamon River."**

< **Submit a fee of \$500 and the Storm Water Pollution Plan (SWPPP) for initial permit prior to the Notice of Intent being considered complete for coverage by the ILR10 General Permits. Please make checks payable to: Illinois EPA.**

< **SWPPP should be submitted electronically to: [epa.constilr10swppp@illinois.gov](mailto:epa.constilr10swppp@illinois.gov) When submitting electronically, use Project Name and City as indicated on NOI form.**



**GUIDELINES FOR COMPLETION OF INCIDENCE OF NON-COMPLIANCE (ION)  
FORM**

Complete and submit this form for any violation of the Storm Water Pollution Prevention Plan observed during any inspection conducted, including those not required by the Plan. Please adhere to the following guidelines.

- Submit original, photocopy or facsimile copies. Facsimile and/or photo copies should be followed-up with an original signature copy as soon as possible. Please write "copy" under the "For Office Use Only" box in the lower right hand corner.
- Submit completed forms to:

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

- Reports must be typed or printed legibly and signed.
- Use the formats given in the following examples for correct form completion.

<u>Example</u>		<u>Format</u>
SECTION	12	1 or 2 numerical digits
TOWNSHIP	12N	1 or 2 numerical digits followed by "N" or "S"
RANGE	12W	1 or 2 numerical digits followed by "E" or "W"

**ILLINOIS ENVIRONMENTAL PROTECTION AGENCY  
NOTICE OF TERMINATION (NOT)  
OF COVERAGE UNDER THE GENERAL PERMIT  
FOR STORM WATER DISCHARGES  
ASSOCIATED WITH CONSTRUCTION SITE ACTIVITIES**

Please use the tab or arrow keys

**OWNER INFORMATION**

NAME:	LAST	FIRST	MIDDLE	OWNER TYPE PRIVATE (select option)
MAILING ADDRESS:				
CITY:		STATE:		ZIP:
CONTACT PERSON:		TELEPHONE NUMBER:	AREA CODE	NUMBER

**CONTRACTOR INFORMATION**

NAME:	LAST	FIRST	MIDDLE	TELEPHONE NUMBER:	AREA CODE	NUMBER
MAILING ADDRESS:		CITY:		STATE:		ZIP:

**CONSTRUCTION SITE INFORMATION**

FACILITY NAME:		OTHER NPDES PERMIT NOS.:	I	L	R	1	0			
FACILITY LOCATION:										
CITY:		STATE:	IL	ZIP:		LATITUDE:			LONGITUDE:	
COUNTY:		SECTION:		TOWNSHIP:		RANGE:				

DATE PROJECT HAS BEEN COMPLETED AND STABILIZED:
---

I certify under penalty of law that disturbed soils at the identified facility have been finally stabilized or that all storm water discharges associated with industrial activity from the identified facility that are authorized by an NPDES general permit have otherwise been eliminated. I understand that by submitting this notice of termination, that I am no longer authorized to discharge storm water associated with industrial activity by the general permit, and that discharging pollutants in storm water associated with industrial activity to Waters of the State is unlawful under the Environmental Protection Act and the Clean Water Act where the discharge is not authorized by an NPDES permit.

OWNER SIGNATURE: \_\_\_\_\_

DATE: \_\_\_\_\_

MAIL COMPLETED FORM TO:  
  
(DO NOT SUBMIT ADDITIONAL DOCUMENTATION UNLESS REQUESTED)

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY  
DIVISION OF WATER POLLUTION CONTROL  
ATTN: PERMIT SECTION  
POST OFFICE BOX 19276  
SPRINGFIELD, ILLINOIS 62794-9276

<b>FOR OFFICE USE ONLY</b>	
LOG:	
PERMIT NO. ILR10 _____	
DATE:	

Information required by this form must be provided to comply with 415 ILCS 5/39 (1996). Failure to do so may prevent this form from being processed and could result in your application being denied. This form has been approved by the Forms Management Center.

## GUIDELINES FOR COMPLETION OF NOTICE OF TERMINATION (NOT) FORM

Please adhere to the following guidelines:

Submit original, photocopy or facsimile copies. Facsimile and/or photo copies should be followed-up with an original signature copy as soon as possible. Please write "copy" under the "For Office Use Only" box in the lower right hand corner.

.... Submit completed forms to:

Illinois Environmental Protection Agency  
Division of Water Pollution Control  
Permit Section  
Post Office Box 19276  
Springfield, Illinois 62794-9276  
217/782-0610

.... Reports must be typed or printed legibly and signed.

.... NOTE: FACILITY LOCATION IS NOT NECESSARILY THE FACILITY MAILING ADDRESS, BUT SHOULD DESCRIBE WHERE THE FACILITY IS LOCATED.

.... Use the formats given in the following examples for correct form completion.

	<u>Example</u>	<u>Format</u>
SECTION	12	1 or 2 numerical digits
TOWNSHIP	12N	1 or 2 numerical digits followed by "N" or "S"
RANGE	12W	1 or 2 numerical digits followed by "E" or "W"

.... Final stabilization has occurred when:

- (a) all soil disturbing activities at the site have been completed
- (b) a uniform perennial vegetative cover with a density of 70% of the native background vegetative cover for the area has been established on all unpaved areas and areas not covered by permanent structures,
- (c) or equivalent permanent stabilization measures have been employed.

## **APPENDIX 15**

Outfall Screening Checklist, Forms, Instructions, and Reports

**Section 1: Background Data**

Subwatershed:		Outfall ID:	
Date:		Time (Military):	
Temperature:		Inspector(s):	
Previous 48 Hours Precipitation:		Photo's Taken (Y/N)	If yes, Photo Numbers:
Land Use in Drainage Area (Check all that apply):		<input type="checkbox"/> Open Space <input type="checkbox"/> Institutional Other: _____ Known Industries: _____	
<input type="checkbox"/> Industrial <input type="checkbox"/> Residential <input type="checkbox"/> Commercial			

**Section 2: Outfall Description**

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
Storm Sewer (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"/> Clay / draintile <input type="checkbox"/> Other: _____	<input type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input type="checkbox"/> Single <input type="checkbox"/> Double <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"/> 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:		

**Section 3: Physical Indicators**

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 algae/growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other: _____	
Do physical indicators suggest an illicit discharge is present (Y/N):			

Flow Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<b>If No, Skip to Section 7 and Close Illicit Discharge Investigation</b>
Flow Description	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial	

**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)**

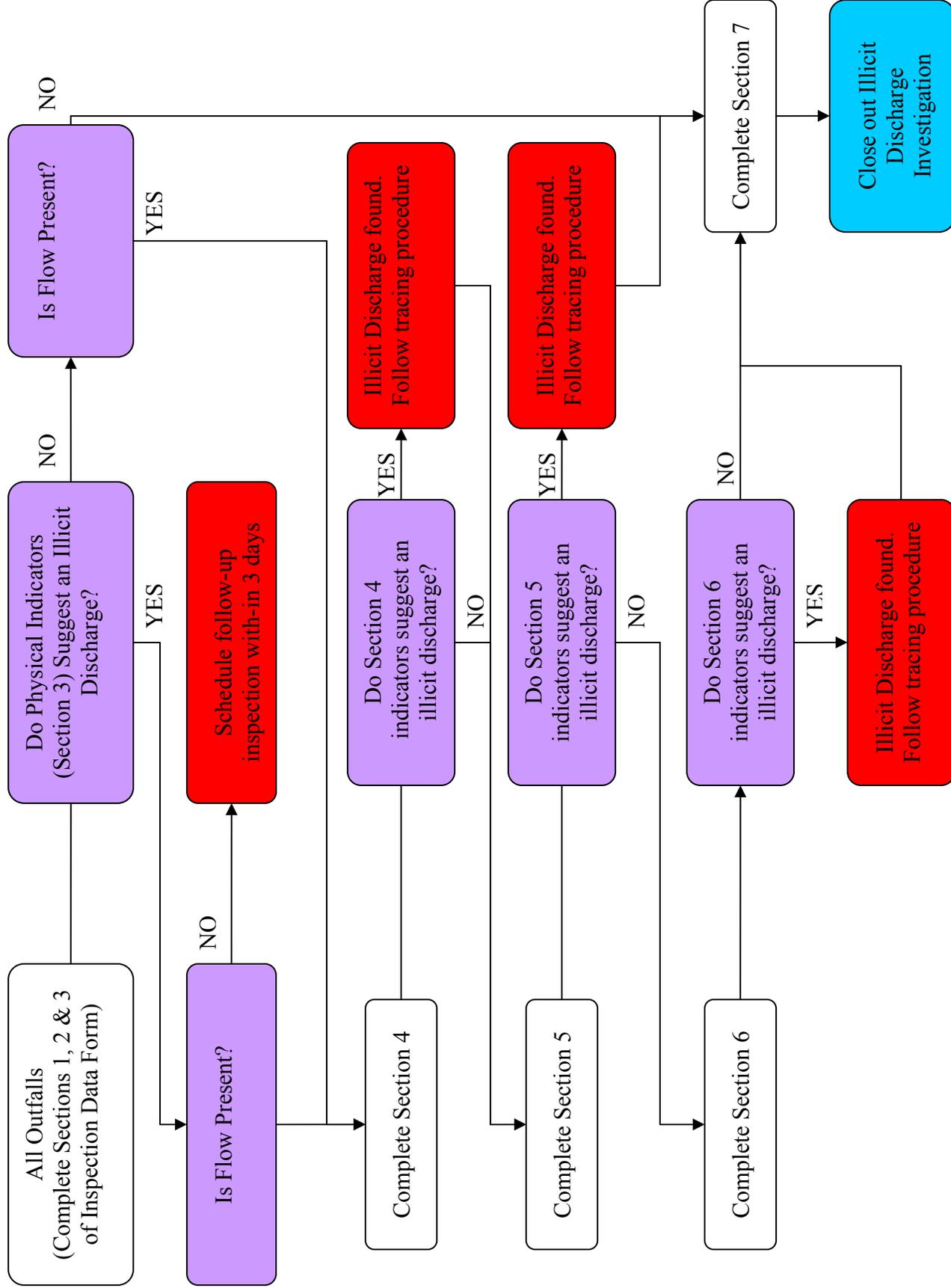
1. Sample for the lab?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
2. If yes, collected from:	<input type="checkbox"/> Flow	<input type="checkbox"/> Pool

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)?**


**Figure 4: Outfall Inspection Procedure Flow Chart**



## Instructions for completing the *Stormwater Outfall Inspection Data Form*

Strike out incorrect entries with a single line; correct values or descriptions are written above or near the struck-out entries. Do not use a new data entry form to correct an incorrect entry. At the completion of each outfall inspection, the field crews are responsible for ensuring that a *Stormwater Outfall Inspection Data Form* has been completely and correctly filled out and that all data and remarks are legible. **It is important to check that values for all chemical parameters have been entered.**

### **Section 1: Background Data**

Subwatershed: The receiving water from the stormwater outfall inventory to be entered here.

Outfall ID: Enter the outfall identification number from the stormwater outfall inventory.

Date: To avoid confusion, dates are to be written in the following manner: DAY MONTH YEAR. For example, 10 MARCH 2007.

Time: Military time (24-hour clock) to be used (for example, 8:30 a.m. would be written as 0830; likewise, 1:30 p.m. would be written as 1330).

Temperature: A concise description of the weather conditions at the time of the screening is to be recorded (for example, Clear, 75° F).

Inspector: The name(s) of the field personnel.

Previous 48 Hours Precipitation: The total amount of precipitation during the 48 hours preceding the inspection is to be noted (for example, none-72 Hours or 0"=4 days). If the total precipitation is not known, it is appropriate to enter a qualitative assessment if the precipitation was minor. For example, *Drizzle-36 Hours* if appropriate. If the precipitation amount was significant, actual precipitation totals is obtained from a local rain gage, if available.

Photo's Taken (Yes/No): Photographs are to be taken with a camera that superimposes a date and time on the film. The date and time should correspond to the date and time recorded on the data form.

Photo Numbers: If photographs are taken, the number(s) is recorded.

Land Use: Check all that apply, noting which land use is predominate. If the industrial box is checked, any known industries are listed to facilitate potential tracing efforts.

## **Section 2: Outfall Description**

### Type of Outfall: Storm Sewer (Closed Pipe) or Open Drainage (Swale/Ditch):

First check if the outfall is either from a Closed Pipe or Open Drainage. Then complete the following row to describe outfall characteristics.

## **Section 3: Physical Indicators**

Indicators: Complete rows describing outfall characteristics (Outfall Damage, Deposits/Stains, Abnormal Vegetation, Poor pool quality, Pipe algae/growth). This section is filled out regardless of current flow conditions. No flow during the time of the inspection, does not rule out the potential of illicit discharges. Corroding or stained pipes, dead or absence of vegetation, are potential indicators of illicit discharges from direct or indirect (i.e. dumping) sources.

Likelihood: After inspecting the physical conditions of the outfall, the likelihood of an illicit discharge is assessed.

Flow Present (Yes/No): A *Yes* or *No* is entered here to indicate the presence or absence of dry-weather flow. If the outfall is submerged or inaccessible, "See Notes" is entered and an explanation provided in the "Notes" section.

Flow Description: A description of the quantity of the dry-weather flow is provided. Refer to Figure 6 of the SMPP.

### Flow Chart Procedure:

- If *No* is entered in the "Flow Present" block and no non-flowing physical indicators appear present the inspection can be closed, skip to Section 7 of the form.
- If *No* is entered in the "Flow Present" block but indicators appear present, place the outfall on the follow-up inspection log, then the current inspection can be closed, skip to Section 7 of the form.
- If *Yes* is entered in the "Flow Present" block (regardless of the presence of non-flowing physical indicators), complete remainder of Section and proceed to Section 4.

## **Section 4: Physical Indicators (Flowing Outfalls Only)**

Complete rows describing outfall characteristics (Odor, Color, Turbidity, Floatables). This section is filled out for flowing outfalls only.

Odor: The presence of an odor is to be assessed by fanning the hand toward the nose over a wide-mouth container of the sample, keeping the sample about 6 to 8 inches from the face. Be careful not to be distracted by odors in the air. Provide a description of the odor, if present. Refer to Table 2 of the SMPP.

Color: The presence of color in the discharge is to be assessed by filling a clean glass sample container with a portion of the grab sample and comparing the sample with a color chart, if color is present. If a color chart is used, the number corresponding to the color matching the sample is to be entered in this blank. Color is not assessed by looking into the discharge. Refer to Table 3 of the SMPP.

Turbidity “clarity”: Turbidity is a measure of the clarity of water. Turbidity may be caused by many factors, including suspended matter such as clay, silt, or finely divided organic and inorganic matter. Turbidity is a measure of the optical properties that cause light to be scattered and not transmitted through a sample. The presence of turbidity is to be assessed by comparing the sample to clean glass sample container with colorless distilled water. Refer to Table 4 of the SMPP.

Floatables: The presence of floating scum, foam, oil sheen, or other materials on the surface of the discharge are to be noted. Describe of any floatables present that are attributable to discharges from the outfall. Do not include trash originating from areas adjacent to the outfall in this observation. Refer to Figure 5 and Table 4 of the SMPP.

Likelyhood: After inspecting the physical conditions of the outfall discharge, the likelihood of an illicit discharge is assessed. If flowing physical indicators are present the tracing procedure are immediately implemented by one of the field crew. The second member of the field crew continues with the inspection by performing the on-site testing in Section 5.

#### Flow Chart Procedure:

- If flowing physical indicators are present the tracing procedure is immediately implemented by one of the field crew. The second member of the field crew continues with the inspection by performing the on-site testing in Section 5.
- If flowing physical indicators do not suggest an illicit discharge continue with the inspection by performing the on-site testing in Section 5.

#### **Section 5: On-Site Sampling/Testing (Flowing Outfalls Only)**



Parameters: Test strip or kit chemical analyses are conducted for the following parameters in accordance with the Flow Chart, refer to Figure 7 of the SMPP.

- Color, color chart,
- Chlorine, test strip,
- Copper, test strip,
- Ammonia, test strip,
- Phenols, test kit, and
- Detergents, test kit.

Testing is done by either a test strip or test kit as applicable (refer to the equipment column). The results are compared with the “acceptable range” and the “within range” column is filled out with a Yes or No. Note that the Temperature, Alkalinity and Hardness are determined although these results do not need to be compared with an “acceptable range”. These values are used to assist in determining the source of the illicit discharge during the tracing procedure.

Sampling Location: A description of the actual sampling location is to be recorded (for example, at end of outfall pipe). If the outfall is submerged or is inaccessible for sampling, an upstream sampling location may be required. A description of any upstream sampling locations is recorded here. Grab samples are collected from the middle, both vertically and horizontally, of the dry-weather flow discharge in a critically cleaned glass container. Samples can be collected by manually dipping a sample container into the flow.

Sampling Procedures: Detailed, step-by-step instructions for using the test strips and kits are available through the Public Works Department. Please also refer to Chapter 3.3.B.7.b. for test kit safety information. Use the following procedures for all test kit analyses:

1. Take a grab sample and swirl to ensure that the sample is well mixed.
2. Rinse the sample cup (25ml) twice with distilled water. Next, rinse the sample cup twice with water from the grab sample.
3. Fill the sample cup to the 25 ml mark, or as required by the instructions for the test kits. Hold the sample cup at eye level to ensure that measurements are accurate.
4. Conduct the test kit analyses following the manufacturer’s instructions.
5. Dispose of the sample as follows:
  - If no chemical or reagents have been added to the sample, the water can be poured on the ground.
  - If any chemical or reagent is added to the sample, pour the water into a container marked “Liquid Waste” for proper disposal to a sanitary sewer system at the end of the day.
6. Rinse the sample cup three times with tap water and dry with a paper towel.

### Flow Chart Procedure:

- If any parameter is outside of the “acceptable range” then an illicit discharge has likely been found. The tracing procedure is immediately implemented by one of the field crew. Testing can be stopped, and the second member of the field crew continues with the inspection by completing Section 7.
- If none of the parameters are outside of the acceptable range, proceed to Section 6.

### **Section 6: Data Collection for Lab Testing**

Determine if the Village’s Waste Water Treatment Plant (WWTP) has adequate staff capacity to analyze the samples.

- If the WWTP has adequate staff capacity, collect grab samples and provide them to the WWTP. Note the location of the sample. Label the sample with the outfall ID number. Proceed to Section 7 while in the field and complete the remainder of Section 6 after the lab results are available.
- If the WWTP does not currently have adequate capacity, determine if Sections 3 or 4 of the inspection form suggest an illicit discharge.
  - If Sections 3 or 4 suggest an illicit discharge contact and outside lab to perform the testing. Proceed to Section 7 while in the field and complete the remainder of Section 6 after the lab results are available.
  - If Sections 3 or 4 do not suggest an illicit discharge, note the outfall ID number. Place the outfall on the follow-up inspection log and proceed to Section 7 of the form. Re-inspect and sample the discharge when the WWTP has adequate capacity.

Sample Location: The location of the sample is noted. Additionally, the sample is labeled with the outfall ID number. Use the insert MS4 type’s sampling procedures and refer to Chapter 3.3.B.7.b. for test kit safety information. . The following additional items are noted.

1. When you collect any samples you must fill out an ***Outfall Sampling Report (Appendix 5.4)***. The report must document time you arrive on location, take the sample and get to the plant to drop off the sample.
2. A 500-ml glass bottle sample is used to collect the sample. If you are collecting a sample that has grease 2-250ml samples taken with a glass container are required.
3. If you use the sampling container that is on a rope, it must be washed with soap and water after every use.

Parameters: Grab samples and lab testing is performed. After lab results are available enter the results here.

- If any parameter is outside of the “acceptable range” then an illicit discharge has likely been found. The tracing procedure should be immediately implemented.

- If none of the parameters are outside of the acceptable then the investigation can be closed.

### **Section 7 Any Non-Illicit Discharge Concerns**

Any problems or unusual features are to be entered here. If the outfall appears to be potentially impacted by inappropriate discharges, this can be recorded here. This section is to be completed even if no flow is observed.

## *Outfall Sampling Report*

Structure ID #

Date:

Outfall ID #

Time of Sample:

Sampled By:

AM      PM

Glass Bottle Size:

250 ml

500 ml

32 ml

Tests requested:

Flouride

Potassium

Fecal Coliform

Relinquished By:	Date:
Comments:	Time:
Received By:	Date:
Comments:	Time:
Relinquished By:	Date:
Comments:	Time:
Received By:	Date:
Comments:	Time:

## **APPENDIX 16**

### Sample Inspection Checklists

**Roadway Culvert / Bridge Checklist**

Inspected by:

Date:

Weather Conditions:

Number	Location	Size	Flood Height <i>(low/medium/high)</i>	Condition <i>(Good/Fair/Poor)</i>	Comments
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

## Detention/Retention Pond Checklist

**Inspected by:** \_\_\_\_\_

**Date:** \_\_\_\_\_

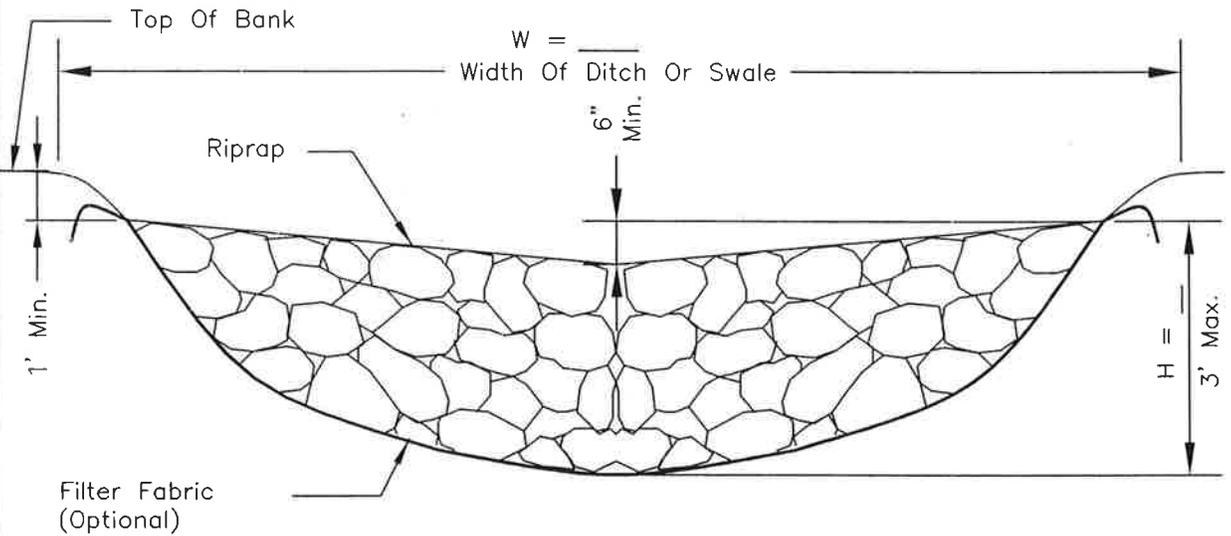
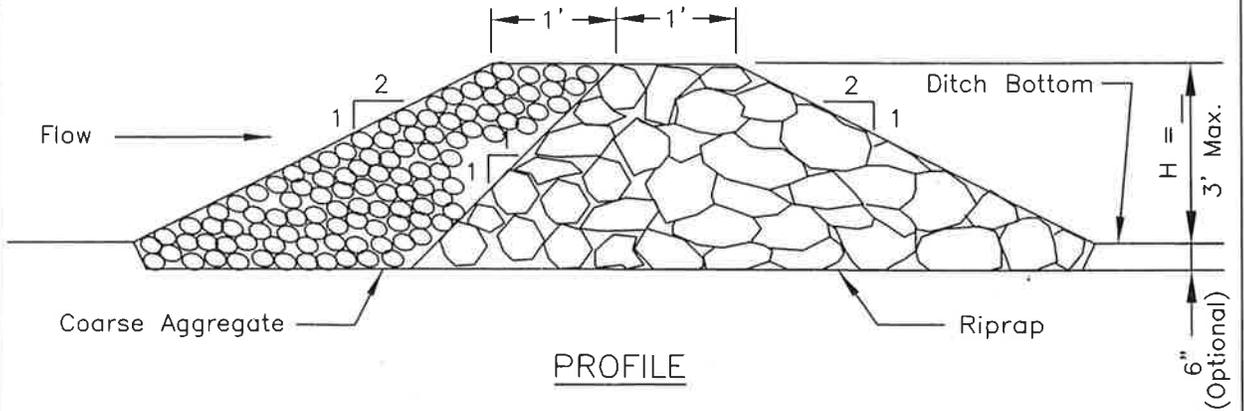
**Weather Conditions:** \_\_\_\_\_

Number	Name/Location	Flood Height <i>(low/medium/high)</i>	Condition <i>(Good / Fair / Poor)</i>	Comments
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

## **APPENDIX 17**

Typical Soil Erosion and Sediment Control Details

# ROCK CHECK DAM - RIPRAP



**NOTES;**

1. Filter fabric shall meet the requirements of material specification 592 GEOTEXTILE, Table 1 or 2, Class I, II, or IV and shall be placed over the cleared area prior to the placing of rock.
2. Coarse aggregate shall meet one of the following IDOT gradations, CA-1, CA-2, CA-3, or CA-4.
3. Riprap shall meet IDOT gradation RR-3 or RR-4 and meet Quality Designation A.
4. Coarse aggregate and riprap shall be placed according to construction specification 25 ROCKFILL using placement Method 1 and Class III compaction.
5. For added stability, the base of the dam may be keyed 6 inches into the soil.
6. See plans for spacing of dams and H dimensions.
7. Maximum drainage area to each dam is 10 acres.
8. ROCK CHECK DAM-COARSE AGGREGATE IL-605CA may be used for drainage areas under 2 acres.

REFERENCE	
Project	_____
Designed	_____ Date _____
Checked	_____ Date _____
Approved	_____ Date _____



STANDARD DWG. NO.  
**IL-605R**  
 SHEET 1 OF 1  
 DATE 1-29-99

# INLET FILTER SYSTEM w/Hydrocarbon Removal

## PART 1 GENERAL

### 1.01 WORK REQUIRED

An inlet filter system, as shown in the details, shall be installed and maintained in open grate frames as directed by the engineer.

### 1.02 SUBMITTALS

The contractor shall make submittals of the manufacturer's literature, shop drawings, installation and maintenance instructions, and other items in accordance with the provisions of the Standard Specifications.

## PART 2 PRODUCTS

### 2.01 INLET FILTER SYSTEM HR

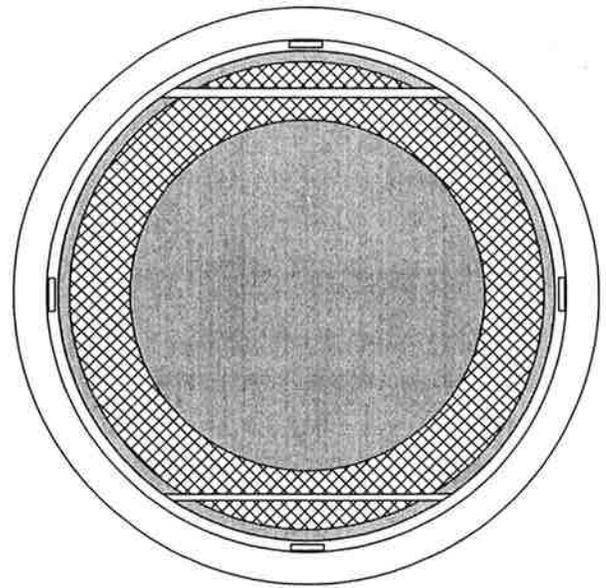
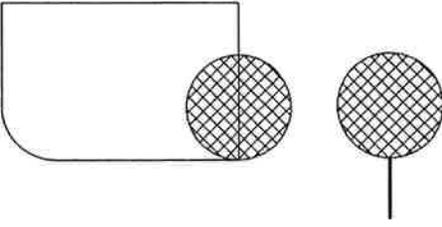
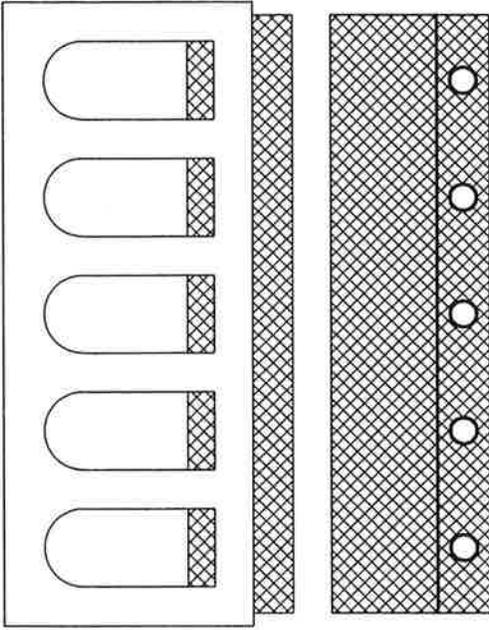
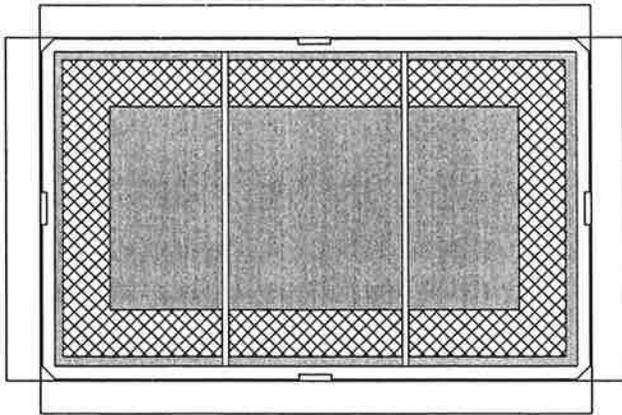
Inlet filter system HR shall consist of a replaceable reinforced filter bag with hydrocarbon removal capabilities suspended from a retainer ring, or frame. Inlet Filter Systems shall be the Catch-All **HR**, with Overflow, as furnished by Marathon Materials, Inc., or pre-approved equal.

The filter bag shall be constructed of a non-woven polypropylene filter geotextile fabric with a minimum weight of 4 oz./yd.<sup>2</sup>, a minimum flow rate of 145 gal./min./ft.<sup>2</sup>, and designed for a minimum silt and debris capacity of 2 cu. ft. The filter bag shall be reinforced with a polyester mesh fabric with a minimum weight of 4 oz./yd.<sup>2</sup> and shall be fitted with a hydrocarbon removal pillow. The hydrocarbon removal pillow shall be hemmed around the entire perimeter of the sediment bag and extend a minimum of four inches towards center. The pillow shall have the capacity to adsorb a minimum seven times its own weight of hydrocarbon-based pollutants. *Curb boxes shall be fitted with a separate pillow, meeting the same requirements, that extends the full width of the box.* The filter bag shall be suspended from a galvanized steel ring, or frame, conforming to ASTM-A36, utilizing a stainless steel band and locking clamp. The frame shall be designed with an overflow feature to prevent any ponding during heavy rainfall.

## PART 3 MEASUREMENT AND PAYMENT

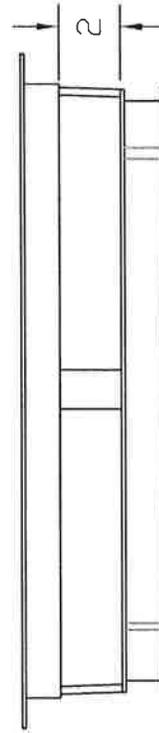
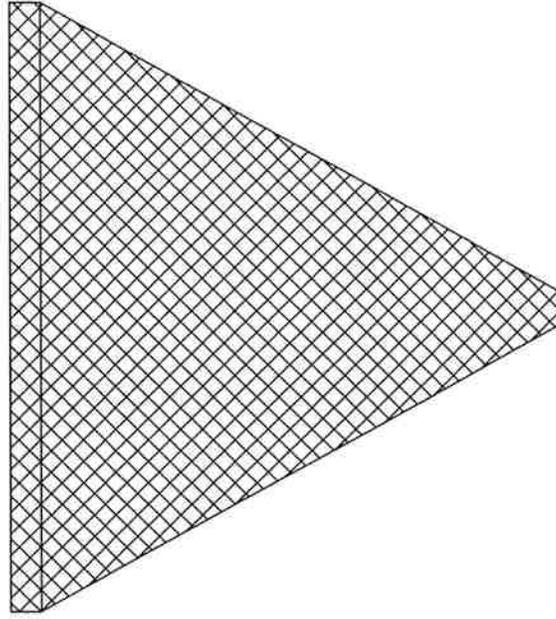
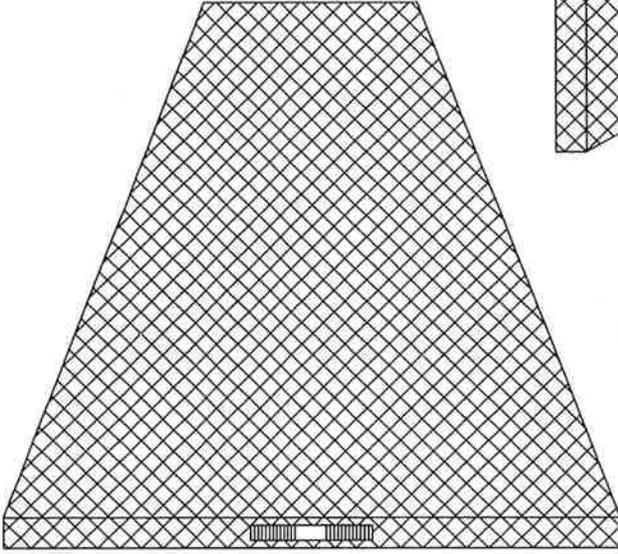
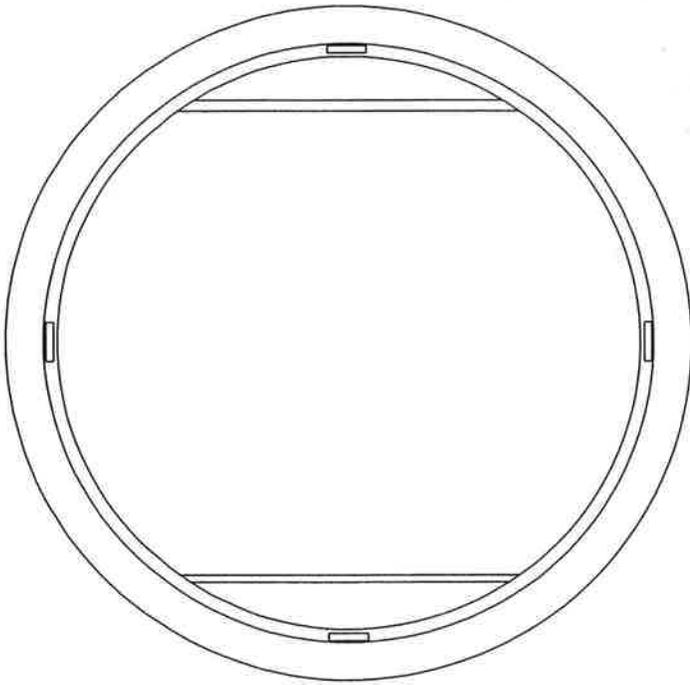
### 3.01 INLET FILTER SYSTEM

All costs for furnishing and installing the inlet filter system HR shall be included in the unit bid price. Periodic cleaning and new bags shall be paid for separately.



This detail depicts the typical placement of the HR (hydrocarbon removal) pillow. An HR pillow is hemmed to the entire perimeter of the sediment bag +/- 4" from the top of the bag and extends +/- 4" towards center. Curb boxes are protected with a separate pillow that is secured to either the curb box vanes or the top flange of the Catch-All frame.

DATE	REVISIONS	Catch-All HR Adsorbent Pillow
5.12.04	Original	
		Marathon Materials, Inc.



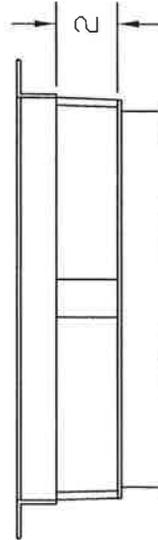
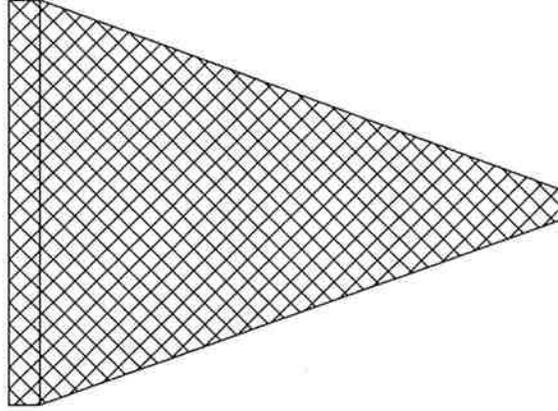
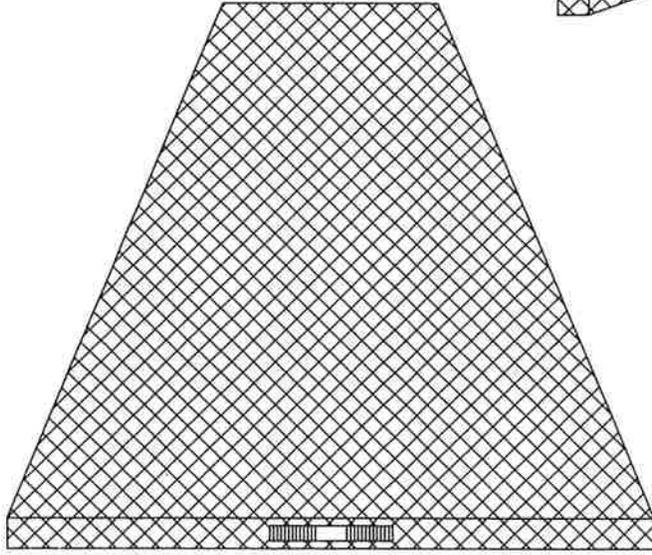
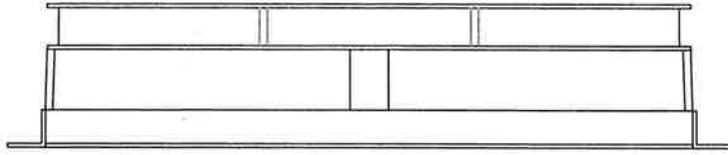
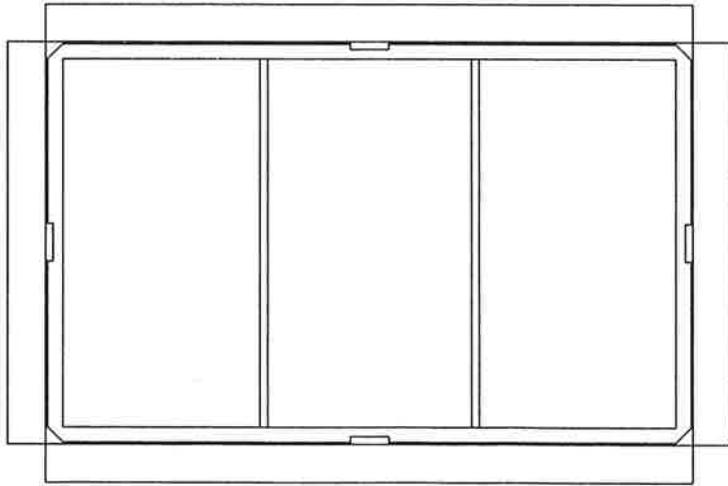
**GENERAL NOTES:**

FRAME: Top flange fabricated from 1 1/4" x 1 1/4" x 1/8" angle. Base rim fabricated from 1 1/2" x 1/2" x 1/8" channel. Handles and suspension brackets fabricated from 1 1/4" x 1/4" flat stock. All steel conforming to ASTM-A36.  
 SEDIMENT BAG: Bag fabricated from 4 oz./sq.yd. non-woven polypropylene geotextile reinforced with polyester mesh. Bag secured to base rim with a stainless steel band and lock.

DATE	REVISIONS
01-11-02	Original

Typical Round  
Catch-All

Marathon Materials, Inc.

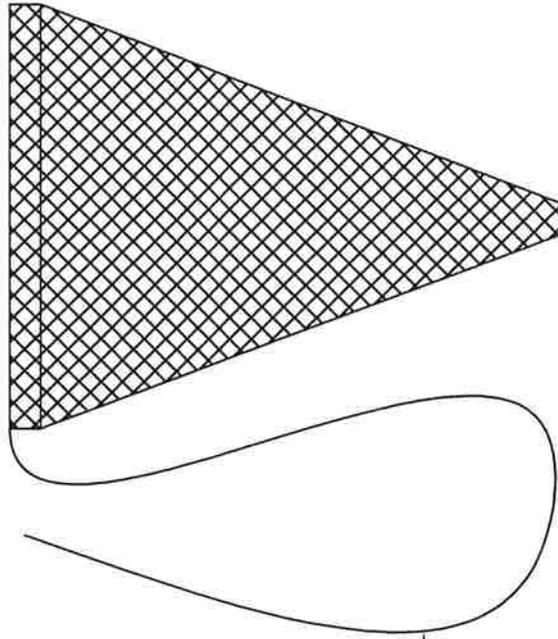
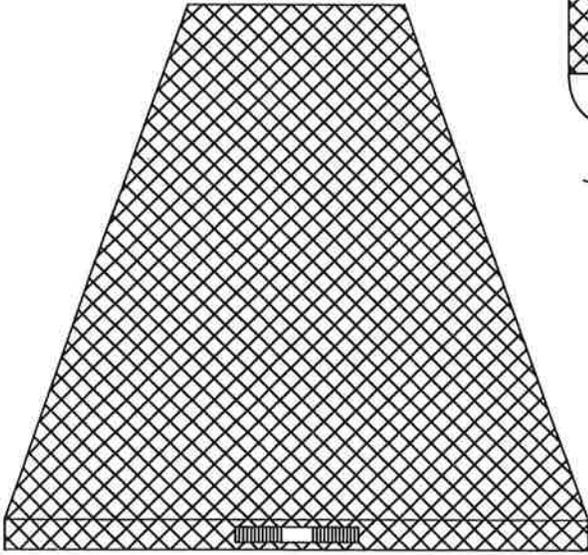
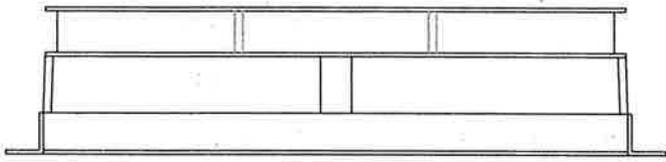
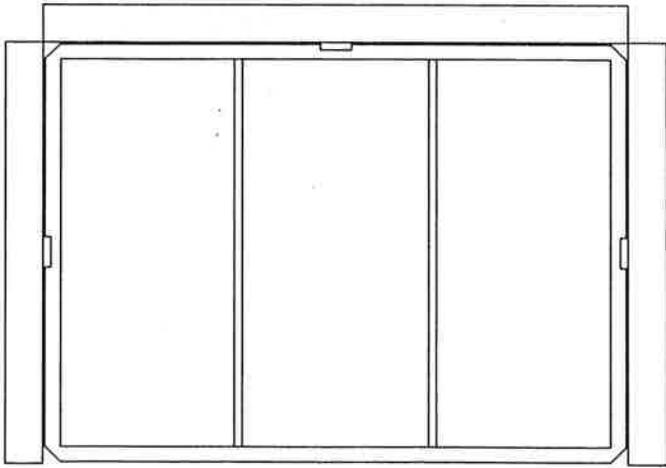


**GENERAL NOTES:**  
**FRAME:** Top flange fabricated from 1 1/4" x 1 1/4" x 1/8" angle. Base rim fabricated from 1 1/2" x 1/2" x 1/8" channel. Handles and suspension brackets fabricated from 1 1/2" x 1/4" flat stock. All steel conforming to ASTM-A36.  
**SEDIMENT BAG:** Bag fabricated from 4 oz./sq.yd. non-woven polypropylene geotextile reinforced with polyester mesh. Bag secured to base rim with a stainless steel band and lock.

DATE	REVISIONS
01-22-02	Original

Typical Rectangular Catch-All

Marathon Materials, Inc.



Fabric Flap to  
cover curb box

**GENERAL NOTES:**

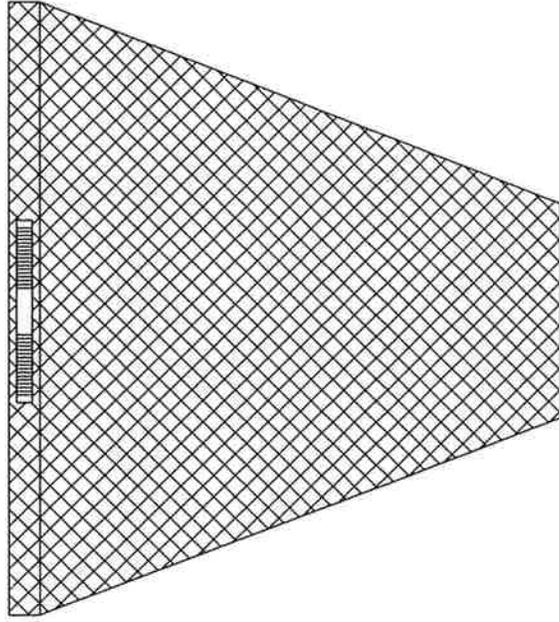
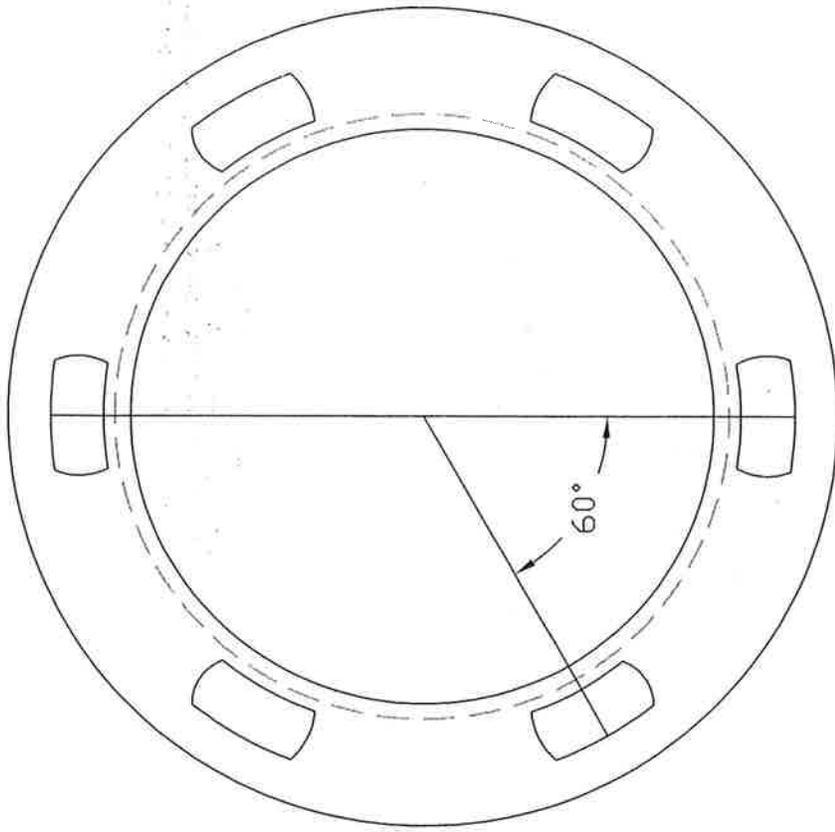
FRAME: Top Flange fabricated from 1 1/4"x1 1/4"x3/8" angle, Base rim fabricated from 1 1/2"x1/2"x3/8" channel, Handles and suspension brackets fabricated from 1 1/4"x1/4" flat stock. All steel conforming to ASTM-A36.  
 SEDIMENT BAG: Bag fabricated from 4 oz./sq.yd. non-woven polypropylene geotextile reinforced with polyester mesh. Bag secured to base rim with a stainless steel band and lock.

**REVISIONS**

DATE	REVISIONS
01-11-02	Original
05-07-04	Remove Back Rail

**Typical Curb Box  
Catch-All**

Marathon Materials, Inc.



**GENERAL NOTES:**  
**FRAME:** Top Flange fabricated from 1/4"x1/4"x1/8" angle. Base rim fabricated from 1/2"x1/2"x1/8" channel. Handles and suspension brackets fabricated from 1/4"x1/4" flat stock. All steel conforming to ASTM-A36.  
**SEDIMENT BAG:** Bag fabricated from 4 oz./sq.yd. non-woven polypropylene geotextile reinforced with polyester mesh. Bag secured to base rim with a stainless steel band and lock.

DATE	REVISIONS
01-22-02	Original

Typical Beehive  
 Catch-All

Marathon Materials, Inc.



## *Catch-All Inlet Protector*

### INLET FILTER SYSTEM MATERIALS

#### I. Non-Woven Polypropylene Filter Geotextile

Property	Test Method	Units	Minimum Average Roll Value (English)
Grab Tensile Strength	ASTM-D-4632	lbs	100
Grab Tensile Elongation	ASTM-D-4632	%	50
Mullen Burst	ASTM-D-3786	psi	225
Puncture	ASTM-D-4833	lbs	65
Trapezoidal Tear	ASTM-D-4533	lbs	45
UV Resistance	ASTM-D-4355	% @ hrs	70 @ 500
<b>Hydraulic</b>			
Apparent Opening Size	ASTM-D-1420	US Sieve	70
Permittivity	ASTM-D-4491	Sec. - 1	2.0
Flow Rate	ASTM-D-4491	Gal/min/ft <sup>2</sup>	145

#### II. Reinforcing Polyester Outer Mesh Fabric

Property	Test Method	Value
Content	ASTM-D-629	Polyester
Weight (oz/yd <sup>2</sup> )	ASTM-D-3776	4.55 + 15%
Whales (holes) inch	ASTM-D-3887	7.5 + 2
Chorses (holes) inch	ASTM-D-3887	15.5 + 2
Instronball Burst (psi)	ASTM-D-3887	120 min
Thickness	ASTM-D-1777	.040 + .005

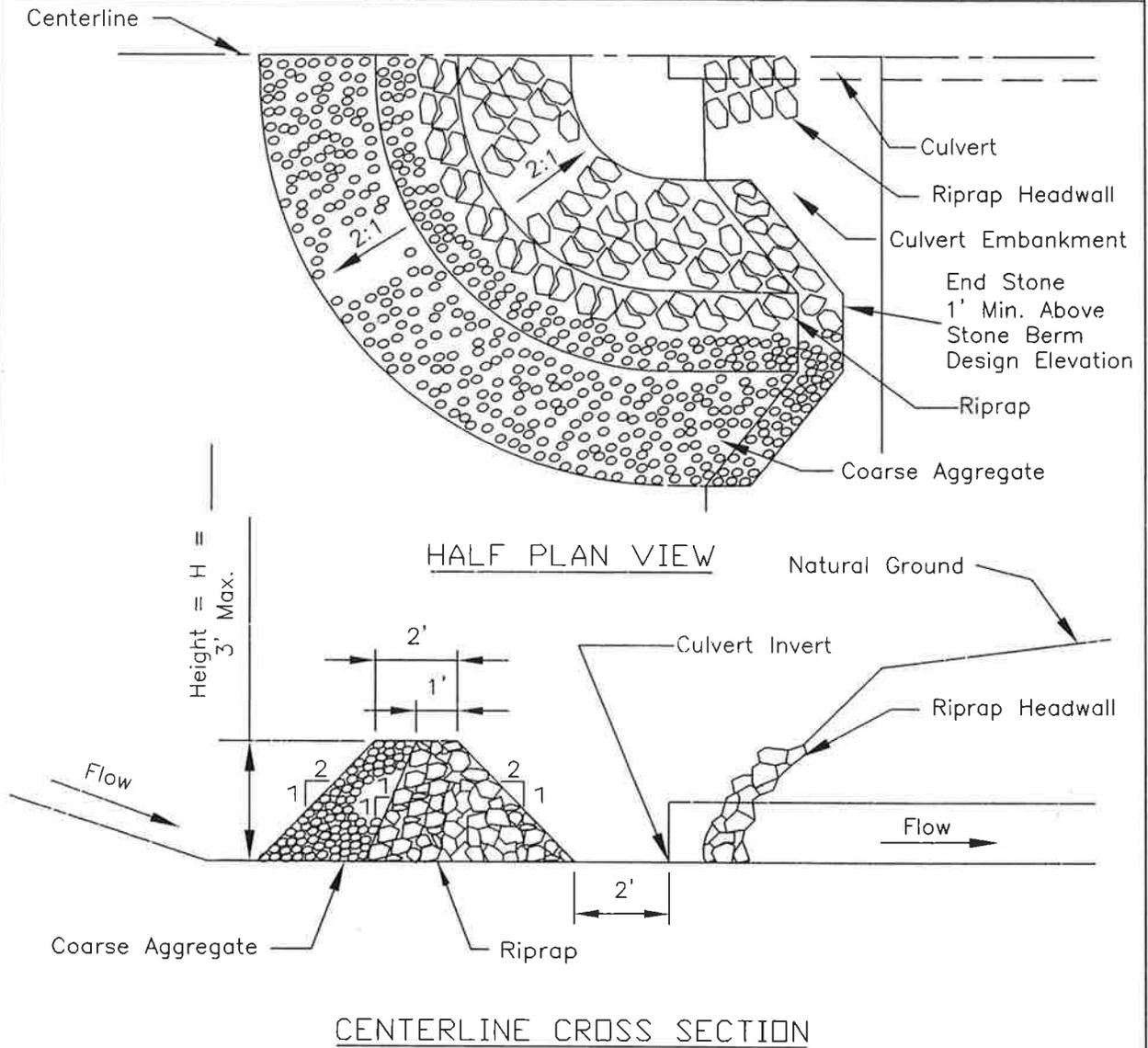
#### III. HR (*Hydrocarbon Removal*) Pillow Capacities

HR Pillow - 2.6 oz. Adsorbent/lf.

Type of Oil	Capacity by Weight - Oil / Adsorbent
Diesel	10:1
Fuel Oil	9:1
Machine Oil	8:1
30W Motor Oil	7:1

*All capacities are rounded down*

# CULVERT INLET PROTECTION - STONE



## Notes:

1. Sediment shall be removed when the sediment has accumulated to one-half the height of the stone berm.
2. Coarse aggregate shall meet one of the following IDOT coarse aggregate gradations, CA-1, CA-2, CA-3 or CA-4.
3. Riprap shall meet IDOT gradation RR-3 or RR-4. Any permanent riprap, such as for the culvert headwall, shall meet IDOT Quality Designation A.
4. Coarse aggregate and riprap shall be placed according to construction specification 25 ROCKFILL using placement Method 1 and Class III compaction.
5. The maximum drainage area to the culvert being protected is 3 acres.
6. See plans for H dimension.
7. Tie the stone berm into the culvert embankment a minimum of 1 foot above the design elevation of the stone berm.

## REFERENCE

Project \_\_\_\_\_  
 Designed \_\_\_\_\_ Date \_\_\_\_\_  
 Checked \_\_\_\_\_ Date \_\_\_\_\_  
 Approved \_\_\_\_\_ Date \_\_\_\_\_



**NRCS**

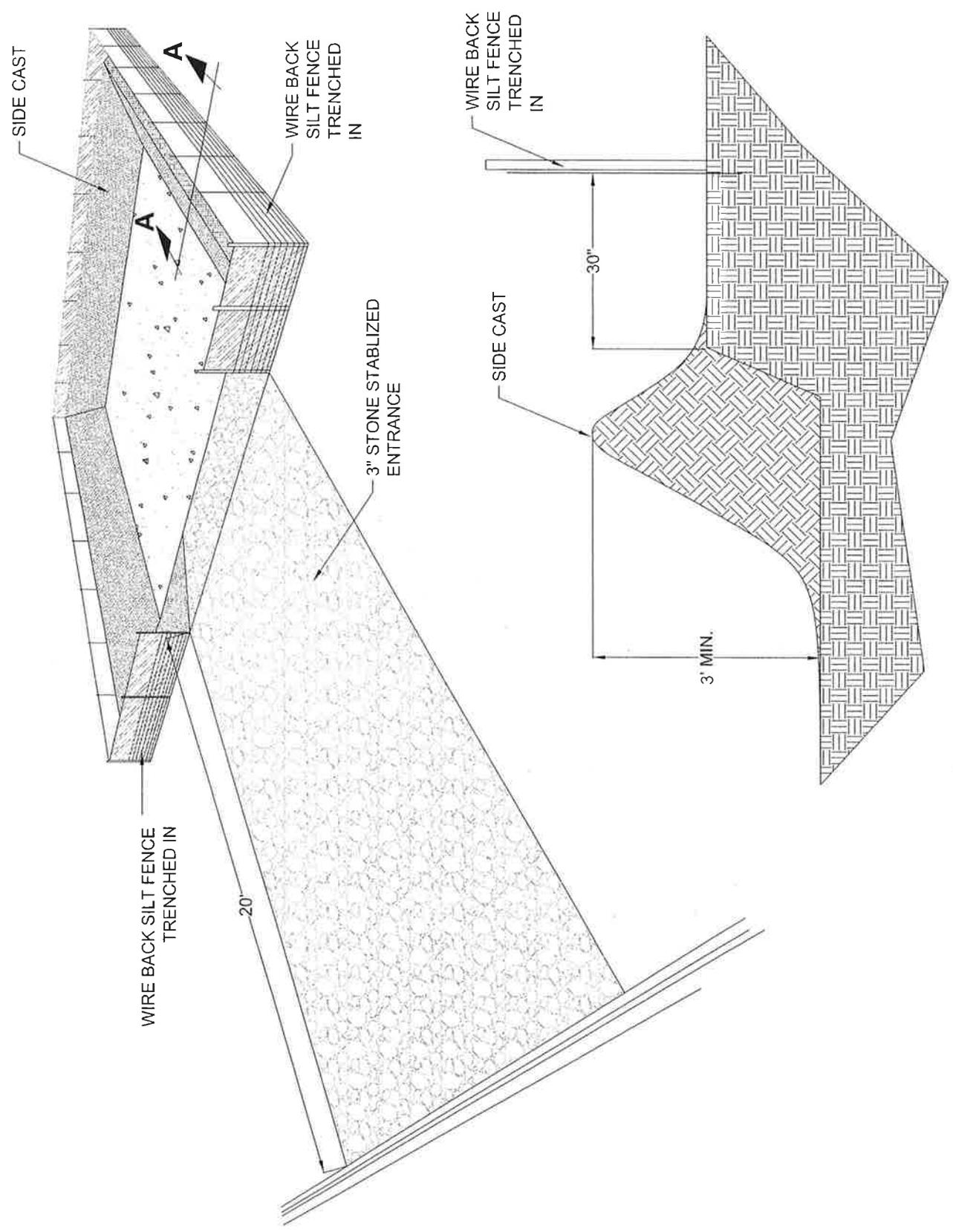
Natural Resources Conservation Service

STANDARD DWG. NO.

IL-508ST

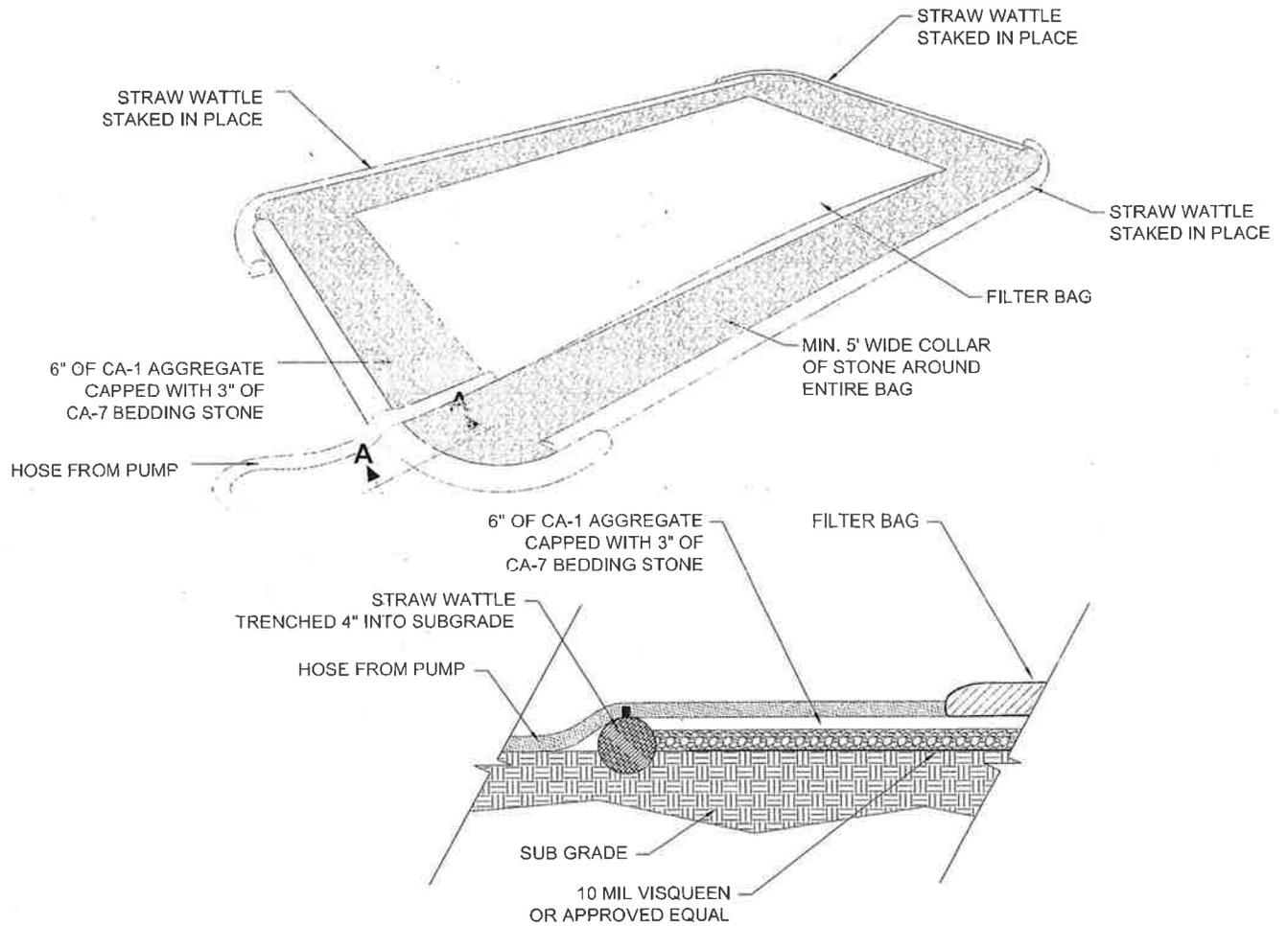
SHEET 1 OF 1

DATE 1-29-99



SECTION 'A'

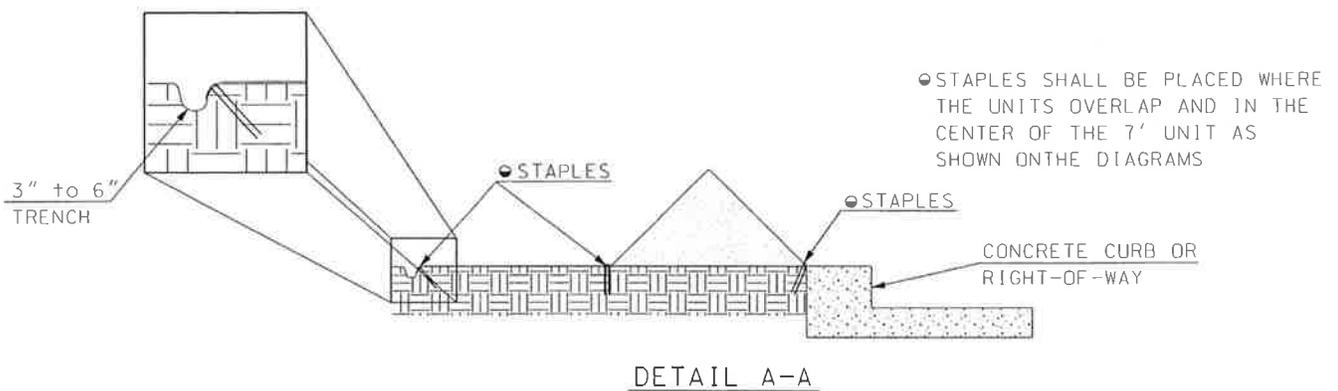
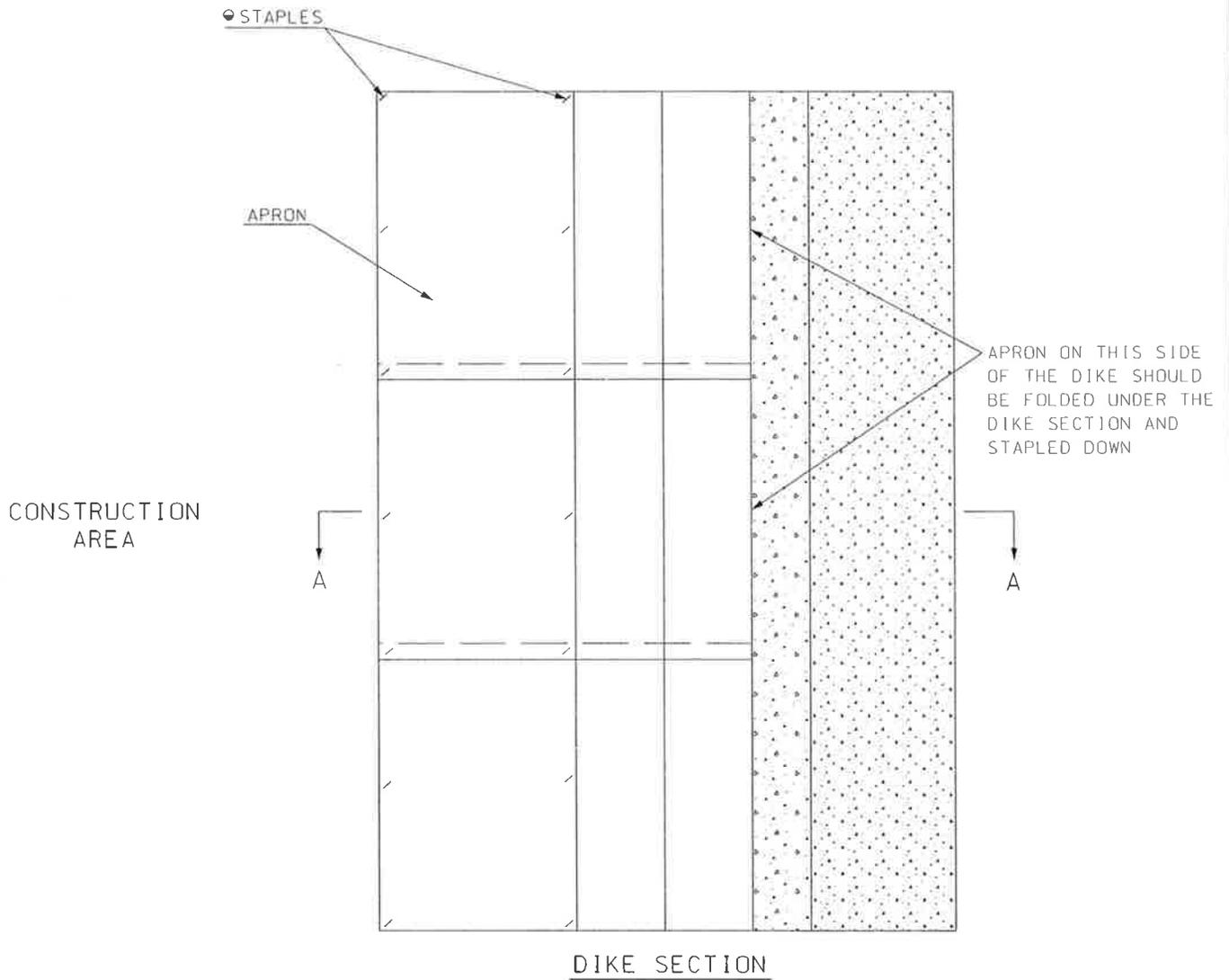
CONCRETE WASH OUT BASIN



- NOTES:
- (1) ACTUAL SIZE AND LAYOUT DETERMINED IN THE FIELD
  - (2) PUMP INTAKE HEAD SHOULD BE FLOATED AT SURFACE OR PLACED IN A STABILIZED SUMP PIT

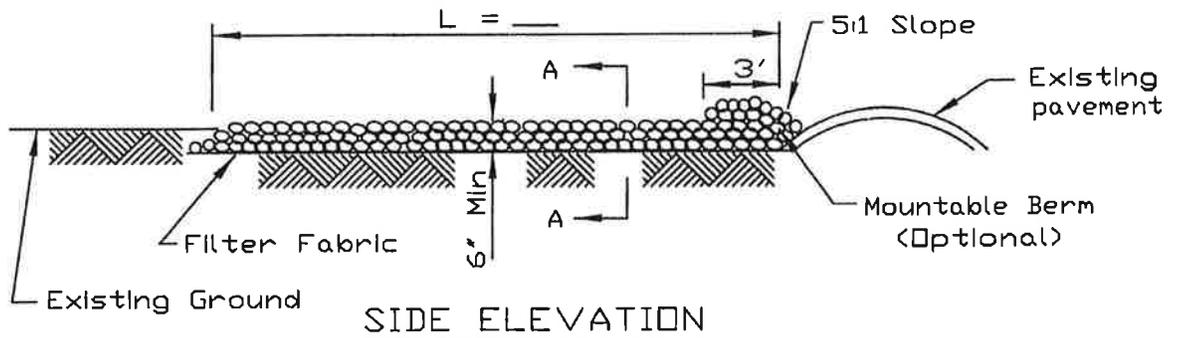
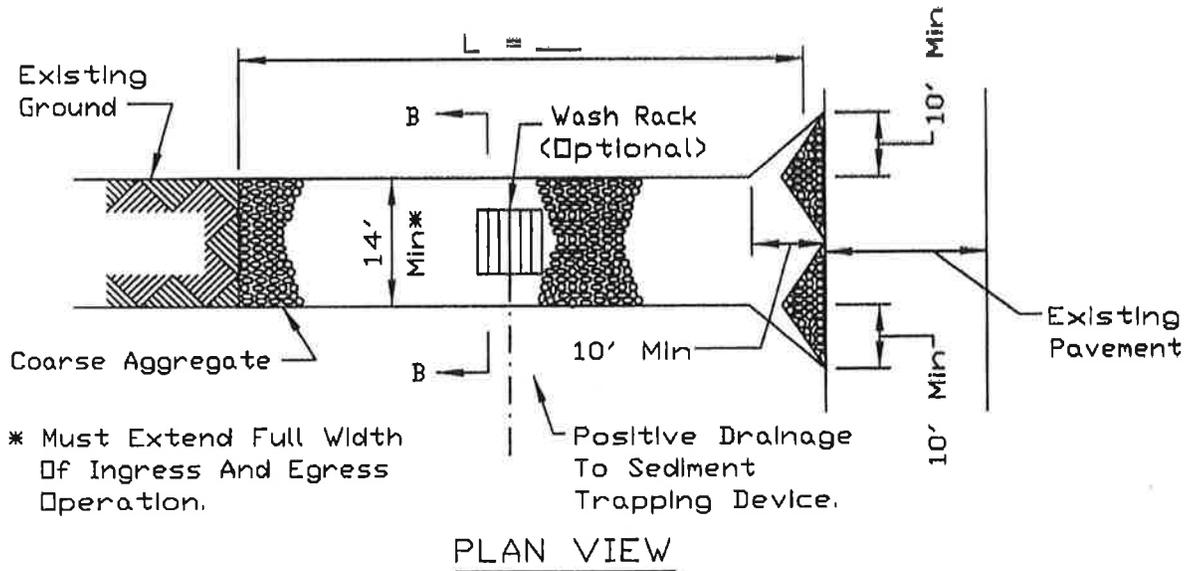
## DEWATERING FILTER PAD

# TRIANGULAR SILT DIKE INSTALLATION FOR CONTINUOUS BARRIER



● STAPLES SHALL BE PLACED WHERE THE UNITS OVERLAP AND IN THE CENTER OF THE 7' UNIT AS SHOWN ON THE DIAGRAMS

# STABILIZED CONSTRUCTION ENTRANCE PLAN



**NOTES:**

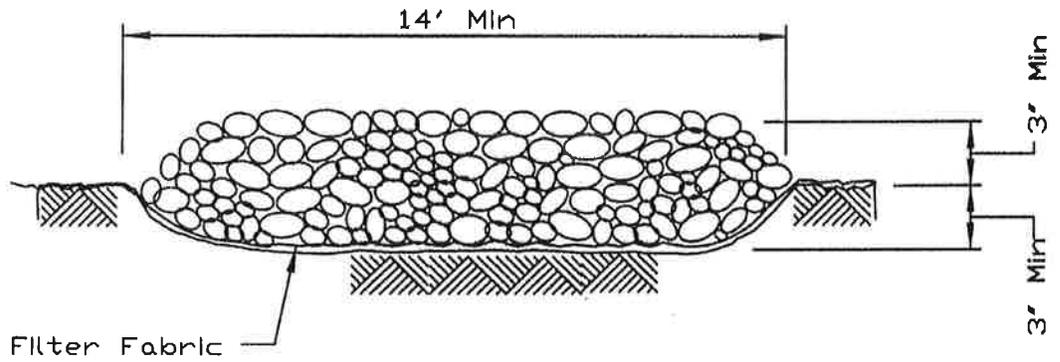
1. Filter fabric shall meet the requirements of material specification 592 GEOTEXTILE, Table I or 2, Class I, II or IV and shall be placed over the cleared area prior to the placing of rock.
2. Rock or reclaimed concrete shall meet one of the following IDOT coarse aggregate gradation, CA-1, CA-2, CA-3 or CA-4 and be placed according to construction specification 25 ROCKFILL using placement Method 1 and Class III compaction.
3. Any drainage facilities required because of washing shall be constructed according to manufacturers specifications.
4. If wash racks are used they shall be installed according to the manufacturer's specifications.

REFERENCE	
Project	_____
Designed	_____ Date _____
Checked	_____ Date _____
Approved	_____ Date _____

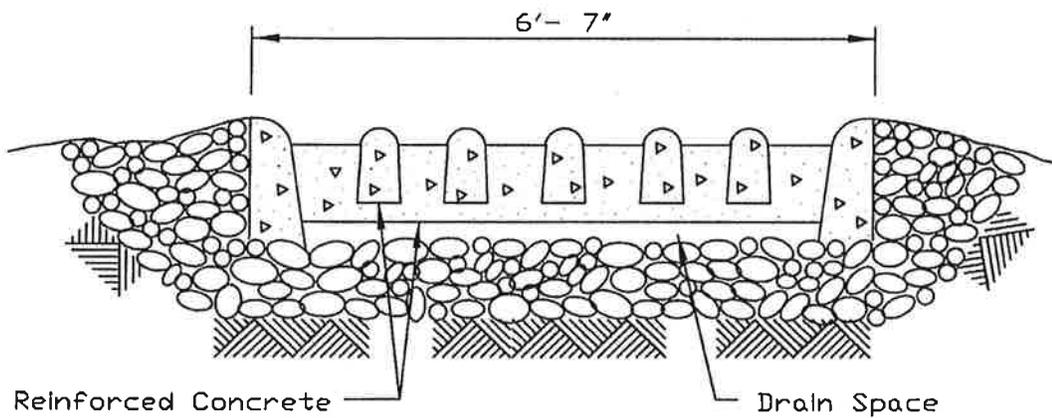


STANDARD DWG. NO.
IL-630
SHEET 1 OF 2
DATE 8-18-94

# STABILIZED CONSTRUCTION ENTRANCE PLAN



SECTION A-A



SECTION B-B

REFERENCE  
 Project \_\_\_\_\_  
 Designed \_\_\_\_\_ Date \_\_\_\_\_  
 Checked \_\_\_\_\_ Date \_\_\_\_\_  
 Approved \_\_\_\_\_ Date \_\_\_\_\_



STANDARD DWG. NO.  
 IL-630  
 SHEET 2 OF 2  
 DATE 8-18-94

**Illinois Urban Manual**  
**PRACTICE STANDARD**  
**STABILIZED CONSTRUCTION ENTRANCE**  
**CODE 630**

**DEFINITION**

A stabilized pad of aggregate underlain with filter fabric located at any point where traffic will be entering or leaving a construction site to or from a public right-of-way, street, alley, sidewalk, or parking area.

**PURPOSE**

The purpose of this standard is to reduce or eliminate the tracking of sediment onto public right-of-ways or streets.

**CONDITIONS WHERE PRACTICE APPLIES**

A stabilized construction entrance shall be used at all points of construction ingress and egress.

**CRITERIA**

Stabilized construction entrance shall meet the following requirements:

Aggregate size - IDOT coarse aggregate gradations: CA-1, CA-2, CA-3, or CA-4.

Thickness - 6 inches or more.

Stone placement - The stone entrance for the entrance shall be placed according to construction specification 25 ROCKFILL. Placement will be by Method 1 and compaction will be class III.

Width - 14 feet minimum but not less than the full width of ingress or egress points.

Length - As required, but not less than 70 feet, except on a single residence lot where a 30 feet minimum shall apply.

Filter fabric shall be used under the aggregate to minimize the migration of stone into the underlying soil by heavy vehicle loads. The filter fabric shall meet the requirements of materials specification 592 GEOTEXTILE Table 1 or 2, class I, II, or IV.

All surface water flowing or diverted toward construction entrances shall be piped across the entrance. If piping is impractical, a mountable berm with 5:1 slopes will be permitted.

Washing - If conditions on the site are such that the vehicles traveling over the gravel do not remove the majority of the mud, then the tires of the vehicles must be washed before entering a public road. Wash water must be carried away from the entrance to a sediment trapping facility such as practice standards IMPOUNDMENT STRUCTURE-ROUTED 842 or TEMPORARY SEDIMENT TRAP 960. All sediment shall be prevented from entering storm drains, ditches, watercourses, or surface waters including wetlands. A wash rack may be used to make washing more convenient and effective.

Location - the washing station should be located to provide for maximum utility by all construction vehicles.

Timing - the graveled access shall be installed as soon as practical after the start of site disturbance.

Removal - the entrance shall remain in place and be maintained until the disturbed area is stabilized by permanent best management practices.

### **CONSIDERATIONS**

Improperly planned and maintained construction entrances can become a continual erosion problem.

The tracking of mud from active building sites onto paved roads by construction vehicles can be greatly reduced, and in some cases eliminated, by the use of a stabilized construction entrance. These entrances provide an area where mud can be removed from construction vehicle tires before they enter a public road.

If the action of the vehicle tires traveling over the stone is not sufficient to remove the majority of the mud, then the tires must be washed before the vehicle enters a public road. When washing is required it shall be done on an area stabilized with aggregate, or using a wash rack underlain with gravel. Provisions shall be made to intercept the wash water and trap the sediment before it is

carried off-site. Construction entrances should be used in conjunction with the stabilization of construction roads, and other exposed areas, to reduce the amount of mud picked up by construction vehicles.

### **PLANS AND SPECIFICATIONS**

Plans and specifications for installing stabilized construction entrances shall be in keeping with this standard and shall describe the requirements for applying the practice to achieve its intended purpose. At a minimum include the following items:

1. Location
2. Length
3. Width
4. Thickness
5. Type of materials

All plans shall include the installation, inspection, and maintenance schedules with the responsible party identified.

Standard drawing STABILIZED CONSTRUCTION ENTRANCE PLAN IL-630 may be used as the plan sheet.

### **OPERATION AND MAINTENANCE**

The entrance shall be maintained in a condition that will prevent tracking of sediment onto public right-of-ways or streets. This may require periodic top dressing with additional aggregate. All sediment spilled, dropped, or washed onto public right-of-ways must be removed immediately. Periodic inspection and needed maintenance shall be provided after each rain.

WOOD STAKES DRIVEN THRU  
ROLL AND 2' MIN.  
BELOW GRADE

WOOD STAKES DRIVEN THRU  
ROLL AND 2' MIN.  
BELOW GRADE

TRENCH WATTLE 4"  
INTO EXISTING GRADE

DRIVE STAKES FLUSH  
WITH WATTLES

12" DIA. WATTLE STAKED  
INTO SURFACE OF DITCH

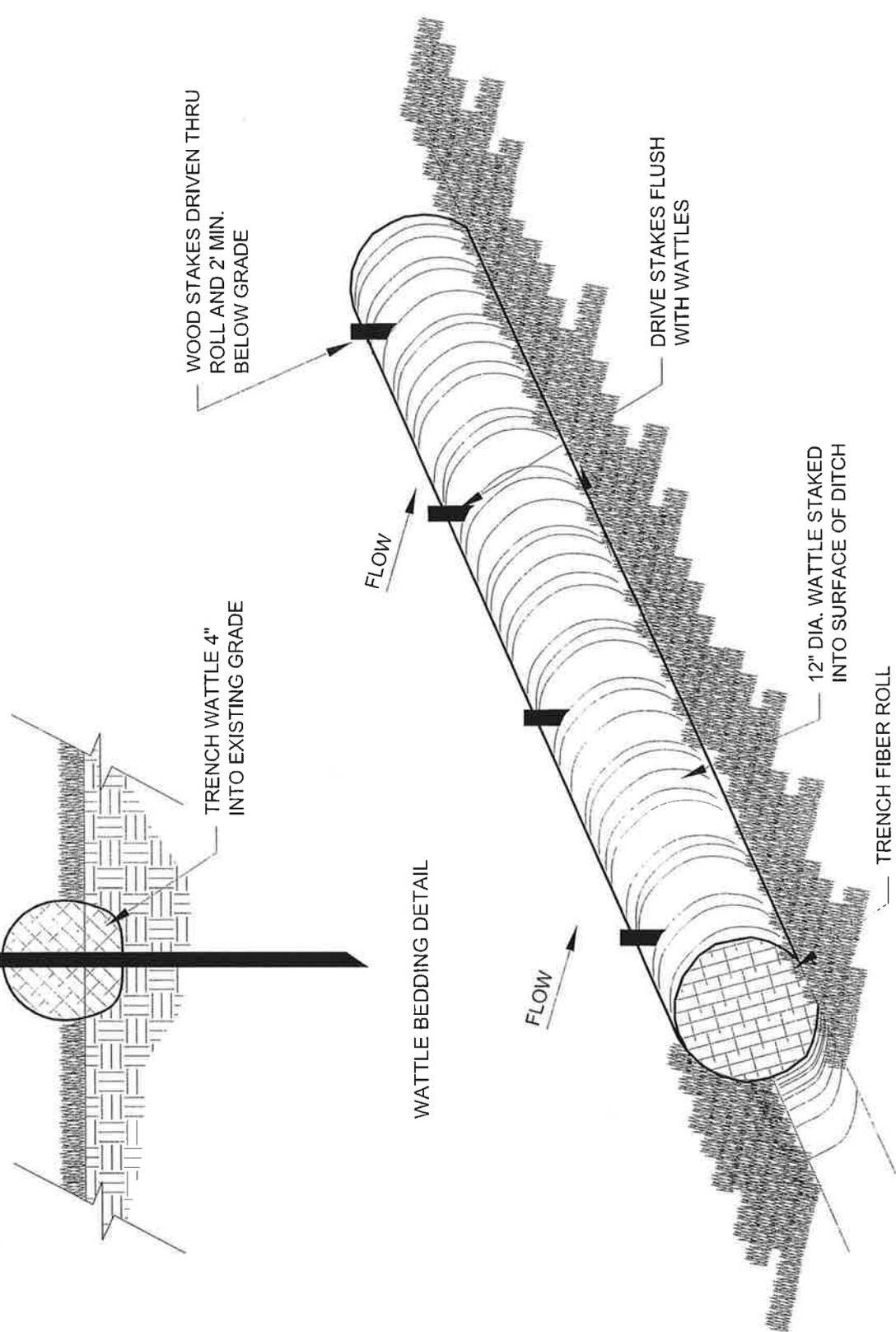
TRENCH FIBER ROLL  
4" INTO SURFACE

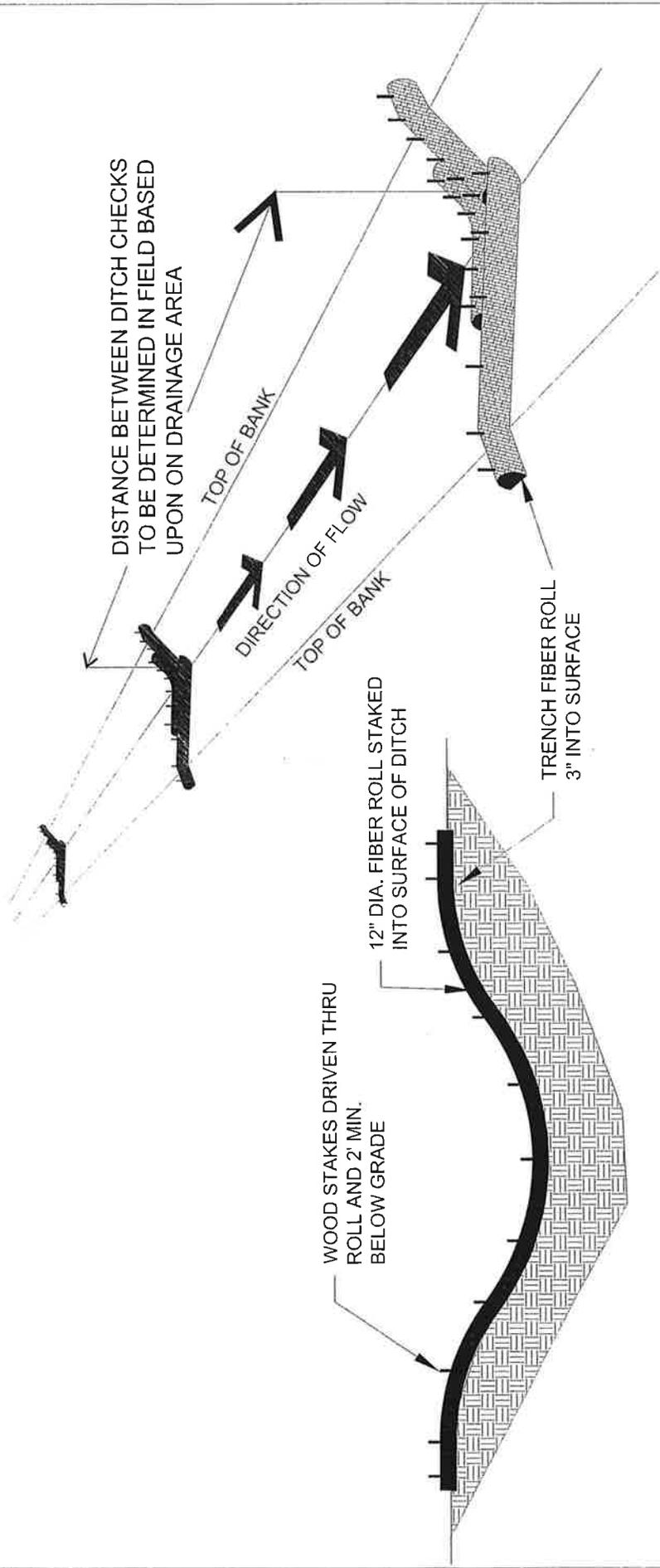
FLOW

FLOW

WATTLE BEDDING DETAIL

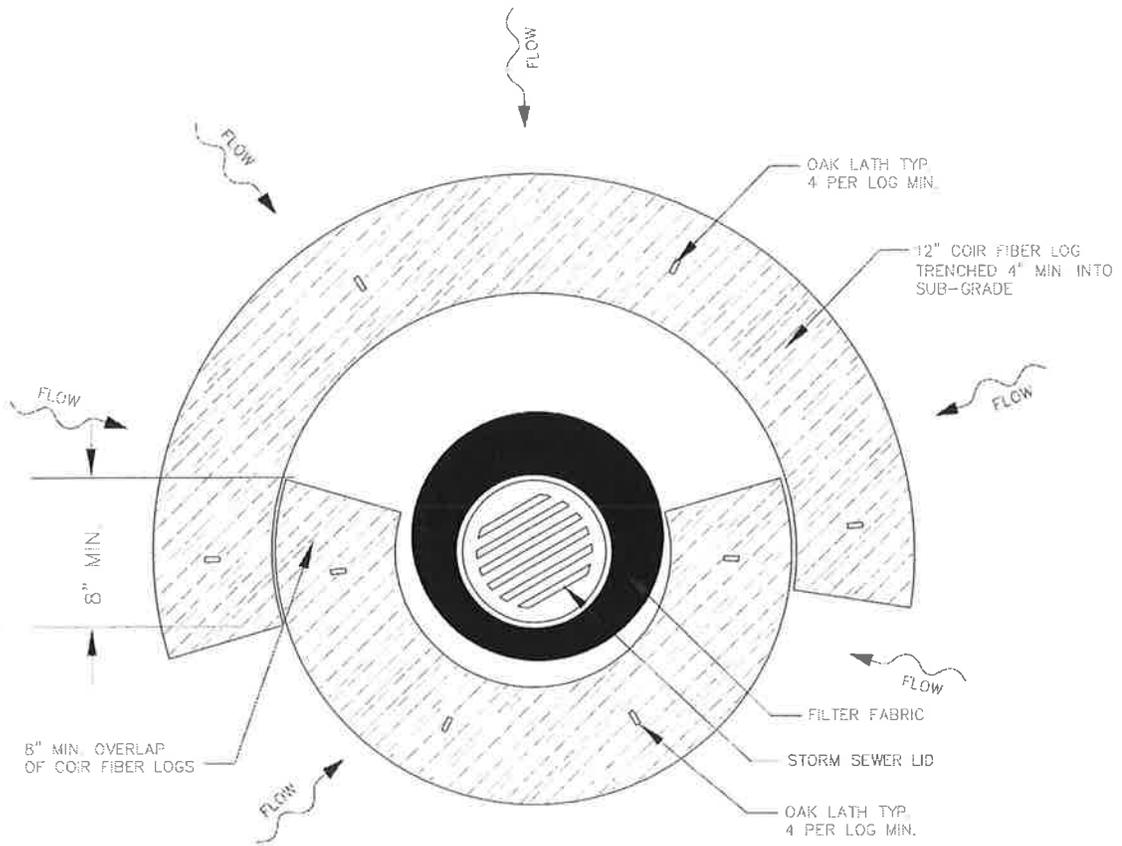
# WATTLE BARRIER PLAN



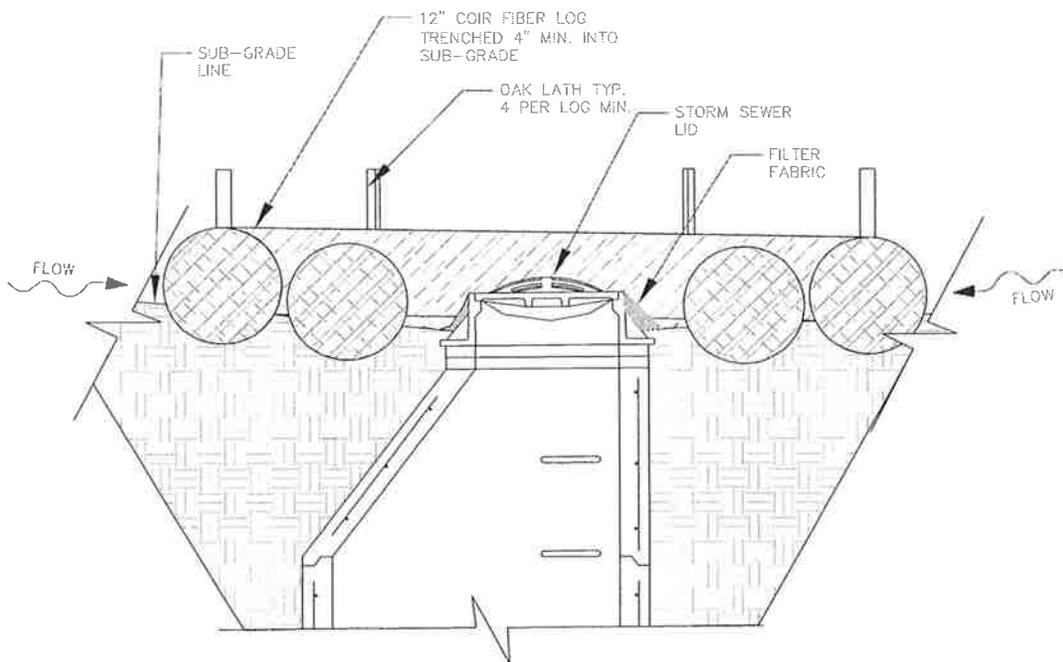


WATTLE CHECK DAM SECTION

# WATTLE DITCH CHECK DETAILS



YARD GRATE INLET PROTECTION  
 PLAN VIEW



YARD GRATE INLET PROTECTION  
 SECTION

## **APPENDIX 18**

Example Public Education and Outreach Materials



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## Public Works

Mayfair Reservoir Information

[Watering Ban](#)

[Branch Pickup](#)

[Garbage Schedule](#)

[Street Improvement Projects](#)

[Street Maintenance](#)

[Summer Rainfall Totals](#)

[Water & Sewer](#)

### About Public Works

The Public Works Department includes a Director, a Supervisor, 17 full-time employees, 1 part-time employee, and an administrative assistant. The Department provides the following services; water and sanitary sewer maintenance, street maintenance, tree and parkway maintenance, and general services.

The Westchester Public Works department's offices are located in the Village Hall main building at 10300 Roosevelt Road. They can be contacted between 7:00am and 3:30pm weekdays by calling 708-345-0041.

### Invitation for Bids

The Village of Westchester seeking bids for multi year building mechanical system maintenance. Visit the [Bid Postings](#) page for more details.

### Commonwealth Edison Required Tree Trimming

ComEd has advised the village that required tree trimming will be occurring within between January and April of 2016. [Click here to view this notification.](#)

To view the map of where trimming is scheduled during this time period [please click here.](#)

### Commonwealth Edison Contractors - Pole Replacement

Here is a [map of locations](#) being replaced between May and June 2016.

[Update for residents regarding Mayfair - May 2016](#)

### Contact

Robert Lewis  
Public Works Director  
[Email](#)

Carl Muell  
Public Works Supervisor  
[Email](#)

10300 W. Roosevelt Rd.  
Westchester, IL 60154

Ph: 708-345-0041  
Fx: 708-223-3051

### Hours

Monday - Friday  
7:00 am - 3:30 pm

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Share

## Storm Water Management

Storm Water Management

### Storm Water Management

Here you will find information regarding storm water quality improvements. This page will be updated shortly.

Cross Connection Control Program

### Dupage River Salt Creek Workgroup

[April 2016 Newsletter](#)

Lawn Sprinklers Cross Connection Notice

### Storm Water Fact Sheets

Below are documents that provide a wealth of information regarding storm water. Each document is in PDF format. Click here to download an [Adobe PDF Reader](#).

Leak Detection Program

Floodplain Information

Rain Barrels

Water Billing

Green Infrastructure

- [Cook County Storm Water Management Brochure](#)
- [Fact Sheet - Capturing Rainwater](#)
- [Fact Sheet - Checklist](#)
- [Fact Sheet - Heavy Rains](#)
- [Fact Sheet - Guide for Homeowners](#)
- [Fact Sheet - Protecting Your Home with Insurance](#)
- [Fact Sheet - Extreme Weather](#)
- [Fact Sheet - Your Sewer Pipe](#)
- [Fact Sheet - Your Yard](#)
- [Fact Sheet - Urban Flooding Awareness](#)
- [Fact Sheet - Water Quality](#)
- [Home Flood Proof Program](#)
- [Rain Barrels](#)

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# Support the Urban Flooding Awareness Act



## BACKGROUND

Evermore destructive storms are pummeling urban areas at an alarming rate, causing massive amounts of property damage to homes and businesses, eroding our land and streams and threatening the quality of our drinking water. What we know:

- The 2014 National Climate Assessment Report confirms major increases in precipitation across most of the country over the last 54 years, and projects even more frequent and intense rain events in the near future.
- It is believed that these storms currently cost property owners, businesses and taxpayers several billion dollars annually across the United States, but there is no good data on which to base future estimates.
- Research by the Illinois Dept. of Natural Resources shows that more than 92% of all damage claims from urban flooding in Illinois from 2007 to 2014 were outside designated floodplains, while current flood control programs focus primarily on flooding from overflowing rivers.

Thus, the vast majority of flood victims, whose homes and businesses are damaged by flooding after rainwater overwhelms local drainage systems, are left with few resources because government agencies are working with an incomplete picture of the nature and extent of urban flooding.

The steady increase in urban flooding and damage over the last few decades has three main causes: (1) increasingly frequent and intense rainfall, (2) continued development of impervious surfaces such as buildings, roads, parking lots, alleys and sidewalks and (3) aging, undersized and poorly maintained stormwater drainage infrastructure.

**The Urban Flooding Awareness Act requires FEMA to direct a study to quantify these facts and develop recommendations to assist federal, state and local governments in their efforts to prevent and provide relief from urban flooding to homeowners and businesses across the country.**

### Chief Sponsors:

Senator Dick Durbin (IL)

Congressman Mike Quigley (IL-5)

### Co-sponsors:

Congressman Steve Cohen (TN-9), Congressman Luis Gutierrez (IL-4), Congressman Jared Huffman (CA-2), Congressman Donald Payne, Jr. (NJ-10), Congressman Jared Polis (CO-2), Congresswoman Eleanor Holmes Norton (DC), Senator Sheldon Whitehouse (RI)

### Current Endorsements:

Alliance for the Great Lakes

American Rivers

Association of State Floodplain Managers

Congress for New Urbanism

National Association of Realtors

Water Environment Federation



Photo Credit: JKleeman/Flickr, Creative Commons License

“The available records of historical flood damage are inadequate for policy evaluation, scientific analysis, and disaster mitigation planning. There are no uniform guidelines for estimating flood losses, and there is no central clearinghouse to collect, evaluate, and report flood damage. The data that exist are rough approximations, compiled by the NWS from damage estimates that are reported in many different ways. Moreover, most published summaries of the damage estimates focus primarily on aggregate national damage totals.”

<http://www.flooddamagedata.org/introduction.html>

## YOUR QUESTIONS ANSWERED

**Q: What is “urban flooding”?**

A: Urban flooding occurs when homes, yards or streets are inundated with water from heavy rains or snow melt, damaging property, and making travel difficult and dangerous. It also results from sewer water backing up through pipes into basements, and from water seeping through foundation walls.

**Q: How is “urban flooding” different from other kinds of flooding?**

A: Government agencies and the media typically associate flooding with infrequent, catastrophic events such as Hurricane Sandy, and when heavy rains cause tidal surges and riverbanks to overflow. However, a recent study in Illinois<sup>1</sup> (“Illinois Study”) suggests that the vast majority of properties affected by flooding are in urban and suburban areas, where flooding affects them every time it rains hard. For these residents and businesses, flooding happens when the run-off from roads, parking lots, yards and roofs overwhelms the sewer system and makes its way into their homes.

**Q: Why is this happening? Is it new?**

A: It is a national trend, and there are three primary reasons for urban flooding. First, over the last 50 years there has been an increase in the number of intense storms. Second, over the same period, development has increased the amount of impervious surfaces (in the form of buildings, streets, sidewalks and parking lots), which means that there’s even less soil that can soak up this increased rainfall. Finally, in many communities the pipes intended to carry rainwater away were installed more than 50 years ago, when there was less runoff, so they were not designed for the increased runoff of today. Now many property owners are seeing water in their homes or flooding in their yards when there is just a moderate amount of rain – sometimes just an inch and a half or more.

**Q: How big of a problem is urban flooding?**

A: Nobody knows how many homes and businesses are affected, which is why we need this study. The Illinois Study found that properties across 99% of Illinois counties were affected at a total cost of over \$2.3 billion in an 8-year period. The average claim to property owners by insurance was \$6,500.

**Q: Why does it matter?**

A: The impacts of urban flooding can be severe – individual homeowners have spent hundreds of thousands of dollars repairing damage and in some cases have had to abandon their property altogether. Repeat flooding can also lead to foundation cracking and subsidence, and to mold, along with the associated health impacts.

**Q: Doesn’t insurance cover this type of flooding?**

A: Yes, but the insurance policies for urban flooding are complex and not designed to deal with the problems that some property owners face every time it rains. One element of the study will be to review the role of insurance in these situations.

**Q: How will a study fix the problem?**

A: Understanding the scale and severity of the problem will help federal and state agencies and the insurance sector better understand how to support affected homeowners and businesses, including where to prioritize investment and action. It will also ensure that the impact of urban flooding on victims is given proper attention and recognition.

**Q: How can individuals help?**

A: Owners of residential and business property that experience flooding can be very helpful by completing the CNT Urban Flooding Survey. The stories and data from this survey will be provided to members of Congress to give them important information about urban flooding and the need for the national study.

<sup>1</sup> Report for the Urban Flooding Awareness Act, June 2015, State of Illinois Department of Natural Resources: [https://www.dnr.illinois.gov/WaterResources/Documents/Final\\_UFAA\\_Report.pdf](https://www.dnr.illinois.gov/WaterResources/Documents/Final_UFAA_Report.pdf)

For more information, please contact Hal Sprague at (773) 269-4046, [hal@cnt.org](mailto:hal@cnt.org)

## About CNT

CNT is a nonprofit innovations hub for urban sustainability. CNT’s research, strategies, and solutions are implemented across America and around the world to create more equitable and resilient communities. Our 35-plus years of work in transportation and community development, water, energy, and climate have inspired a generation of new approaches and earned the highest of honors.

# Your Building's Sewer Pipe



In *RainReady*<sup>SM</sup> communities, better water management means that homes, schools, and businesses are prepared for rain—whether too much or too little. *RainReady* programs keep residences secure and dry, services running, and rivers and lakes clean.

Sewer systems collect wastewater from inside our buildings and carry it to treatment facilities that are often many miles away. When functioning properly, both privately and publicly owned sewer pipes are inconspicuous to most people. When they fail, sewers can back up into homes, businesses, yards, and streets. They can also dump untreated sewage and polluted stormwater across the landscape, sometimes ending up in rivers, streams, and lakes.

Such flooding and pollution pose financial and health risks for entire communities, and they are often preventable. It is the responsibility of the property owner to maintain and repair the private sewer pipe that connects a building to the public main line under a street. By having your building sewer checked or encouraging your municipality to inspect building sewers throughout the community, you are helping to tackle a problem that can otherwise damage homes and communities with unwanted and unsafe water.



Photo credit: Rachel, Flickr Creative Commons

## COMBINED SEWER SYSTEMS AND SEPARATE SEWER SYSTEMS

There are two main types of sewer systems: *combined* and *separate*. In combined systems, wastewater from inside buildings joins the stormwater that has landed on impermeable surfaces and been collected by storm drains, and both are carried in the same pipe to a treatment facility. If the capacity of these pipes is exceeded, which often occurs during large rain events, they overflow into nearby streams, rivers, and lakes. The health and ecological dangers of Combined Sewer Overflows (CSOs) make these systems undesirable, but they serve millions of people across the country (generally in older towns and cities), and they are expensive to divide into two separate systems.

In separate sewer systems, sanitary wastewater and stormwater have their own pipes. Sanitary wastewater collected from inside buildings is carried directly to a treatment facility, while the water collected by storm drains is discharged into nearby streams, rivers, and lakes. Although they are preferable to combined sewers, separate sewer systems are not without problems. For example, even though sanitary sewer pipes are designed to carry only sanitary wastewater, various malfunctions and illegal practices can cause them to exceed their intended capacity. This leads to hazardous, untreated sewage flowing backward into homes and other buildings or pouring out of manholes.

## PROBLEMS AND SOLUTIONS FOR YOUR BUILDING SEWER PIPE

If the capacity of your building's sewer pipe is exceeded or the pipe is blocked, it can back up and flood your home with untreated sewage. Even if your own building sewer doesn't back up and discharge sewage into your home, contributing too much water to the sanitary sewer system will increase the risk that your neighbors will experience backups. It's not uncommon for a significant proportion of building owners in a community to have problems with their building sewers, each contributing to the flooding of the others.

There are a few notable problems that can cause building sewers to malfunction.

**Sump pumps, foundation drains, or gutter downspouts** that are connected to your building sewer can allow excessive stormwater and groundwater to enter the pipe, often sending wastewater back into your building and possibly others. Although it was once common to connect these devices to sanitary sewer lines, doing so is generally illegal or discouraged nowadays, and all three should be disconnected. Discharges from sump pumps, foundation drains, and downspouts can be rerouted to storm sewers or backyards—ideally ones with rain gardens, rain barrels,

or underground cisterns designed to retain stormwater as it infiltrates into the soil.

**Roots, grease, tree roots, and other blockages** can obstruct the flow within a building sewer pipe and create pressure that sends the wastewater back into the building. A skilled plumber can use a video camera to examine your pipes and ensure that they are free of blockages. If tree roots are obstructing your pipes, the plumber can destroy them mechanically, or you can use chemical root destroyer to kill them.



Photo credit: Seth Anderson, Flickr Creative Commons

**Cracks and leaks** in a building sewer can allow groundwater to enter and exceed the sewer's capacity, sending wastewater back into the building and possibly others. Since sanitary sewer systems are generally designed to handle only wastewater, the addition of any stormwater or groundwater can exceed the capacity of the sewer lines. A skilled plumber can use a video camera to locate cracks and leaks and recommend further action to correct the problem.

### OTHER OPTIONS FOR PREVENTING SEWER BACKUPS

In addition to having your building sewer checked, there are many other technologies available for protecting your building from problems caused by sewer backups. Some will work better than others for your situation, so it's important to research the costs and benefits of each. Here are a few examples:

**Floor drain plugs** are cheap, easily installed, and may effectively prevent sewage backflow through the floor drain, which is generally a building's lowest opening to the sewer system. However, if they are not removed in time, floor drain plugs can also prevent floodwater from leaving a building through the floor drain since they stop water from flowing in either direction. Furthermore, they do not prevent sewage backflow from entering buildings through their next lowest openings, such as bathtub drains.

**Standpipes** are inexpensive, open-ended pipes that are inserted into the floor drain with a water-tight seal. They can hold sanitary sewer backflow water that rises above the level of the drain in order to prevent flooding. Unlike drain plugs, standpipes equalize water pressure above and below the drain, which minimizes the possibility of foundation cracking. Unfortunately, standpipes often do not have enough capacity to prevent major backups.

**Overhead sewers** are an effective but more costly option for homes with bathroom or laundry plumbing that is below the flood level (e.g., in a basement). An ejector pump, which appears and acts much like a sump pump, is installed in the floor below the flood level. It receives wastewater from the basement toilet and pushes it upwards through a pipe that meets with wastewater draining from higher levels of the building. Due to the force of gravity, the building sewer then drains all of the building's wastewater downwards to the municipal sewer pipe, effectively reducing the risk of backups.

**Backwater valves** are one-way flaps installed within your building sewer that automatically close during backup events and prevent any wastewater from re-entering your building through the pipe. They can be either installed from inside your building or through a temporary hole that is dug in your lawn to reach the pipe. Backwater valves require regular maintenance to ensure that they are working properly and are free from the buildup of debris that may clog them.

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DOES YOUR COMMUNITY HAVE A RAINREADY PLAN? LEARN MORE AT [WWW.RAINREADY.ORG](http://WWW.RAINREADY.ORG)

---

# Taking Action: A Guide for Homeowners



In *RainReady*<sup>SM</sup> communities, better water management means that homes, schools, and businesses are prepared for rain—whether too much or too little. RainReady programs keep residences secure and dry, services running, and rivers and lakes clean.

Wet basement, parched lawn, or cracking foundation? There are many well-tested options available to homeowners in need of water management solutions. Here are ten actions homeowners can take to protect their properties. For more details, visit [www.rainready.org/for-homeowners](http://www.rainready.org/for-homeowners).

1

## ✓ ASSESS YOUR PROPERTY

The first step to making improvements is understanding how water falls on your property and flows through your pipes. If you have significant problems, you may need the help of an engineer, plumber, electrician, or landscape designer. Try to find an assessor that is independent of any contractor so they will be focused on the most affordable solutions. Always document problems with words, photographs, and videos, as this information will be helpful for assessments, insurance claims, and acquiring help from your municipality.



2

## ✓ MAKE YARD IMPROVEMENTS

In order to prevent flooding and minimize the impact of water scarcity in your home and neighborhood, try to capture stormwater runoff using rain gardens, swales, dry wells, permeable paving, rain barrels, or cisterns. Since conventional lawns exacerbate water management problems, consider replacing yours with a variety of native plants and grasses, which absorb more water and require less fertilizing, mowing, and water. Other yard improvements include re-grading land so that stormwater drains away from your building, disconnecting gutter downspouts from municipal sewer lines, and constructing walls and barriers to prevent water from reaching low-entry points.

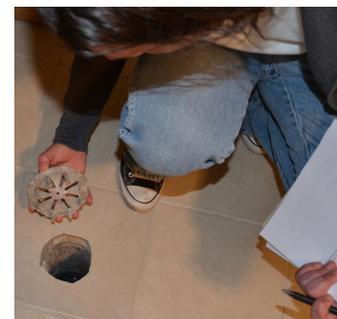


Photo credit: Jason Vance, Flickr Creative Commons

3

## ✓ MANAGE WATER WITHIN YOUR HOME

There are a range of appliances, fixtures, water systems, and accessories on the market that can help you manage water in your home. For example, you can save energy, water, and money by using high-performance, water-efficient appliances. Alarm systems for sump-pumps, home rain gauges, and smartphone flood-alert applications all help minimize the damage of flooding. If water regularly enters your home, place appliances, furnaces, hot water heaters and electrical panels above the typical flood level on wood or concrete blocks. There are also a range of floodproofing devices on the market, such as floor-drain guards, standpipes, sump pumps, backwater valves, overhead sewer pumps, and interior and exterior drain tiles.



4

## ✓ HAVE YOUR BUILDING SEWERS CHECKED

Faulty pipes connecting your home to the municipal sewer system can exacerbate foundation damage and flooding in your home. Ensure that roots, grease, waste, or tree roots are not obstructing the

pipe and preventing wastewater from leaving the house. If there are roots in the drain, you can use a root destroyer twice a year to kill them. Also check if your sump pump, foundation drains, and gutter downspouts are connected to sewer pipes and causing them to exceed capacity during heavy rainstorms, which can cause backups. You might need a licensed plumber to determine if the sewer pipes on your property are functioning properly.

5

## ✓ RECLAIM YOUR PUBLIC RIGHTS-OF-WAY

The green spaces between the sidewalk and street can be adapted to capture and absorb stormwater runoff from the nearby surfaces. By incorporating rain gardens or tree plantings into the parkway, you can reduce the risk of runoff entering your building or flooding your street. A rain garden is constructed by digging a trench in the parkway and backfilling it with open-graded stone topped with a sandy, engineered soil mix; mulch; and plants. Rain gardens are very permeable and can store the incoming rainwater until it infiltrates the underlying soil.



Photo credit: EPA Smart Growth, Flickr Creative Commons

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## ✓ GET INSURED

Home insurance policies cover damage caused by household appliance malfunction, burst pipes, or rain entering the house from above, but they do not cover damage caused by flooding, backup, sump pump failure, below-ground seepage, mold damage, or earth movement. Water backup and sump pump discharge policies can usually be purchased as riders, but they do not cover damage from water seepage through basement walls or from homeowner negligence. If your municipality participates, you can also get coverage through the National Flood Insurance Program, which is federally backed and covers flood-related damage to appliances, plumbing, furnaces, hot water heaters, and other structural items such as drywall, stairways, and insulation.

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## ✓ BE A WISE HOME BUYER AND SELLER

Check that your realtor is knowledgeable about the signs of water-related damage and is willing to advocate for repairs before finalizing a sale. Because property sellers may be reluctant to disclose risks, research carefully about local subsidence and flooding risks and look for signs like foundation and wall cracks, water marks on basement walls, or a musty smell. Check the residential real property disclosure report, but remember that a seller may be reluctant to fully disclose previous problems. Ask your realtor to request a loss history report for the property, which will reveal any insurance claims made against the property in the past five to seven years. If you think that the property is prone to flooding or foundation cracks but would still like to buy it, you can request that the seller take appropriate action to reduce your risk.



Photo credit: Eric Allix Rogers, Flickr Creative Commons

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## ✓ EXPECT AND PREPARE FOR EXTREME WEATHER

If there are weather warnings, clear your drainage areas, secure your windows and doors, and ensure your sump pump is working. If you are nervous about flooding in your home, move valuable belongings to the upper floors and make sure you have adequate food and water for a few days. If water enters your home, carefully turn off your main electrical switch and move to the upper floors. Take dry clothing, cell phones, flashlights, and a portable radio, and then wait for help. Also, be on alert for gas leaks, as rising water can extinguish the pilot light on your water heater or furnace and let gas into your home. If you leave your property, do not walk or drive through flooded areas. Wait for the water to drain out before reentering the property, and check for structural damage before you enter any buildings. If there is severe damage, call your flood insurance company to file a claim. Even if you aren't covered, note the date and time as well as the depth of the water. Document and photograph items that were damaged, including their estimated value.



Photo credit: Charlotte Sanderson, Flickr Creative Commons

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## ✓ IDENTIFY FUNDING

Many municipalities contribute to the costs of RainReady improvements on private and public property. Re-grading yards, replacing lawns, disconnecting sump pumps from the sewer system, and using efficient appliances can often be more cost-effective than expanding or replacing municipal pipes and storage facilities. This investment should be supported by long-term, dedicated funding that is part of residents' regular water and utility bills and is regularly reported on. Encourage your municipality to explore these options, in addition to federal and state grants, so that RainReady improvements become cost-effective and feasible for all residents.



Photo credit: Jason Dicks, Flickr Creative Commons

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## ✓ MAKE THE CASE FOR A RAINREADY PLAN IN YOUR COMMUNITY

The homes, businesses, and public buildings of a community are inextricably linked by common watersheds—the area of land where rain, snow, and other water drains into rivers or streams. As urban development expands, downstream property owners can discover that their homes and basements have unintentionally become the neighborhood's storage basin, or that their drinking water is being depleted by other people and other uses. Although RainReady improvements on individual properties can provide relief, residents and governments are recognizing the need for a RainReady Plan for whole neighborhoods and regions. Community members should advocate for rain readiness as a necessary component of a municipal plans.

**Even if you're not suffering from problems** on your own property, keep in mind that the irrigation of your lawn, the runoff from your property, the condition of your sewer pipes, and the type of home appliances you have can exacerbate your neighborhood problems. In other words, good water management means being a good neighbor.

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DOES YOUR COMMUNITY HAVE A RAINREADY PLAN? LEARN MORE AT [WWW.RAINREADY.ORG](http://WWW.RAINREADY.ORG)

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# Seven Techniques for Capturing Rainwater on Your Property



In *RainReady<sup>SM</sup>* communities, better water management means that homes, schools, and businesses are prepared for rain—whether too much or too little. *RainReady* programs keep residences secure and dry, services running, and rivers and lakes clean.

There are many actions that you can take as a homeowner to manage water more effectively on your property. The seven improvements outlined in this factsheet can reduce the chance of flooding, protect your building's foundation, and reduce runoff that contributes to pollution. They will also conserve water resources, attract wildlife, and beautify your property.

Before making improvements to your yard, you'll need to understand how water currently moves or collects on your property. You can then use this information to help determine an effective and affordable suite of improvements. By creating a more RainReady property, you are protecting yourself and helping your community at the same time.

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## THE PROBLEMS

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There may be several water management issues you are seeking to address:

**TOO MUCH WATER:** Conventional lawns and paved surfaces have a limited ability to absorb water, so they are inadequate for draining water during major rain events. Excess water can flood your building, submerge your yard, or pool against your foundation and cause serious structural problems. Excess water can also flood the properties of your neighbors, or it can become runoff that delivers pollutants from your property to nearby bodies of water.

**TOO LITTLE WATER:** In times of water shortage, dry soil around your home can cause foundation cracking and instability, and it can even cause sinkholes to develop on your property. Because lawns have limited capacity for absorbing water, they need to be continually watered and thus contribute to the depletion of scarce freshwater resources in your region.

**POLLUTED WATER:** As rainwater runs off your yard onto nearby streets and sidewalks, it picks up pollutants such as gasoline, oil, road salt, fertilizer, commercial and industrial waste, and other debris. Instead of filtering into the soil, the polluted water flows into nearby bodies of water, overloaded storm sewers, or developed properties.



Photo credit: Gardening in a Minute, Flickr Creative Commons



Photo credit: ankraut, Flickr Creative Commons

## THE SOLUTIONS

Yard improvements in your community can reduce these problems by slowing the flow of stormwater, filtering out pollutants, and allowing water to percolate into the soil below. We've outlined seven approaches that you and your neighbors can use to capture rainwater in your yards. These improvements will be most effective if they are coordinated carefully with one another. To accomplish this at a neighborhood scale, encourage your municipality to set up a grant program and Rain Fund. See our corresponding factsheets for further information.



Photo credit: CNT

**RAIN GARDEN:** This is a shallow, heavily vegetated basin that captures stormwater with highly absorbent soil (such as compost) that filters out chemicals, heavy metals, and sediments. Rain gardens should be planted with native, deep-rooted plants, since these allow for easier infiltration of treated water into the soil, require less irrigation, offer greater resilience to drought, and provide a suitable habitat for local wildlife. Property owners can build rain gardens on their own or enlist the help of a specialist.



Photo credit: deech, Flickr Creative Commons

**SWALE:** This is a vegetated, shallowly sloped channel that slows and treats stormwater runoff on your property. Like a rain garden, a swale contains soils and plants that filter pollutants from the stormwater it captures, have minimal watering requirements, and attract local wildlife. Unlike a rain garden, a swale's primary function is to slow and treat water as it continues to flow to an existing stream, rain garden, infiltration drain, or dry well. Be mindful of the water's destination, as you don't want to create new problems for yourself or your neighbors.



Photo credit: Eileen O'Shea, Flickr Creative Commons

**FRENCH DRAIN:** This is a slightly sloped underground trench that is filled with rocks or gravel in order to move rainwater away from a building. Modern French drains are often laid with a perforated pipe near the bottom in order to maximize how fast they can convey water. The rocks or gravel can reach the surface and simply appear as a landscaping element, or they can be covered with a highly permeable layer of soil and vegetation. French drains can lead to a dry well, rain garden, stream, or other area.



Photo credit: drywellguy, Flickr Creative Commons

**DRY WELL:** This is an underground chamber that can hold both rainwater and groundwater while they dissipate into the soil. A dry well can receive water from a grass lawn, swale, rain garden, or other areas through a surface drain. It can also receive water from a sump pump, foundation drain, or gutter downspout through an underground pipe. A simple version of a dry well can consist of a pit filled with gravel or other debris, while a more advanced version can consist of a perforated tank that is buried and surrounded with gravel.

## Seven Techniques for Capturing Rainwater on Your Property

Photo credit: roger\_moments, Flickr Creative Commons



**RAIN BARREL:** This is a plastic or wooden container connected to your gutter downspout that collects rainwater to be used for irrigating your property. A rain barrel keeps rainwater away from your building foundation, acts as a measure of insurance against water shortage on your property, and also conserves regional water resources. A rain barrel has an overflow port, which should either lead to a secondary barrel or channel water away from your building to a rain garden, swale, dry well, or other permeable area.

Photo credit: CNT



**PERMEABLE PAVING:** This is a type of paving system that allows water to infiltrate the soil below instead of collecting on the surface as runoff. These paving systems consist of a porous surface material—such as special pervious concrete, asphalt, or interlocking pavers—installed atop rock and sediment layers that are designed to absorb water, filter out contaminants, and let the water percolate into the soil. Permeable paving systems are frequently installed in parking lots and low-speed streets, but they are also very effective as driveways, patios, and walkways on residential properties, as they reduce how much gasoline, oil, fertilizer, pet waste, and other debris leaves your property as runoff.

Photo credit: CNT



**GREEN ROOF:** This is a building roof covered with vegetation that absorbs and treats rainwater while also offering numerous other benefits. The vegetation sits atop a set of carefully engineered layers that supports plant growth, filters out pollutants from rainwater, and waterproofs the building. Although green roofs are more expensive to install than standard roofs, they offer long-term financial and social benefits, including reduced costs for building insulation, increased urban agricultural space, improved air quality, reduced air temperatures, improved wildlife habitat, and increased property value.

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DOES YOUR COMMUNITY HAVE A RAINREADY PLAN? LEARN MORE AT [WWW.RAINREADY.ORG](http://WWW.RAINREADY.ORG)

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## **APPENDIX 19**

### Construction Site Inspection Forms

CHRISTOPHER B. BURKE ENGINEERING, LTD.  
CBBEL NPDES REPORT

**Date of Site Visit:** \_\_\_\_\_

Date of Last Site Visit: \_\_\_\_\_

NPDES Permit No.: \_\_\_\_\_

Client: \_\_\_\_\_

Site Name: \_\_\_\_\_

CBBEL Project Number: \_\_\_\_\_

CBBEL Staff Member & Title: \_\_\_\_\_

Estimated Date of Last Significant Rain Event: \_\_\_\_\_

**Response to Previous Report(s):**

**Erosion and Sedimentation**

Minor  Moderate  Severe  N/A

Observations/Recommended Action:

**Condition of Site Discharge Point(s)**

Good  Fair  Poor  N/A

Observations/Recommended Action:

**Condition of Roadways and Locations where vehicles enter or exit the site**

Good  Fair  Poor  N/A

Observations/Recommended Action:

**Silt Fence**

Good  Fair  Poor  N/A

Observations/Recommended Action:

**Inlet/Outlet Protection**

Good  Fair  Poor  N/A

Observations/Recommended Action:

**Ditch Checks/Check Dams**

Good  Fair  Poor  N/A

Observations/Recommended Action:

**Concrete Washouts**

Good  Fair  Poor  N/A

Observations/Recommended Action:

**Housekeeping/Material Storage**

Good  Fair  Poor  N/A

Observations/Recommended Action:

**General Comments:**

"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 submitting false information, including the possibility of fine and imprisonment for knowing violations."

Printed Name & Title: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

PLEASE CALL IF YOU NEED ADDITIONAL INFORMATION -- PHONE: (847) 823-0500

FAX (847) 823-0520



## NPDES Site Audit Report for ILR10

General Information	
Project Name	Approximate Acreage
Operator	
Project Location	
Date of Site Visit	NPDES Permit No. ILR10
Observer's Name(s) & Title(s)	
Construction phase(s) at time of visit	<input type="checkbox"/> Pre-Construction <input type="checkbox"/> Land Development <input type="checkbox"/> Vertical Construction <input type="checkbox"/> Roadway Construction <input type="checkbox"/> Post Construction <input type="checkbox"/> Other: _____
Type of Site Visit:	
<input type="checkbox"/> Initial Visit <input type="checkbox"/> Follow-up <input type="checkbox"/> Other: _____	
Weather Information	
Weather conditions during the site visit:	
SWPPP/Soil Erosion and Sediment Control (SESC) Plan	
1. Has the SWPPP been updated/amended as required by the NPDES Permit and/or local requirements? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
2. Is the Operator Certification Form signed and maintained with SWPPP? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
3. Are Contractor Certification Forms signed and maintained with SWPPP? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
4. Have inspection reports been completed and signed every 7 calendar days and after ≥0.5 inch precipitation events? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
SWPPP/SESC Plan Comments: _____	





## NPDES Site Audit Report for ILR40

General Information	
Project Name	Approximate Acreage
Operator	
Project Location	
Date of Site Visit	NPDES Permit No. ILR10 (If Applicable)
Observer's Name(s) & Title(s)	
Construction phase(s) at time of visit	<input type="checkbox"/> Pre-Construction <input type="checkbox"/> Land Development <input type="checkbox"/> Vertical Construction <input type="checkbox"/> Roadway Construction <input type="checkbox"/> Post Construction <input type="checkbox"/> Other:
Type of Site Visit: <input type="checkbox"/> Initial Visit <input type="checkbox"/> Follow-up <input type="checkbox"/> Other: _____	
Weather Information	
Weather conditions during the site visit:	
SWPPP/Soil Erosion and Sediment Control (SESC) Plan	
1. Is an NPDES Permit required for construction site activities? (e.g., Does the construction activity disturb $\geq 1$ acre?)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
2. Is the SWPPP on site (or accessible with location posted)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
3. Is the SWPPP/SESC Plan updated/amended as required by the NPDES Permit and/or local requirements?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
4. Are Operator and Contractor Certification Forms signed and maintained with SWPPP?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
5. Have inspection reports been completed and signed every 7 calendar days and after $\geq 0.5$ inch precipitation events?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
SWPPP/SESC Plan Comments: _____	



## **APPENDIX 20**

### Outfall Inspection Data Forms and Reports

## *Outfall Sampling Report*

---

Structure ID #

Date:

Outfall ID #

Time of Sample:

Sampled By:

AM

PM

---

Glass Bottle Size:

250 ml

500 ml

32 ml

---

Tests requested:

Flouride

Potassium

Fecal Coliform

Relinquished By:	Date:
Comments:	Time:
Received By:	Date:
Comments:	Time:
Relinquished By:	Date:
Comments:	Time:
Received By:	Date:
Comments:	Time:

- pH, test strip,
- Color, color chart,
- Chlorine, test strip,
- Copper, test strip,
- Ammonia, test strip,
- Phenols, test kit, and
- Detergents, test kit.

Testing is done by either a test strip or test kit as applicable (refer to the equipment column). The results are compared with the “acceptable range” and the “within range” column is filled out with a Yes or No. Note that the Temperature, Alkalinity and Hardness are determined although these results do not need to be compared with an “acceptable range”. These values are used to assist in determining the source of the illicit discharge during the tracing procedure.

Sampling Location: A description of the actual sampling location is to be recorded (for example, at end of outfall pipe). If the outfall is submerged or is inaccessible for sampling, an upstream sampling location may be required. A description of any upstream sampling locations is recorded here. Grab samples are collected from the middle, both vertically and horizontally, of the dry-weather flow discharge in a critically cleaned glass container. Samples can be collected by manually dipping a sample container into the flow.

Sampling Procedures: Detailed, step-by-step instructions for using the test strips and kits are available through the Public Works Department. Please also refer to Chapter 3.3.B.7.b. for test kit safety information. Use the following procedures for all test kit analyses:

1. Take a grab sample and swirl to ensure that the sample is well mixed.
2. Rinse the sample cup (25ml) twice with distilled water. Next, rinse the sample cup twice with water from the grab sample.
3. Fill the sample cup to the 25 ml mark, or as required by the instructions for the test kits. Hold the sample cup at eye level to ensure that measurements are accurate.
4. Conduct the test kit analyses following the manufacturer’s instructions.
5. Dispose of the sample as follows:
  - If no chemical or reagents have been added to the sample, the water can be poured on the ground.
  - If any chemical or reagent is added to the sample, pour the water into a container marked “Liquid Waste” for proper disposal to a sanitary sewer system at the end of the day.
6. Rinse the sample cup three times with tap water and dry with a paper towel.

Flow Chart Procedure:

- If any parameter is outside of the “acceptable range” then an illicit discharge has likely been found. The tracing procedure is immediately implemented by one of the field crew. Testing can be stopped, and the second member of the field crew continues with the inspection by completing Section 7.
- If none of the parameters are outside of the acceptable range, proceed to Section 6.

### **Section 6: Data Collection for Lab Testing**

Determine if the Village’s Waste Water Treatment Plant (WWTP) has adequate staff capacity to analyze the samples.

- If the WWTP has adequate staff capacity, collect grab samples and provide them to the WWTP. Note the location of the sample. Label the sample with the outfall ID number. Proceed to Section 7 while in the field and complete the remainder of Section 6 after the lab results are available.
- If the WWTP does not currently have adequate capacity, determine if Sections 3 or 4 of the inspection form suggest an illicit discharge.
  - If Sections 3 or 4 suggest an illicit discharge contact and outside lab to perform the testing. Proceed to Section 7 while in the field and complete the remainder of Section 6 after the lab results are available.
  - If Sections 3 or 4 do not suggest an illicit discharge, note the outfall ID number. Place the outfall on the follow-up inspection log and proceed to Section 7 of the form. Re-inspect and sample the discharge when the WWTP has adequate capacity.

Sample Location: The location of the sample is noted. Additionally, the sample is labeled with the outfall ID number. Use the **insert MS4 type’s** sampling procedures and refer to Chapter 3.3.B.7.b. for test kit safety information. . The following additional items are noted.

1. When you collect any samples you must fill out an ***Outfall Sampling Report (Appendix 5.4)***. The report must document time you arrive on location, take the sample and get to the plant to drop off the sample.
2. A 500-ml glass bottle sample is used to collect the sample. If you are collecting a sample that has grease 2-250ml samples taken with a glass container are required.
3. If you use the sampling container that is on a rope, it must be washed with soap and water after every use.

Parameters: Grab samples and lab testing is performed. After lab results are available enter the results here.

- If any parameter is outside of the “acceptable range” then an illicit discharge has likely been found. The tracing procedure should be immediately implemented.
- If none of the parameters are outside of the acceptable then the investigation can be closed.

## **Section 7 Any Non-Illicit Discharge Concerns**

Any problems or unusual features are to be entered here. If the outfall appears to be potentially impacted by inappropriate discharges, this can be recorded here. This section is to be completed even if no flow is observed.

**Section 1: Background Data**

Subwatershed	Outfall ID:	
Date:	Time (Military):	
Temperature:	Inspector(s):	
Previous 48 Hours Precipitation:	Photo's Taken (Y/N)	If yes, Photo Numbers:
Land Use in Drainage Area (Check all that apply):	<input type="checkbox"/> Open Space <input type="checkbox"/> Industrial <input type="checkbox"/> Institutional <input type="checkbox"/> Residential Other: _____ <input type="checkbox"/> Commercial Known Industries: _____	

**Section 2: Outfall Description**

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
Storm Sewer (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"/> Clay / drain tile <input type="checkbox"/> Other: _____	<input type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input type="checkbox"/> Single <input type="checkbox"/> Double <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"/> 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:		

**Section 3: Physical Indicators**

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 algae/growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other: _____	
Do physical indicators suggest an illicit discharge is present (Y/N):			

Flow Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<b>If No, Skip to Section 7 and Close Illicit Discharge Investigation</b>
Flow Description	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial	

**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)**

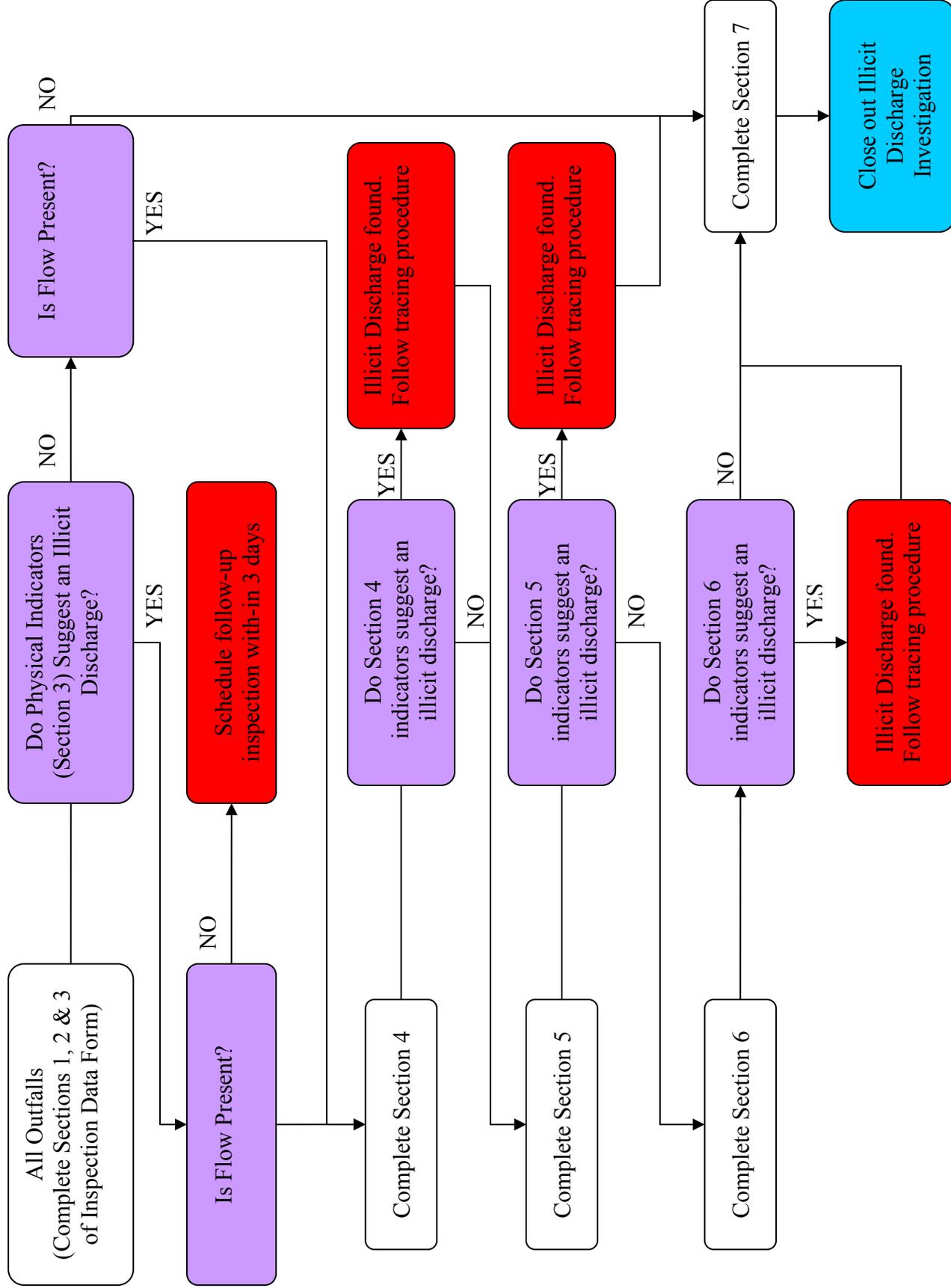
1. Sample for the lab?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
2. If yes, collected from:	<input type="checkbox"/> Flow	<input type="checkbox"/> Pool

PARAMETER	RESULT (from lab)	ACCEPTABLE RANGE	WITHIN RANGE (Y/N)
Fecal Coliform		400 per 100 mL	
Fluoride		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)?**


**Figure 4: Outfall Inspection Procedure Flow Chart**



## Instructions for completing the *Stormwater Outfall Inspection Data Form*

Strike out incorrect entries with a single line; correct values or descriptions are written above or near the struck-out entries. Do not use a new data entry form to correct an incorrect entry. At the completion of each outfall inspection, the field crews are responsible for ensuring that a *Stormwater Outfall Inspection Data Form* has been completely and correctly filled out and that all data and remarks are legible. **It is important to check that values for all chemical parameters have been entered.**

### **Section 1: Background Data**

Subwatershed: The receiving water from the stormwater outfall inventory to be entered here.

Outfall ID: Enter the outfall identification number from the stormwater outfall inventory.

Date: To avoid confusion, dates are to be written in the following manner: DAY MONTH YEAR. For example, 10 MARCH 2007.

Time: Military time (24-hour clock) to be used (for example, 8:30 a.m. would be written as 0830; likewise, 1:30 p.m. would be written as 1330).

Temperature: A concise description of the weather conditions at the time of the screening is to be recorded (for example, Clear, 75° F).

Inspector: The name(s) of the field personnel.

Previous 48 Hours Precipitation: The total amount of precipitation during the 48 hours preceding the inspection is to be noted (for example, none-72 Hours or 0"=4 days). If the total precipitation is not known, it is appropriate to enter a qualitative assessment if the precipitation was minor. For example, *Drizzle-36 Hours* if appropriate. If the precipitation amount was significant, actual precipitation totals is obtained from a local rain gage, if available.

Photo's Taken (Yes/No): Photographs are to be taken with a camera that superimposes a date and time on the film. The date and time should correspond to the date and time recorded on the data form.

Photo Numbers: If photographs are taken, the number(s) is recorded.

Land Use: Check all that apply, noting which land use is predominate. If the industrial box is checked, any known industries are listed to facilitate potential tracing efforts.

## Section 2: Outfall Description

Type of Outfall: Storm Sewer (Closed Pipe) or Open Drainage (Swale/Ditch):

First check if the outfall is either from a Closed Pipe or Open Drainage. Then complete the following row to describe outfall characteristics.

## Section 3: Physical Indicators

Indicators: Complete rows describing outfall characteristics (Outfall Damage, Deposits/Stains, Abnormal Vegetation, Poor pool quality, Pipe algae/growth). This section is filled out regardless of current flow conditions. No flow during the time of the inspection, does not rule out the potential of illicit discharges. Corroding or stained pipes, dead or absence of vegetation, are potential indicators of illicit discharges from direct or indirect (i.e. dumping) sources.

Likelihood: After inspecting the physical conditions of the outfall, the likelihood of an illicit discharge is assessed.

Flow Present (Yes/No): A *Yes* or *No* is entered here to indicate the presence or absence of dry-weather flow. If the outfall is submerged or inaccessible, "See Notes" is entered and an explanation provided in the "Notes" section.

Flow Description: A description of the quantity of the dry-weather flow is provided. Refer to Figure 6 of the SMPP.

Flow Chart Procedure:

- If *No* is entered in the "Flow Present" block and no non-flowing physical indicators appear present the inspection can be closed, skip to Section 7 of the form.
- If *No* is entered in the "Flow Present" block but indicators appear present, place the outfall on the follow-up inspection log, then the current inspection can be closed, skip to Section 7 of the form.
- If *Yes* is entered in the "Flow Present" block (regardless of the presence of non-flowing physical indicators), complete remainder of Section and proceed to Section 4.

## Section 4: Physical Indicators (Flowing Outfalls Only)

Complete rows describing outfall characteristics (Odor, Color, Turbidity, Floatables). This section is filled out for flowing outfalls only.

Odor: The presence of an odor is to be assessed by fanning the hand toward the nose over a wide-mouth container of the sample, keeping the sample about 6 to 8 inches from the face. Be careful not to be distracted by odors in the air. Provide a description of the odor, if present. Refer to Table 2 of the SMPP.

Color: The presence of color in the discharge is to be assessed by filling a clean glass sample container with a portion of the grab sample and comparing the sample with a color chart, if color is present. If a color chart is used, the number corresponding to the color matching the sample is to be entered in this blank. Color is not assessed by looking into the discharge. Refer to Table 3 of the SMPP.

Turbidity “clarity”: Turbidity is a measure of the clarity of water. Turbidity may be caused by many factors, including suspended matter such as clay, silt, or finely divided organic and inorganic matter. Turbidity is a measure of the optical properties that cause light to be scattered and not transmitted through a sample. The presence of turbidity is to be assessed by comparing the sample to clean glass sample container with colorless distilled water. Refer to Table 4 of the SMPP.

Floatables: The presence of floating scum, foam, oil sheen, or other materials on the surface of the discharge are to be noted. Describe of any floatables present that are attributable to discharges from the outfall. Do not include trash originating from areas adjacent to the outfall in this observation. Refer to Figure 5 and Table 4 of the SMPP.

Likelyhood: After inspecting the physical conditions of the outfall discharge, the likelihood of an illicit discharge is assessed. If flowing physical indicators are present the tracing procedure are immediately implemented by one of the field crew. The second member of the field crew continues with the inspection by performing the on-site testing in Section 5.

#### Flow Chart Procedure:

- If flowing physical indicators are present the tracing procedure is immediately implemented by one of the field crew. The second member of the field crew continues with the inspection by performing the on-site testing in Section 5.
- If flowing physical indicators do not suggest an illicit discharge continue with the inspection by performing the on-site testing in Section 5.

### **Section 5: On-Site Sampling/Testing (Flowing Outfalls Only)**



Parameters: Test strip or kit chemical analyses are conducted for the following parameters in accordance with the Flow Chart, refer to Figure 7 of the SMPP.

- Color, color chart,
- Chlorine, test strip,
- Copper, test strip,
- Ammonia, test strip,
- Phenols, test kit, and
- Detergents, test kit.

Testing is done by either a test strip or test kit as applicable (refer to the equipment column). The results are compared with the “acceptable range” and the “within range” column is filled out with a Yes or No. Note that the Temperature, Alkalinity and Hardness are determined although these results do not need to be compared with an “acceptable range”. These values are used to assist in determining the source of the illicit discharge during the tracing procedure.

Sampling Location: A description of the actual sampling location is to be recorded (for example, at end of outfall pipe). If the outfall is submerged or is inaccessible for sampling, an upstream sampling location may be required. A description of any upstream sampling locations is recorded here. Grab samples are collected from the middle, both vertically and horizontally, of the dry-weather flow discharge in a critically cleaned glass container. Samples can be collected by manually dipping a sample container into the flow.

Sampling Procedures: Detailed, step-by-step instructions for using the test strips and kits are available through the **Public Works Department**. Please also refer to Chapter 3.3.B.7.b. for test kit safety information. Use the following procedures for all test kit analyses:

1. Take a grab sample and swirl to ensure that the sample is well mixed.
2. Rinse the sample cup (25ml) twice with distilled water. Next, rinse the sample cup twice with water from the grab sample.
3. Fill the sample cup to the 25 ml mark, or as required by the instructions for the test kits. Hold the sample cup at eye level to ensure that measurements are accurate.
4. Conduct the test kit analyses following the manufacturer’s instructions.
5. Dispose of the sample as follows:
  - If no chemical or reagents have been added to the sample, the water can be poured on the ground.
  - If any chemical or reagent is added to the sample, pour the water into a container marked “Liquid Waste” for proper disposal to a sanitary sewer system at the end of the day.
6. Rinse the sample cup three times with tap water and dry with a paper towel.

Flow Chart Procedure:

- If any parameter is outside of the “acceptable range” then an illicit discharge has likely been found. The tracing procedure is immediately implemented by one of the field crew. Testing can be stopped, and the second member of the field crew continues with the inspection by completing Section 7.
- If none of the parameters are outside of the acceptable range, proceed to Section 6.

**Section 6: Data Collection for Lab Testing**

Determine if the Village’s Waste Water Treatment Plant (WWTP) has adequate staff capacity to analyze the samples.

- If the WWTP has adequate staff capacity, collect grab samples and provide them to the WWTP. Note the location of the sample. Label the sample with the outfall ID number. Proceed to Section 7 while in the field and complete the remainder of Section 6 after the lab results are available.
- If the WWTP does not currently have adequate capacity, determine if Sections 3 or 4 of the inspection form suggest an illicit discharge.
  - If Sections 3 or 4 suggest an illicit discharge contact and outside lab to perform the testing. Proceed to Section 7 while in the field and complete the remainder of Section 6 after the lab results are available.
  - If Sections 3 or 4 do not suggest an illicit discharge, note the outfall ID number. Place the outfall on the follow-up inspection log and proceed to Section 7 of the form. Re-inspect and sample the discharge when the WWTP has adequate capacity.

Sample Location: The location of the sample is noted. Additionally, the sample is labeled with the outfall ID number. Use the insert MS4 type’s sampling procedures and refer to Chapter 3.3.B.7.b. for test kit safety information. . The following additional items are noted.

1. When you collect any samples you must fill out an ***Outfall Sampling Report (Appendix 5.4)***. The report must document time you arrive on location, take the sample and get to the plant to drop off the sample.
2. A 500-ml glass bottle sample is used to collect the sample. If you are collecting a sample that has grease 2-250ml samples taken with a glass container are required.
3. If you use the sampling container that is on a rope, it must be washed with soap and water after every use.

Parameters: Grab samples and lab testing is performed. After lab results are available enter the results here.

- If any parameter is outside of the “acceptable range” then an illicit discharge has likely been found. The tracing procedure should be immediately implemented.

- If none of the parameters are outside of the acceptable then the investigation can be closed.

### **Section 7 Any Non-Illicit Discharge Concerns**

Any problems or unusual features are to be entered here. If the outfall appears to be potentially impacted by inappropriate discharges, this can be recorded here. This section is to be completed even if no flow is observed.

## **APPENDIX 21**

### Detention Pond Checklists

## *Detention/Retention Pond Checklist*

**Inspected by:**

**Date:**

**Weather Conditions:**

Number	Name/Location	Flood Height <i>(low/medium/high)</i>	Condition <i>(Good / Fair / Poor)</i>	Comments
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

### *Detention/Retention Pond Checklist*

<b>Inspected by:</b>	<b>Date:</b>
<b>Weather Conditions:</b>	

Number	Name/Location	Flood Height <small>(low/medium/high)</small>	Condition <small>(Good / Fair / Poor)</small>	Comments
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

## **APPENDIX 22**

### Pre-Construction Meeting Forms



# Village of Westchester

Christopher B. Burke Engineering, Ltd.

## Preconstruction Meeting Agenda Items

Date: \_\_\_\_\_  
Location: \_\_\_\_\_  
Start Time: \_\_\_\_\_  
Adjourn Time: \_\_\_\_\_

Project: \_\_\_\_\_  
Building Permit #: \_\_\_\_\_  
Developer: \_\_\_\_\_

Attendees: See Attached "Sign In Sheet"

Development  
Coordinator: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_  
Zip Code: \_\_\_\_\_  
Cell Phone #: \_\_\_\_\_  
Office Phone #: \_\_\_\_\_  
Fax #: \_\_\_\_\_  
Email address: \_\_\_\_\_

24 hr. Emergency  
Contact: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_  
Zip Code: \_\_\_\_\_  
Cell Phone #: \_\_\_\_\_  
Office Phone #: \_\_\_\_\_  
Fax #: \_\_\_\_\_  
Email address: \_\_\_\_\_

- ( ) 1. Certificate of Insurance
  - ( ) A. Completed By DEVELOPER/CONTRACTOR as requested by the Village
  - ( ) B. Required from DEVELOPER/CONTRACTOR prior to Notice to Proceed and/or Building Permit
  - ( ) C. Submitted (YES) (NO)
  - ( ) D. Additionally Insured to be listed
    - ( ) i. The Village of Westchester
    - ( ) ii. Other \_\_\_\_\_

- ( ) 2. Contractors
  - ( ) A. All Contractors Named
    - ( ) i. Sub #1 \_\_\_\_\_ (Underground) \_\_\_\_\_
    - ( ) ii. Sub #2 \_\_\_\_\_ (Paving) \_\_\_\_\_
    - ( ) iii. Sub #3 \_\_\_\_\_ (Earthwork) \_\_\_\_\_
    - ( ) iv. Sub #4 \_\_\_\_\_ (Street Lighting) \_\_\_\_\_
    - ( ) v. Sub #5 \_\_\_\_\_ (Other) \_\_\_\_\_



# Village of Westchester

Christopher B. Burke Engineering, Ltd.

## *Preconstruction Meeting Agenda Items*

- ( ) 3. Engineer's Authority
  - ( ) A. Furnish DEVELOPER all desired assistance in interpreting plans and specifications.
  - ( ) B. Assistance does not relieve the DEVELOPER and/or CONTRACTORS of any responsibility for the Work. Faulty work must be corrected by the DEVELOPER and/or CONTRACTOR.
  - ( ) C. ENGINEER does not have control over or charge/supervision of, nor be responsible for construction means, methods, techniques, sequences, procedures or controls, or the safety precautions or programs in connection with the Work.
  - ( ) D. Village Contacts:


- ( ) 4. Drawings
  - ( ) A. APPROVED FOR CONSTRUCTION ENGINEERING
  - ( ) B. APPROVED FINAL PLAT
  - ( ) C. ENGINEER'S SURFACE DRAINAGE WATER CERTIFICATE (signed)
  - ( ) D. CONTRACTOR'S CERTIFICATE (NPDES)
  - ( ) E. DEVELOPER / CONTRACTOR to field verify for accuracy of all Drawings pertinent to this project. Any discrepancies found shall be brought to the attention of the VILLAGE/OWNER immediately.
  - ( ) F. Construction set of Drawings provided to Village
  - ( ) G. Additional Drawings requested by Village: \_\_\_\_\_
  - ( ) H. Electronic Copy of drawings provided to Village

- ( ) 5. Responsibilities of DEVELOPER / CONTRACTORS
  - ( ) A. Work schedule to be submitted prior to Start of Construction
  - ( ) B. Existing Utilities: Joint J.U.L.I.E. meeting to be coordinated by CONTRACTOR prior to Notice To Proceed
    - ( ) i. Date of Joint J.U.L.I.E. meet \_\_\_\_\_

- ( ) 6. Submittals
  - ( ) A. Required Submittals
    - ( ) i. NPDES Documentation (ILR10 or Letter of Coverage)
    - ( ) ii. IEPA Operating Permits
      - (1) Sanitary
      - (2) Water
    - ( ) iii. Shop Drawings for Street Lighting System (publicly maintained system only)



# Village of Westchester

Christopher B. Burke Engineering, Ltd.

## *Preconstruction Meeting Agenda Items*

- ( ) 7. NPDES – Sediment & Erosion Control
  - ( ) A. Inspections by Developer Forwarded to Village via email to [rlewis@westchester-il.org](mailto:rlewis@westchester-il.org)
  - ( ) B. Developer Contact = \_\_\_\_\_ email = \_\_\_\_\_
  
- ( ) 8. Mobilization and Demobilization
  - ( ) A. Date of Mobilization \_\_\_\_\_
  - ( ) B. Access \_\_\_\_\_
  
- ( ) 9. Project Progress/Coordination Meetings
  - ( ) A. Bi-Weekly: every other \_\_\_\_\_
  - ( ) B. First meeting to be held on \_\_\_\_\_
  
- ( ) 10. Working Hours per Village Ordinance
  - ( ) A. Weekdays 7AM – Dusk
  - ( ) B. Saturdays 8AM – Dusk
  - ( ) C. Sundays 8AM - Dusk
  
- ( ) 11. Temporary Construction Facilities
  - ( ) A. Detours
    - ( ) i. Route & Signage Per Approved Plan
    - ( ) ii. Notification to public (CC: Village)
      - (1) School Districts
      - (2) Fire & Police & Sheriffs Departments
      - (3) USPS
  - ( ) B. Maintenance of Traffic Control
    - ( ) i. Name of Traffic Control Sub: \_\_\_\_\_
    - ( ) ii. Responsible Traffic Control Contact: \_\_\_\_\_
    - ( ) iii. Phone #: \_\_\_\_\_
  - ( ) C. Maintenance of Erosion Control
    - ( ) i. Name of Erosion Control Sub: \_\_\_\_\_
    - ( ) ii. Responsible Erosion Control Contact: \_\_\_\_\_
    - ( ) iii. Phone #: \_\_\_\_\_
  
- ( ) 12. Street Cleaning – Daily if needed
  
- ( ) 13. Approved Material List



# Village of Westchester

Christopher B. Burke Engineering, Ltd.

## *Preconstruction Meeting Agenda Items*

- ( ) 14. General Subdivision Ordinance Requirements
  - ( ) A. Items listed below **do not constitute all requirements** as listed in the Village's Subdivision Ordinance.
  - ( ) B. All Subcontractors should be made aware of the following general requirements included in the Village Subdivision Ordinance.
  - ( ) C. **SANITARY**
    - ( ) i. Sewer Depth. Min. depth of 3½ feet to the sewer invert shall be required. Max. depth of 25 feet.
    - ( ) ii. Prior to pipe laying and jointing, the trench shall be sufficiently dewatered to maintain the water level in the trench at or below the base of the bedding.
    - ( ) iii. Manholes shall be no less than 48 inches in dia. and shall be constructed with an external chimney seal in accordance with the sanitary manhole detail.
    - ( ) iv. Allowable service materials are ductile iron and PVC.
    - ( ) v. The contractor shall keep a record of the location of branch fittings, riser pipes, and service lines by measurement to the nearest downstream manhole. Location information shall be included on record drawings.
    - ( ) vi. Testing Requirements
      - (1) Low Pressure Air Test
      - (2) MH Vacuum
      - (3) Mandrill
      - (4) Videotaping
  - ( ) D. **WATER DISTRIBUTION**
    - ( ) i. Fire Hydrants
      - (1) Hydrants shall be installed no closer than 3 feet to the face of the hydrant, steamer port (pumper nozzle), nor further than 8 feet from the back curb.
      - (2) No hydrant shall be installed within 4 feet of any obstruction, nor shall any obstruction be placed within 4 feet of a hydrant.
      - (3) FLAGS – to be installed on lower portion of bonnet & on opposite side of steamer port
    - ( ) ii. Valves - All valves 12 inches and larger shall be butterfly valves iron body rubber seat type. All valves shall open counter clockwise with non-rising stem (except hand valves).
    - ( ) iii. Vaults
      - (1) All valves proposed to be placed under pavement shall be installed in precast concrete vaults as specified in the valve vault detail.
      - (2) Vaults shall be constructed with an external chimney seal.
      - (3) All other valves and auxiliary valves shall be installed within cast iron valve boxes fitted with a valve box stabilizer.
      - (4) Vaults and boxes shall not be allowed within driveway limits.



# Village of Westchester

## Christopher B. Burke Engineering, Ltd.

### ***Preconstruction Meeting Agenda Items***

- ( ) iv. Pipe - All plastic water main shall be installed with a minimum ten (10) gauge solid copper tracer wire. The wire shall be continuous through valve vaults and boxes and shall be accessible up to the inside top of all vault frames and/or valve box covers.
- ( ) v. Water Service Lines
  - (1) Service lines shall be continuous with no splices or change in material between either the corporation and the curb stop or the curb stop and the house meter.
- ( ) vi. Testing Requirements
  - (1) Static Pressure
  - (2) Leakage
  - (3) Chlorination - (results to be delivered to McHenry Analytical by CONTRACTOR)
  
- ( ) E. COMBINATION CONC C&G
  - ( ) i. All C&G shall be continuously reinforced using two No. 4 bars.
  - ( ) ii. Stamped with "W" indicating the location of a water service & Stamped with "S" indicating the location of a sanitary sewer service.
  
- ( ) F. DRIVEWAYS / APPROACHES
  - ( ) i. No manholes, inlets, valve vaults or other types of structures shall be allowed to be constructed in a driveway or driveway approach unless approved by the Director of Public Works
  - ( ) ii. Constructed with air-entrained Portland Cement – 4% to 6% in accordance with the IDOT "Standard Specifications". The concrete mix shall be a min. of six bags of Portland Cement per CY of concrete and shall use fiberglass reinforcement additives. The use of welded wire fabric is prohibited.
  - ( ) iii. The final surface of all concrete driveway approaches shall have an appropriate sealant applied in accordance with the IDOT "Standard Specifications".
  - ( ) iv. When the subgrade has been prepared & no sooner than 24 hours prior to placing concrete, the contractor shall notify the Village Inspector that forms are in place and the subgrade is ready for inspection. No concrete shall be placed until the subgrade has been inspected and approved
  - ( ) v. *Cold Weather Requirements*. No concrete shall be placed when the air temperature is below 40° F. or is between 40° and 45° F. and falling unless approved by the Village Engineer. In no case shall concrete be placed on frozen subgrade.
  
- ( ) G. SIDEWALKS
  - ( ) i. *MATERIAL* - All sidewalks shall be constructed of PCC Concrete & shall be at least a 6 bag mix. 4% to 6% air- entrained & Slump of not less than 2 inches or more than 4 inches. Fiberglass reinforced additives shall be used on all sidewalks extending through driveways.



# Village of Westchester

## Christopher B. Burke Engineering, Ltd.

### *Preconstruction Meeting Agenda Items*

- ( ) ii. *SUBGRADE PREPARATION* When the subgrade has been prepared and no sooner than 24 hours prior to placing concrete, the contractor shall notify the Village Inspector that forms are in place and the subgrade is ready for inspection. No concrete shall be placed until the subgrade has been inspected and approved.
- ( ) iii. *COLD WEATHER REQUIREMENTS* – Same as for C&G and Driveways
- ( ) iv. When the temperature of the air is expected to drop below 40° F. within 24 hours after placing the concrete shall be protected with 9 inches of loose, dry straw and a layer of burlap, or other acceptable material, for a period of at least five days.
  
- ( ) H. **STREET LIGHTING**
  - ( ) i. Street lighting systems shall be guaranteed from date of acceptance for a period of 3 years.
  - ( ) ii. Submit for review Shop Drawings / Catalog Cuts to Village for review (poles, luminaries, conduit, controller, foundations, etc.)
  - ( ) iii. Streetlights shall be no closer than 8 feet away from any fire hydrant.
  - ( ) iv. **SPARE POLES, LUMINARES & LAMPS** - The Village shall be provided with spare poles and luminaries for streetlight installations in the ratio of 1 for every 20 in the system to be installed. A payment in lieu of spare poles and luminaries, at the unit cost of a said streetlight installation, can be made when determined by the Director of Public Works that a sufficient inventory of the same type of pole and luminaries exists at Public Works.
  
- ( ) I. **WIRE/CABLE REQUIREMENTS**
  - ( ) i. All wire and cable installed for street lighting system from the power source to the lighting poles, shall be contained in either three conductor 1¼ inch minimum diameter unit-duct manufactured from high density smooth wall polyethylene electrical plastic duct or heavy-walled galvanized steel conduit.
  - ( ) ii. All wire, cable and unit-duct to be furnished are to be installed with a min. burial of 30 inches in locations on the right-of-way side of the front set-back limit and are to be installed with a min. burial of 48 inches in locations on the rear yard side of the front set-back limit.
  - ( ) iii. All circuits shall be tested in the presence of the Village Electrical Inspector.
  - ( ) iv. Cable slack shall be provided such that there is a min. of 3 feet of slack at the base of all light poles.
  - ( ) v. When passing under concrete or asphalt surfaces, rigid galvanized steel conduit not less than 2 inches in diameter shall be used for raceways for unit-duct.



# Village of Westchester

Christopher B. Burke Engineering, Ltd.

## *Preconstruction Meeting Agenda Items*

- ( ) J. Wetland Improvements
  - ( ) i. Annual Reports – To be forwarded to the Village for review  
([rlewis@westchester-il.org](mailto:rlewis@westchester-il.org))
  
- ( ) K. FINAL ACCEPTANCE
  - ( ) i. Request in writing prior to August 15<sup>th</sup> directed to Village Engineer
  - ( ) ii. Punch list work completed and re-inspected prior to Oct. 1<sup>st</sup>
  - ( ) iii. One year Maintenance Period
  
- ( ) L. OTHER ITEMS

## **APPENDIX 23**

Employee Training Agendas or Course Information

# Westchester NPDES Compliance Seminar Outline

- I. NPDES Program Overview
  - a. What is NPDES?
  - b. What is MS4?
    - Aspects of MS4s
  - c. What is a BMP?
  - d. Why are we here?
  
- II. Regulation of Discharges to the MS4
  - a. Illicit Discharges
    - Examples
    - Detergents
    - Sanitary Sewer Waste
    - Naturally Occurring Discharges
    - Exemptions
  
  - b. Construction Runoff Control
    - Silt Fence
    - Dust Control
    - Wattles vs. Straw Bales
    - Inlet Protection
    - Riprap
    - Check Dams
    - Diversion Dikes
    - Washouts
    - Dewatering Activities
  
  - c. Pollution Prevention and Good Housekeeping
    - Salt Storage
    - Municipal Projects
    - Material Storage
    - Street Sweeping
    - Chemical Storage
    - Proper Disposal
  
  - d. Consequences of Non-Compliance


  
**NPDES Phase II MS4 Training Seminar**
  

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

### 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

### 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

### What is NPDES?

#### 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.

### Other MS4 - Examples

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





### Why Are We Here?

#### Village must regulate all discharges to the MS4

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

### 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)

### Best Management Practices

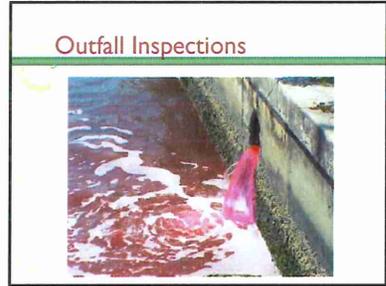
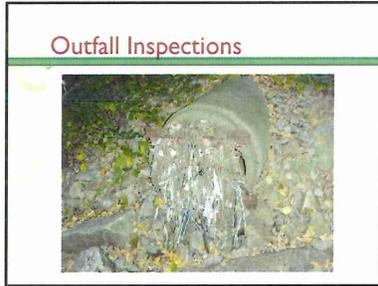
- A BMP is a method, device, or practice for removing, reducing, or preventing pollution in stormwater runoff from reaching receiving waters.
- Examples:
  - Construction – Silt Fence
  - Municipal – Street Sweeping

### 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**

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

**Outfall Inspections**

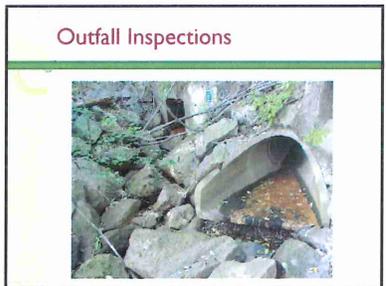
5. Physical Indicators - Both
  - a) Indicator (Damage, stains, etc)
  - b) Presence
  - c) Description (cracking, oily, etc)
  - d) Comments

**Outfall Inspections**

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

**Outfall Inspections**

4. Physical Indicators - Flowing
  - a) Indicator (odor, color, etc)
  - b) Presence
  - c) Description (sewage, sulfur, etc)
  - d) Severity





Illicit Discharges

- Motor Oil



Illicit Discharges

- Animal Waste



Illicit Discharges

- Oil and Grease



Illicit Discharges

- Leaking Dumpster



Illicit Discharges

- Leaking Drums



Illicit Discharges  
Sanitary Sewer Waste

- Gray Water



Illicit Discharges

- Detergents



Illicit Discharges

- Suds



Illicit Discharges  
Sanitary Sewer Waste

- Foam



Illicit Discharges  
Sanitary Sewer Waste

- Staining



Illicit Discharges

- Spills



Illicit Discharge: Outfalls



Illicit Discharges  
Sanitary Sewer Waste

- Failing Septic System or cheater pipes

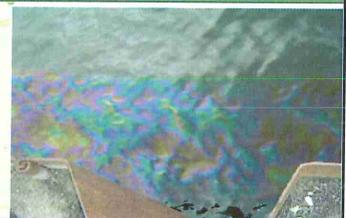


Illicit Discharges

Trash and Debris



Illicit Discharge: Oil Sheen



Illicit Discharges

- Petroleum Sheen



Illicit Discharges Industrial

- Chemical Odor



Illicit Discharges Industrial

- Discolored water



### Illicit Discharges Agricultural Runoff

- Excessive Vegetation



### Illicit Discharges or Naturally Occurring?

- Foam or Suds



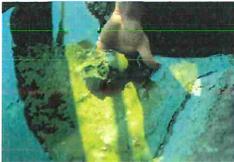
### Illicit Discharges or Naturally Occurring?

- Sheens and Deposits



### Illicit Discharges Fertilizers

- Blue Green Algae



### Illicit Discharges or Naturally Occurring?

- Staining and Discoloration



### 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
- flooding drains
- lawn watering
- individual residential car washing
- flows from riparian habitats and wetlands

### Illicit Discharges or Naturally Occurring?

- Fish kills



### Illicit Discharges or Naturally Occurring?

- Algae Blooms



### 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

### 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!**



### Wattles to Replace Straw Bales

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



### Inlet Protection



### Silt Fence Indicating an Erosion Problem...



### Wattles to Replace Straw Bales



### Inlet Protection



### Silt Fence Failure: Use Alternative



### 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

### Result of Failing to Maintain Inlet Protection



Inlet Protection: Wattles



Street Inlet Protection



Filter Basket



Prefabricated: Long Term and High Flow



Street Inlets



Filter Basket Cleanout



Prefabricated: Long Term and High Flow



Street Inlet Protection: Filter Fabric

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



Stone Inlet Protection



### 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.

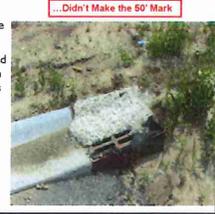


### Construction Entrance / Exit

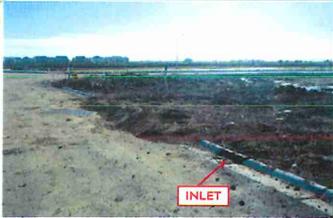


### Concrete/Construction Washouts

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



### Dirt Ramps



### Concrete/Construction Washouts



### Concrete/Construction Washouts



### 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



### Concrete/Construction Washouts



### Concrete/Construction Washouts



Construction Washout



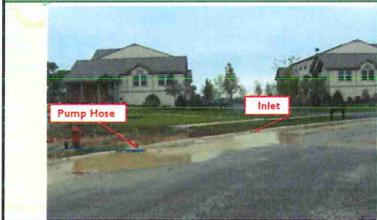
Dewatering...Floating the Pump



Filter Bag...Fine Clays



De-Watering Illicit Discharge



Filter Bag...Onsite



Filter Bag...Fine Clays



Dewatering...Floating the Pump



Filter Bag...At Capacity



Dewatering Activities



### Dewatering Activities



### Non-Storm Water Runoff

Water Main Flushing



### Illicit Discharge



### Illicit Discharge From Pumping



### Unprotected Inlet



### 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



### Non-Storm Water Runoff

Hydrant Flushing



### Next Step...Violationville



### Pollutant Storage

Designate chemical storage area(s) onsite to store:

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



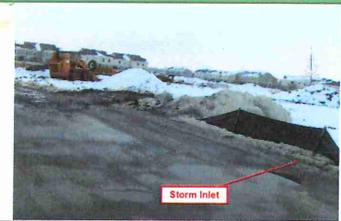
### Pollutant Storage Violation



### Port-A-Potty



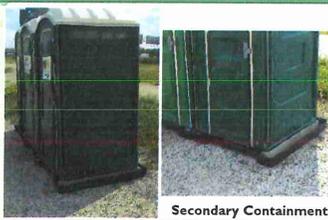
### Stockpiles Are More Than Soil



### Pollutant Storage Violation



### Pollutant Storage



### Pollution Prevention and Good Housekeeping

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

### Pollutant Storage Example



### Soil Stockpiles

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



### Pollution Prevention and Good Housekeeping

Municipal Activity	Primary Pollutants					
	Excess Sediment	Excess Silt	Excess Sand	Excess Oil	Excess Grease	Excess Nutrients
Building and Ground Maintenance and Repair	X	X	X	X	X	X
Public Works and Maintenance	X	X	X	X	X	X
Water Use, Flow, and Disposal	X	X	X	X	X	X
Vehicle and Equipment Parking	X	X	X	X	X	X
Vehicle and Equipment Maintenance and Repair	X	X	X	X	X	X
Vehicle and Equipment Wash and Clean	X	X	X	X	X	X
Construction and Unloading of Materials	X	X	X	X	X	X
Construction Material Storage	X	X	X	X	X	X
Construction of New Materials	X	X	X	X	X	X
Construction Equipment	X	X	X	X	X	X
Construction Activities	X	X	X	X	X	X
Landscaping Maintenance	X	X	X	X	X	X

### Pollution Prevention and Good Housekeeping

- Education and training are first and most important steps in reducing or preventing discharges from municipal activities

### Pollution Prevention and Good Housekeeping



### Pollution Prevention and Good Housekeeping

- Municipal project with no SE/SC measures



### Salt Piles



### Salt Storage

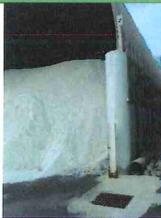
- Store piles under a roof or impermeable layer
  - Minimize contact with precipitation and storm water runoff
- Out of 100 yr Floodplain
- Stored on impermeable surfaces
- Contained within a curb or berm
- Store at least 50 feet from wetlands or streams
- Can contaminate surface and ground water

### Pollution Prevention and Good Housekeeping

- Salt box next to inlet



### Pollution Prevention and Good Housekeeping



### 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

- Uncovered drums



### Pollution Prevention and Good Housekeeping

- Oil Recycling Storage Tanks



### Pollution Prevention and Good Housekeeping

- Demonstration Areas



### Pollution Prevention and Good Housekeeping

- Proper Disposal of Municipal Generated Wastes



### Pollution Prevention and Good Housekeeping

- Inspection and maintenance procedures and schedules
  - Create and follow!

### Pollution Prevention and Good Housekeeping

- Clearly Marked Procedures and Equipment
- Signage



### Pollution Prevention and Good Housekeeping



### Pollution Prevention and Good Housekeeping

- Pet Waste Pick Up Station



### 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

Dewater CORRECTLY!



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

Pollution Prevention and Good Housekeeping



Pollution Prevention and Good Housekeeping

Watermain Breaks



Failure to Comply

- Municipalities and governmental entities NOT exempt from enforcement actions

\$\$\$

## Questions ?



## Photo References

[www.emeraldseedandsupply.com](http://www.emeraldseedandsupply.com)

[www.aot.state.vt.us](http://www.aot.state.vt.us)

[www.nvequipsales.com](http://www.nvequipsales.com)

[www.aot.state.vt.us](http://www.aot.state.vt.us)

[www.greatamericanteec.com](http://www.greatamericanteec.com)

[www.thedeicingbusiness.com](http://www.thedeicingbusiness.com)

[www.depweb.state.pa.us/news/lib/news/oilsheen.JPG.jpg](http://www.depweb.state.pa.us/news/lib/news/oilsheen.JPG.jpg)

[www.nsc.govt.nz](http://www.nsc.govt.nz)

## **APPENDIX 24**

Compliance Documentation – Public Education and Outreach

# PUBLIC WORKS

32 JUNE 2016

## Branch Pick-up:

Branch Pickup for June will be the week of June 6-10, 2016

## June 2016

Su M Tu W Th Fr Sa

			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

Branch Pickup for July will be the week of July 11-15, 2016

Branch Pickup for August will be the week of August 1-5, 2016

The Public Works Department will pick up branches the first full week of every month from April-November (with schedule variations due to holidays). All brush must be put out on the front parkway no later than 7:00 a.m. on the designated pickup day. Branches can be up to 7' in length and stacked with the butt ends facing the street in the same direction.

If not stacked properly, a "re-stack" notice will be left.

Public Works Crews will only pass through a designated pickup area once due to time schedule and other workload responsibilities.

Thursday and Friday are Open Load days for pickup of any brush that will not fit through the chipper, such as logs, stumps, and large limbs.

Please make every effort to cut oversized limbs/stumps for one employee to lift and to remove the dirt from the root ball to allow for pickup. Landscaping contractors are responsible for their own brush pickup and disposal.

Please note the following schedule for branch pickup:

### MONDAY:

From Mannheim Road west to Wolf road and from Canterbury south to Windsor-including both sides of Windsor Drive. Also, Waterford, Waverly, Camelot and Concord.

### TUESDAY:

Roosevelt Road south to Cerrack Road-from Gardner Road west to Mannheim Road.

### WEDNESDAY:

From Roosevelt Road north to the expressway and from Gardner Road west to Mannheim Road. Also, Roosevelt Road south to Canterbury from Hasee west to Heidam.

### THURSDAY:

From Bellevue west to Wolf Road, Matindale Drive to 31<sup>st</sup> Street

Remember..... Waste Management will also pick up your branches/ bushes if they are loaded no more than 4' in length. These will be picked up on your regular garbage day every week.

FRIGHT yard waste stickers for reusable yard waste receptacles are available at the Public Works office and the Village Hall.

## Construction season has started. Please drive carefully in all work zones

The Public Works Department is now repairing parkways that have been damaged by water excavations and snow plow damage.

Concrete work and street repairs have started, as weather permits.

The Public Works Department continues to fill potholes throughout the Village. Please call Public Works at 708-345-0041 to report potholes.

The vac and jet machine will continue to clean out storm sewer inlets, as weather permits.

As Always.....

Village residents are asked to call Public Works at 708-345-0041 or the Police Non-Emergency number after hours at 708-345-0050 if an unusual amount of water is visible in the street or parkway. This could be a main break or water leak that requires our immediate attention.

## Free Rain Barrel Program

With the spring weather arriving, now is the perfect time to order your rain barrels.

MWRD continues to offer free rain barrels to the residents of Westchester. You can order up to 4 rain barrels for each private residence in various colors. If you would like to see the product and its size, there is a sample rain barrel in the lobby outside the Public Works Department.

Applications are available at the Village Hall or Public Works Dept., as well as

online at [www.westchester-il.org](http://www.westchester-il.org). For more information, please call Gayle at 708-315-0091.

## Sprinkling Ban Reminder

We have water-use restrictions in effect every year, May 15-September 15, from 12pm to 6pm. This includes:

- Outdoor Watering
- Cleaning Outdoor Surfaces
- Cleaning Buildings
- Pool Filling

Sprinkling during unrestricted hours (before noon, after 6pm) shall be allowed on even numbered days for those even numbered addresses, and on odd numbered days for those residents having odd numbered addresses. If we have a dry summer, further restrictions may be necessary.



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Westchester, IL 60154  
708-531-1991

Additional Services:  
Color  
Highlights  
Nail Services  
Facial Waxing





RESIDENTS

BUSINESS

GOVERNMENT

HOW DO I...?

Search



Village of Westchester: Home > Government > Departments > Public Works > Water & Sewer > [Rain Barrels](#)



### Rain Barrels

Storm Water Management

Cross Connection Control Program

Lawn Sprinklers Cross Connection Notice

Leak Detection Program

Floodplain Information

Rain Barrels

Water Billing

Green Infrastructure



Effective June 2015, the Village of Westchester has partnered with the Metropolitan Water Reclamation District (MWRD) of Greater Chicago to offer its residents FREE RAIN BARRELS!

The rain barrels hold 55 gallons of rain water and come in four (4) colors: Black, Gray, Terra Cotta, and Blue (they are all the same size, regardless of how the pictures look). Up to four (4) barrels can be ordered per household and the MWRD's vendor will arrange for their delivery which will accompany instructions for installation. *\*May take up to six (6) weeks for the delivery.*

This is a terrific program and the Village of Westchester strongly encourages your participation.

[Order Form](#) - This form can be completed electronically and emailed directly to Gayle at [ggolz@westchester-il.org](mailto:ggolz@westchester-il.org)  
[Installation Information](#)

[Home](#)

[Sitemap](#)

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## **APPENDIX 25**

Compliance Documentation – Public Participation/Involvement



RESIDENTS

BUSINESS

GOVERNMENT

HOW DO I...?

Search



Village of Westchester: Home > Residents > Village Maps



### Available Maps

The following maps are available and will open in a new window:

- [Main Village Map](#)
- [Garbage Pickup Schedule](#)
- [Branch Pickup](#)
- [Flood Plain Map](#)

New Residents

Boards & Commissions

ComEd Information

Demographics

Employment Opportunities

FAQs

Non Home Rule Sales Tax

News

Parks & Facilities

Photo Gallery

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## **APPENDIX 26**

Compliance Documentation – Construction Site Runoff Control

## **APPENDIX 27**

Compliance Documentation – Post-Construction Runoff Control

## **ARTICLE 9: MAINTENANCE**

### ***Introduction***

The WMO was established to manage and mitigate the impacts of **development** and **stormwater** upon **flooding** and water quality. The management and mitigation of these impacts is completed through an approach of effecting change on a variety of levels: from promoting responsible land use; providing storage; minimizing **impervious areas**; protecting and enhancing **wetlands, floodplains, buffers, and riparian environments**; minimizing **erosion**; and providing **sediment** control (see §103 for a complete listing). Accomplishing these goals requires implementation of onsite **maintenance** and monitoring to ensure that the work is carried out effectively over the life of the project. Through effective **maintenance** and monitoring, and completion of remedial tasks to address issues that arise, the overall goals of the program and permitted projects can be met.

Many of the **maintenance** requirements specified in the WMO are already required by **National Pollutant Discharge Elimination System (NPDES)** General Permits. The **erosion** and **sediment** control requirements in the WMO are generally based on the General **NPDES** Permit for **Stormwater** Discharges from Construction **Site** Activities (General **NPDES** Permit ILR-10). In addition, many of the **maintenance** requirements for each community's **stormwater** management system are covered under the General **NPDES** Permit for **Stormwater** Discharges from Small Municipal Separate **Storm Sewer** Systems (MS4 Permit).

Under the WMO (§900.1), perpetual **maintenance** plans must be prepared and implemented for the following components of every **development**:

- A. **Erosion and sediment control practices;**
- B. **Stormwater detention facilities;**
- C. **Stormwater** collection facilities including both **major** and **minor stormwater systems;**
- D. Volume control facilities;
- E. **Native planting conservation areas;**
- F. **Qualified sewer construction** including service on grease basins, triple basins, and private pre-treatment facilities;
- G. **Wetland mitigation;** and
- H. **Riparian environment mitigation.**

For every development permitted under the WMO, the facilities described in A through H above must be listed on Schedule R. In addition, the location of these facilities must be shown on Exhibit R (Recording Exhibit) along with the applicable maintenance responsibilities and activities. Two copies of Schedule R and Exhibit R should be included with each submittal and four copies of each are due at approval. Exhibit R should be submitted separately from the plans as its own sheet (minimum exhibit size of 11" by 17").

**Note: All bold terms contained in this document are defined terms in the WMO. Refer to Appendix A of the WMO or the TGM for the definition of each bold term.**

Schedule R is not required for simple sewer connection permits that solely includes a straightforward service connection or private sewer extension to existing **development** (i.e. no new site development). In addition, any municipal owned properties/publicly funded permits do not require Schedule R. One exception to the above would be a permit that involves a **Sole Permittee** status (see **Sole Permitte** section in article 3 of the **TGM** for more information). If a Schedule R is not required for a publically funded school improvement project, for example, then all the appropriate **maintenance** schedules and notes must be included as part of the engineering utility or **maintenance** plan, with additional provisions for all proposed qualified sewers (if applicable) including pretreatment facilities. If a Schedule R is required for a permit, as in the case of a new volume control facility on private property, then all the qualified sewer **maintenance** including pretreatment facilities must also be included on Schedule R and Exhibit R (if applicable).

Table 9.1 lists those project types and the likely type of **maintenance** plan or native vegetation performance standards that may apply. In some cases, the **maintenance** may be a temporary measure during construction, but in most cases the **maintenance** will begin post-construction and will continue permanently with the **development**.

**Table 9-1. Summary of Maintenance Plan Requirements**

		Duration		Vegetative Performance Standards		Manufactured Device
		During Construction	Post Construction	Lawn, etc.	Native Plants	
A	Erosion and sediment control practices	X	X	-	-	-
B	Stormwater detention facilities	X	X	X	X	X
C	Stormwater collection facilities including both major and minor stormwater systems	X	X	X	X	X
D	Volume control facilities	-	X	X	X	X
E	Native planting conservation areas	X	X	X	X	X
F	Qualified Sewer Construction including service on grease basins, triple basins and private pre-treatment facilities	-	X	-	-	X
G	Wetland mitigation	X	X	-	X	X
H	Riparian environment mitigation	X	X	X	X	X

**Plan Requirements and Guidance**

The **maintenance** plan should describe inspection, **maintenance**, and monitoring activities that occur after the construction phase and continue, as applicable, into perpetuity. There are three key components to an effective **maintenance** plan:

- 1) A comprehensive list of all **maintenance** tasks that are to be performed for each system (A through H above) and the frequency of each task;
- 2) The responsible party for performing the **maintenance**; and

- 
- 3) A description of applicable temporary and permanent access and **maintenance** easements granted or dedicated to, and accepted by, a governmental entity.

Guidance for the **maintenance** of the systems listed in items A through H above is included below. Example perpetual maintenance plans and wetland mitigation maintenance and monitoring plans are included at the end of this article.

#### Erosion and Sediment Control Practices

All **developments** that are greater than or equal to one (1.0) acre in size must comply with the Illinois Environmental Protection (**IEPA**) **NPDES** requirements for construction activities (General **NPDES** Permit ILR-10). However, the WMO requires **erosion and sediment control practices** on all **development sites**, regardless of the area of land disturbance. For every **development**, a **maintenance** plan is required for all temporary and permanent **erosion and sediment control practices**.

The **maintenance** plan should be a schedule of implementation of the **erosion and sediment control** plan including, but not limited to:

- A. A statement that installation of **erosion and sediment control practices** will occur prior to any soil disturbance;
- B. A schedule for construction activities, including **stabilized** construction entrance installation, **sediment** trapping facility installation, **site** clearing, stockpiling, grading, construction waste disposal, temporary and permanent **stabilization**, and removal of temporary **erosion and sediment control practices**;
- C. A schedule for inspection, reporting, and **maintenance** of all **erosion and sediment control practices**; and
- D. Contact information for the party responsible for implementation and **maintenance** of the **site** soil **erosion** and **sediment** control plan.

Onsite inspections should be completed regularly and also after **storm events** that result in 0.5 inches or more rainfall. During these inspections, an assessment should be made on whether the onsite soil **erosion and sediment control practices** are performing properly, as compared to the specifications contained in the plans and/or *Illinois Urban Manual*. Any **maintenance** that is required should also be identified and implemented immediately.

All **erosion and sediment control practices** should be monitored and maintained throughout the duration of construction in accordance with the requirements of §302 of the WMO and General **NPDES** Permit ILR-10. In some cases, perpetual **maintenance** and monitoring of projects, post-construction, is required to ensure the **erosion** and **sediment** control issues that may arise are quickly identified and rectified as necessary (see §310.2). However, in most cases monitoring of the **site** will cease once a Notice of Termination (NOT) has been submitted to

**IEPA.** All temporary **erosion and sediment control practices** should be maintained until permanent **stabilization** is achieved and then removed within 30 days of **stabilization**.

Maintenance and inspection provisions for erosion and sediment control practices during the construction phase should be provided on the plans in the form of general notes and maintenance/inspection schedules. Figures 9.1 and 9.2 provide examples of general notes for maintenance and inspections, and Figure 9.3 provides an example of an inspection and maintenance schedule.

**GENERAL NOTES – MAINTENANCE**

THE FOLLOWING IS A DESCRIPTION OF PROCEDURES THAT SHOULD BE USED TO MAINTAIN, IN GOOD AND EFFECTIVE OPERATION CONDITIONS, VEGETATION, EROSION AND SEDIMENT CONTROL MEASURES AND OTHER PROTECTIVE MEASURES IDENTIFIED IN THIS PLAN AND STANDARD SPECIFICATIONS. ALL EROSION CONTROL MEASURES MUST BE MAINTAINED AND IMMEDIATELY REPLACED AS NEEDED AND AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL INSPECTION, MAINTENANCE, AND REPAIR. THE CONTRACTOR SHALL INSPECT AND COMPLETE MAINTENANCE OF ALL ITEMS A MINIMUM OF EVERY 7 DAYS AND WITHIN 24 HOURS OF A 0.5-INCH RAINFALL. ALL TEMPORARY EROSION AND SEDIMENT CONTROL ITEMS, INCLUDING PERIMETER EROSION BARRIER, MUST BE REMOVED WITHIN 30 DAYS AFTER FINAL STABILIZATION IS COMPLETED.

STABILIZED CONSTRUCTION ENTRANCE: THE ENTRANCES SHOULD BE MAINTAINED TO PREVENT TRACKING OF SEDIMENT ONTO PUBLIC STREETS. MAINTENANCE INCLUDES TOP DRESSING WITH ADDITIONAL STONE AND REMOVING TOP LAYERS OF STONE AND SEDIMENT. THE SEDIMENT RUN-OFF INTO THE PUBLIC RIGHT-OF-WAY SHOULD BE REMOVED IMMEDIATELY.

RIPRAP OUTLET PROTECTION: RIPRAP SHOULD BE INSPECTED FOR ANY SCOUR BENEATH THE RIPRAP OR FOR STONES THAT HAVE BEEN DISLODGED. SEDIMENT ACCUMULATION IN THE OUTFALL AREA SHOULD BE REMOVED AS NEEDED.

CONCRETE WASHOUT AREA: EXISTING AREAS SHOULD BE CLEANED OUT, OR NEW FACILITIES SHOULD BE CONSTRUCTED AND OPERATIONAL ONCE THE EXISTING WASHOUT IS 75% FULL. WASHOUT SHOULD BE INSPECTED FREQUENTLY TO ENSURE THAT PLASTIC LININGS ARE INTACTS AND SIDEWALLS HAVE NOT BEEN DAMAGED BY CONSTRUCTION ACTIVITIES. WHEN THE WASHOUT AREA IS ADJACENT TO A PAVED ROAD, THE PAVED ROAD SHOULD BE INSPECTED FOR ACCUMULATED CONCRETE WASTE. ANY ACCUMULATED CONCRETE WASTE ON THE ROAD, CURB, OR GUTTER SHOULD BE REMOVED AND PROPERLY DISPOSED.

EROSION CONTROL BLANKET: THE BLANKET AND STAPLES SHOULD BE INSPECTED FREQUENTLY AND SHALL BE INSTALLED TO THE ILLINOIS URBAN MANUAL, UNLESS OTHERWISE INSTRUCTED BY THE MANUFACTURER. EROSION OCCURRING UNDERNEATH THE BLANKET SHOULD BE BACK-FILLED AND SEEDED WITH THE APPROPRIATE SEED MIX. ADDITIONAL BMP'S MAY NEED TO BE INSTALLED TO REDUCE EROSION UNDER THE BLANKET.

SILT FENCE: SILT FENCES SHOULD BE INSPECTED REGULARLY FOR UNDERCUTTING WHERE THE FENCE MEETS THE GROUND, OVERTOPPING, AND TEARS ALONG THE LENGTH OF THE FENCE. DEFICIENCIES SHOULD BE REPAIRED IMMEDIATELY. REMOVE ACCUMULATED SEDIMENTS FROM THE FENCE BASE WHEN THE SEDIMENT REACHES ONE-HALF THE FENCE HEIGHT. DURING FINAL STABILIZATION, PROPERLY DISPOSE OF ANY SEDIMENT THAT HAS ACCUMULATED ON THE SILT FENCE. INSTANCES WHEN AREAS OF SILT FENCE CONTINUALLY FAIL, REPLACE SILT FENCE WITH ANOTHER BMP AS SEEN FIT.

CATCH BASIN AND INLET FILTERS: INLET FILTERS SHOULD BE INSPECTED FOR PROPER FILTERING, IF FILTER BAGS ARE USED, REMOVE SEDIMENT FROM THE FILTER BAGS WHEN 50% OF THE STORAGE VOLUME HAS BEEN FILLED, UNLESS OTHERWISE INSTRUCTED BY THE MANUFACTURER. REMOVE TRASH AND DEBRIS DURING INSPECTIONS. ACCUMULATED MATERIAL IN THE FILTERS SHOULD BE DISPOSED PROPERLY. DO NOT PUNCTURE HOLES IN FILTERS IF PONDING OCCURS.

THE CONTRACTOR OR CO-PERMITTEE WILL ASSUME MAINTENANCE OF FACILITIES FOR THE PROPOSED PROJECT ONCE CONSTRUCTION IS COMPLETE AND THE DISTURBED AREAS ARE STABILIZED.

**Figure 9.1. Example General Notes for Maintenance of Erosion and Sediment Control Practices**

**GENERAL NOTES – INSPECTIONS**

THE OWNER SHALL DESIGNATE A QUALIFIED PERSON TO BE RESPONSIBLE FOR SEDIMENT AND EROSION CONTROL OBSERVATION REPORTING. THIS QUALIFIED PERSON SHALL MEET THE REQUIREMENTS NOTED IN THE ILR10 PERMIT CONDITIONS AND/OR THE WMO REGULATIONS. SITE OBSERVATIONS SHOULD OCCUR AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM THAT IS 0.5 INCHES OR GREATER, OR EQUIVALENT SNOWFALL. SITE OBSERVATION REPORTS SHOULD BE MAINTAINED ONSITE AS PART OF THE SWPPP.

EACH SITE OBSERVATION SHALL INCLUDE THE FOLLOWING COMPONENTS:

- A. DISTURBED AREAS AND AREAS USED FOR THE STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION SHALL BE CHECKED FOR EVIDENCE OF, OR POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM. THE EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN SHALL BE OBSERVED TO ENSURE THAT THEY HAVE BEEN INSTALLED AND ARE OPERATING CORRECTLY. WHERE DISCHARGE POINTS ARE ACCESSIBLE, THEY SHOULD BE CHECKED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT TRACKING TO THE RECEIVING WATERS. LOCATIONS WHERE VEHICLES ENTER AND EXIT THE SITE SHOULD BE CHECKED FOR OFF-SITE SEDIMENT TRACKING. ALL PUMPING OPERATIONS AND ALL OTHER POTENTIAL NON-STORM WATER DISCHARGES SHOULD BE OBSERVED.
- B. BASED ON THE RESULTS OF THE SITE OBSERVATION, THE DESCRIPTION OF POTENTIAL POLLUTANT SOURCES IDENTIFIED, AND THE POLLUTION PREVENTION MEASURES DESCRIBED IN THIS PLAN SHALL BE REVISED AS APPROPRIATE, AS SOON AS PRACTICABLE AFTER THE OBSERVATION. THE MODIFICATIONS, IF ANY, SHALL PROVIDE FOR TIMELY IMPLEMENTATION OF ANY CHANGES TO THE PLAN WITH 7 CALENDAR DAYS FOLLOWING THE SITE OBSERVATION.
- C. A REPORT SUMMARIZING THE SCOPE OF THE OBSERVATION, NAME(S) AND QUALIFICATIONS OF PERSONNEL MAKING THE OBSERVATION, THE DATE(S) OF THE OBSERVATION, MAJOR OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THE STORM WATER POLLUTION PREVENTION PLAN, AND ACTIONS TAKEN IN ACCORDANCE WITH PARAGRAPH B ABOVE SHALL BE MADE AND RETAINED AS PART OF THE STORM WATER POLLUTION PREVENTION PLAN FOR AT LEAST THREE YEARS FROM THE DATE OF FINAL STABILIZATION OR PERMIT COVERAGE IS TERMINATED. THE REPORT SHALL BE SIGNED IN ACCORDANCE WITH PART VI.G (SIGNATORY REQUIREMENTS) OF THE ILR10 NPDES PERMIT.
- D. THE OWNER SHALL NOTIFY THE APPROPRIATE AGENCY FIELD OPERATIONS SECTION OFFICE BY EMAIL AT EPA.SWNONCOMP@ILLINOIS.GOV, TELEPHONE, OR FAX WITHIN 24 HOURS OF ANY INCIDENCE OF NONCOMPLIANCE FOR ANY VIOLATION OF THE STORM WATER POLLUTION PREVENTION PLAN OBSERVED DURING A SITE OBSERVATION, OR FOR VIOLATIONS OF ANY CONDITION OF THE PERMIT. THE OWNER SHALL COMPLETE AND SUBMIT WITHIN 5 DAYS OF INCIDENCE OF NONCOMPLIANCE (ION) REPORT FOR ANY VIOLATION OF THE STORM WATER POLLUTION PREVENTION PLAN OBSERVED DURING AN INSPECTION CONDUCTED. SUBMISSION SHALL BE ON FORMS PROVIDED BY THE AGENCY AND INCLUDE SPECIFIC INFORMATION ON THE CAUSE OF NONCOMPLIANCE, ACTIONS WHICH WERE TAKEN TO PREVENT ANY FURTHER CAUSES OF NONCOMPLIANCE, AND A STATEMENT DETAILING ANY ENVIRONMENTAL IMPACT, WHICH MAY HAVE RESULTED FROM THE NONCOMPLIANCE.
- E. ALL REPORTS OF NONCOMPLIANCE SHALL BE SIGNED BY A RESPONSIBLE AUTHORITY AS DEFINED IN PART VI.G OF THE ILR10 NPDES PERMIT (SIGNATORY REQUIREMENTS).
- F. ALL REPORTS OF NONCOMPLIANCE SHALL BE MAILED TO THE AGENCY AT THE FOLLOWING ADDRESS:
 

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY  
 DIVISION OF WATER POLLUTION CONTROL  
 COMPLIANCE ASSURANCE SECTION  
 1021 NORTH GRAND AVENUE EAST  
 POST OFFICE BOX 19276  
 SPRINGFIELD, ILLINOIS 62794-9276

**Figure 9.2. Example General Notes for Inspection of Erosion and Sediment Control Practices**

(*)	CONTROL MEASURE GROUP	CONTROL MEASURE	APPL.	CONTROL MEASURE CHARACTERISTICS	TEMP.	PERMANT
VEGETATIVE SOIL COVER	TEMPORARY SEEDING		X	PROVIDES QUICK TEMPORARY COVER TO CONTROL EROSION WHEN PERMANENT SEEDING IS NOT DESIRED OR TIME OF YEAR IS INAPPROPRIATE.	X	
	PERMANENT SEEDING		X	PROVIDES PERMANENT VEGETATIVE COVER TO CONTROL EROSION, FILTERS SEDIMENT FROM WATER. MAY BE PART OF FINAL LANDSCAPE PLAN.		X
	DORMANT SEEDING			SAME AS PERMANENT SEEDING EXCEPT IS DONE DURING DORMANT SEASON. HIGHER RATES OF SEED APPLICATION ARE REQUIRED.	X	X
	SOODING			QUICK PERMANENT COVER TO CONTROL EROSION. QUICK WAY TO ESTABLISH VEGETATION FILTER STRIP. CAN BE USED ON STEEP SLOPES OR IN DRAINAGEWAYS WHERE SEEDING MAY BE DIFFICULT.	X	X
	PLANTS, TREES & SHRUBS			PROVIDES GROUND COVER, SHEDS AND LIMES IN ADDITION TO PERMANENT VEGETATION. MAY BE USED AS PART OF A FINAL LANDSCAPE PLAN ALONG WITH SHRUBS AND TREES.		X
NON VEGETATIVE SOIL COVER	MULCHING			ADDED INSURANCE OF A SUCCESSFUL TEMPORARY OR PERMANENT SEEDING. CONTROLS EXPOSED VEGETATION AND PRESERVES MOISTURE. PROVIDES COVER WHERE VEGETATION CANNOT BE ESTABLISHED.	X	X
	EROSION BLANKET		X	PROTECTS THE SOIL SURFACE FROM RAINFALL IMPACTS AND OVERLAND FLOW DURING THE ESTABLISHMENT OF VEGETATION. REDUCES SOIL MOISTURE LOSS DUE TO EVAPORATION.	X	X
	AGGREGATE COVER			PROVIDES SOIL COVER ON ROADS AND PARKING LOTS AND AREAS WHERE VEGETATION CANNOT BE ESTABLISHED. PREVENTS MUD FROM BEING PICKED UP AND TRANSPORTED OFF-SITE.	X	X
	PAVING		X	PROVIDES PERMANENT COVER ON PARKING LOTS AND ROADS IN OTHER AREAS WHERE VEGETATION CANNOT BE ESTABLISHED.		X
	DIVERSIONS	RIDGE DIVERSION			TYPICALLY USED ABOVE SLOPES. USED WHEN AN EXCESS OF SOIL IS AVAILABLE.	X
CHANNEL DIVERSION				TYPICALLY USED AT TOP OR BASE OF SLOPES. USED WHEN EXCESS SOIL IS NOT AVAILABLE.	X	X
COMBINATION DIVERSION				TYPICALLY USED ANYWHERE ON A SLOPE. SOIL TAKEN OUT OF CHANNEL IS USED TO BUILD THE RIDGE.	X	X
CURB AND GUTTER				SPECIAL CASE OF DIVERSION USED IN CONJUNCTION WITH A STREET TO DIVERT WATER FROM AN AREA REQUIRING PROTECTION.		X
BENCHES				SPECIAL CASE OF DIVERSION CONSTRUCTED WHEN WORKING ON CUT SLOPES TO SHORTEN LENGTH OF SLOPE AND ADD SLOPE STABILITY.	X	X
WATERWAYS	BARE CHANNEL		X	PROVIDES MEANS OF CONVEYING RUNOFF TO DESIRED LOCATION. MAY BE USED TO OBTAIN INTERSLOPE AREAS. ONLY APPLICABLE WHEN VELOCITY OF FLOW IS VERY LOW.		X
	STRUCTURAL STREAMBANK STABILIZATION			PROTECTS STREAMBANKS FROM EROSION FORCE OF FLOWING WATER		X
	VEGETATIVE CHANNEL			PROVIDES ADDED STABILITY TO CHANNEL. USED WHEN VELOCITY OF FLOW IS NOT EXTREMELY FAST.	X	X
	VEGETATIVE STREAMBANK STABILIZATION			PROTECTS STREAMBANKS FROM THE EROSION FORCE OF FLOWING WATER AND PROVIDES NATURAL- PLEASING APPEARANCE.		X
ENCLOSED DRAINAGE	LINED CHANNEL			USED WHEN VEGETATION WILL NOT PROTECT THE CHANNEL AGAINST HIGH VELOCITIES OF FLOW OR WHERE VEGETATION CANNOT BE ESTABLISHED.	X	X
	STORM SEWER UNDERDRAIN		X	CAN BE USED TO CONVEY SEDIMENT LADEN WATER TO SEDIMENT BASIN OR IN CONJUNCTION WITH A WATERWAY. USED TO LOWER WATER TABLE AND INTERCEPT GROUNDWATER FOR BETTER VEGETATION GROWTH AND SOIL STABILITY AND TO CONVEY BASE FLOW IN WATERWAYS AND TO DEWATER SEDIMENT BASINS.	X	X
SPILLWAYS	STRAIGHT PIPE SPILLWAY			USED FOR RELATIVELY SMALL VERTICAL DROPS AND SMALL FLOWS OF WATER.		X
	DROP INLET PIPE SPILLWAY			SAME AS PIPE SPILLWAY EXCEPT LARGER FLOWS AND LARGE VERTICAL DROPS CAN BE ACCOMMODATED.		X
	WEIR SPILLWAY			USED FOR RELATIVELY SMALL VERTICAL DROPS AND FLOWS MUCH GREATER THAN PIPE STRUCTURES.	X	X
	BOX INLET WEIR SPILLWAY			SAME AS WEIR SPILLWAY EXCEPT LARGER FLOWS CAN BE ACCOMMODATED BECAUSE OF LOWER WEIR LENGTH.	X	X
OUTLETS	LINED APRON			PROTECTS DOWNSTREAM CHANNEL FROM HIGH VELOCITY OF FLOW DISCHARGING FROM STRUCTURES.	X	X
SEDIMENT BASINS	EMBANKMENT SEDIMENT BASIN			USED WHERE TOPOGRAPHY LENDS ITSELF TO CONSTRUCTING A DAM AND EARTH FILL IS AVAILABLE.	X	X
	EXCAVATED SEDIMENT BASIN			USED WHERE EMBANKMENT COULD CAUSE A HAZARD DOWNSTREAM IN CASE OF FAILURE AND WHEN EXCESS EARTH FILL IS NOT AVAILABLE.	X	X
	COMBINATION SEDIMENT BASIN			USED WHEN TOPOGRAPHY IS SUITABLE BUT ADDITIONAL CAPACITY IS NEEDED.	X	X
SEDIMENT FILTERS	BARRIER FILTER			USED FOR SINGLE LOTS OR DRAINAGE AREAS LESS THAN 1/2 ACRE TO FILTER SEDIMENT FROM RUNOFF.	X	
	VEGETATIVE FILTER		X	USED ALONG DRAINAGEWAYS OR PROPERTY LINES TO FILTER SEDIMENT FROM RUNOFF. SIZE MUST BE INCREASED IN PROPORTION TO DRAINAGE AREA.	X	X
	FILTER FABRIC		X	USED FOR ROADWAY CURB INLETS.	X	X
MUD AND DUST CONTROL	STABILIZED CONST. ENTRANCE		X	PREVENT MUD FROM BEING PICKED UP AND CARRIED OFF-SITE.	X	X
	DUST AND TRAFFIC CONTROL		X	PREVENTS DUST FROM LEAVING CONSTRUCTION SITE.	X	X

(\*) EROSION CONTROL BLANKET SHALL BE PLACED ON ALL DISTURBED AREAS WITHIN 15 DAYS AFTER FINAL GRADE IS REACHED.

INSPECTION AND MAINTENANCE SCHEDULE

ACTIVITY	RESPONSIBLE PARTY	DURATION
STABILIZATION DURING CONSTRUCTION MAINTENANCE	CONTRACTOR	DECEMBER 2005 TO JUNE 2006
STABILIZATION DURING CONSTRUCTION-OBSERVATION	ENGINEER	WEEKLY AND AFTER EACH SIGNIFICANT RAINFALL EVENT
VEGETATION MAINTENANCE	CONTRACTOR	1 YEAR FROM COMPLETION
VEGETATION AND STABILIZATION MAINTENANCE	CONTRACTOR	ONGOING FROM CONSTRUCTION COMPLETION

SOIL PROTECTION SCHEDULE

STABILIZATION TYPE	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
PERMANENT SEEDING												

PROPOSED SCHEDULE



Figure 9.3. Example Maintenance and Inspection Schedule for Erosion and Sediment Control Practices

### Stormwater Detention Facilities

A scheduled perpetual **maintenance** plan is required for all **stormwater detention facilities**, and should include, at a minimum, the following items:

- Planned **maintenance** tasks and frequency of each task such as removal of **sediment**, debris, mowing and pruning of vegetation, and restoration of eroded areas;
- Identification of the responsible parties for performing the **maintenance** tasks; and
- A description of applicable temporary and permanent access and **maintenance** easements granted or dedicated to, and accepted by, a governmental entity.

**Maintenance** tasks for **stormwater detention facilities** should be performed monthly, at a minimum. The **maintenance** plan for **stormwater detention facilities** should include the following tasks:

- *Debris removal.* Trash, brush, grass clippings, **sediment**, and other debris should be removed from the **detention facility** to maintain the designed storage volume. To prevent clogging, the outlet control **structure** should also be inspected and all debris should be removed.
- *Restoration of eroded areas.* For areas where there is evidence of **erosion**, or in areas where future **erosion** is likely, protection should be provided to prevent further damage. All bare areas should be seeded and restored. Areas located along the side slopes of the **detention facility** will require seeding in conjunction with an **erosion** control blanket.
- *Vegetation control.* If used as a recreational area, the grassed areas of the **detention facility** should be mowed regularly to provide the intended use of the area. Grass clippings from mowing activities should always be collected. Mechanical methods for controlling weeds should be used instead of herbicides and pesticides. In addition, trees should not be allowed to grow along the emergency overflow weir and on any berms that are greater than four feet high. Vegetative control for **detention facilities** that serve as a **wetland** or wildlife habitat area should follow the guidance contained in the **wetland maintenance** plan.

### Stormwater Collection Facilities

A perpetual **maintenance** plan for **stormwater facilities** is required. This includes the **major** and **minor** components of the **stormwater system** (other than the **detention facility**), such as **storm sewers**, catch basins, inlets, **outfalls to waterways**, and overland flow routes. A scheduled perpetual **maintenance** plan is required for all **stormwater** collection facilities, and should include, at a minimum, the following items:

- Planned **maintenance** tasks and frequency of each task such as removal of **sediment**, debris, mowing and pruning of vegetation, and restoration of eroded areas;
- Identification of the responsible parties for performing the **maintenance** tasks; and
- A description of applicable temporary and permanent access and **maintenance** easements granted or dedicated to, and accepted by, a governmental entity.

To ensure that **stormwater** collection facilities function as they were designed, regular inspections and **maintenance** of the system should be performed every two weeks. At a minimum, the following **maintenance activities** should be performed:

- *Debris removal.* Trash, wood chips, grass clippings, **sediment**, and other debris should be removed from the catch basins, inlets, **outfalls**, and **storm sewers** to prevent clogging. Cleaning should be done in such a way that the debris is not discharged back into the **stormwater** system.
- *Removal of obstructions.* Inspections should be performed to ensure that all overland flow routes are free from obstructions. If an obstruction has been placed in an overland flow route, it should be removed immediately.
- *Vegetation control.* For grassed swales that serve as overland flow routes, regular mowing should be performed to keep grass at an optimum height (less than six inches). Trees, bushes, and any other non-grass vegetation should be removed to preserve the conveyance capacity of the swale. Any areas of bare soil should be restored immediately using seeding with **erosion** control blanket.

#### Volume Control Facilities

A perpetual **maintenance** plan for volume control facilities is required. The written plan must include:

- Planned **maintenance** tasks and frequency of each task such as removal of **sediment**, debris, mowing and pruning of vegetation, and restoration of eroded areas;
- Identification of the responsible parties for performing the **maintenance** tasks; and
- A description of applicable temporary and permanent access and **maintenance** easements granted or dedicated to, and accepted by, a governmental entity.

Because every **development** permitted under the WMO is required to incorporate **green infrastructure** into the **site** design, special **maintenance** practices should be developed that ensure that the **green infrastructure** (both **volume control practices** and **flow-through practices**) functions properly over time. For **volume control practices**, monitoring wells are required for every 40,000 ft<sup>2</sup> of surface area. The monitoring wells should be utilized to determine the water level in the **volume control practice** and verify it is functioning properly.

Without proper **maintenance**, the void spaces in porous pavement and infiltration basins may become clogged with **sediment**, reducing their effectiveness. To prevent clogging in the void space of pervious pavement (concrete, asphalt, pavers), it is recommended that adjacent landscaped areas be designed such that **stormwater runoff** from these areas onto the porous pavement is minimized. In addition, low pressure power washing and vacuuming of the surface is recommended on a yearly basis. This **maintenance** is especially critical during the fall. High pressure washing should be avoided for these types of surfaces, as it can cause damage to the pavement. Proper **maintenance** is especially difficult for pervious pavers, because extra care must be taken so that power washing and vacuuming does not dislodge the small chips that are used to fill in the paver gaps. In addition, small debris can collect in the paver gaps and lead to weed growth.

For infiltration trenches and basins, the use of a mulch layer above the infiltration practice will work like a filter for the **sediment** transported by **stormwater runoff**. The mulch layer will need to be replaced when it is filled, but will protect the void spaces in the soil and aggregate layers below from **sedimentation**. An alternative to using a mulch layer is the installation of a **sediment** trap upstream of the infiltration area. The **sediment** trap is a small depression that captures **stormwater** and allows the **sediment** to settle before it reaches the infiltration basin. For the **sediment** trap to be effective, the collected **sediment** must be removed regularly.

For mechanical **flow-through practices**, such as an oil and grit separator, an effective **maintenance** plan is based on performing frequent inspections. The rate at which these devices collect pollutants will vary from **site** to **site**, and therefore frequent inspections (once per month) should be performed to ensure the system is functioning properly. The **maintenance** for these devices should be performed in accordance with the manufacturer's recommendations. As an example, the inspection and **maintenance** guide for the CDS system, which was developed by Contech Construction Products, Inc., is available on-line at:

<http://www.conteches.com/products/stormwater-management/treatment/cds.aspx#1822141-technical-info>

#### Qualified Sewer Construction

A perpetual **maintenance** plan is required for all **qualified sewer construction**. The written plan must include, at a minimum:

- Planned **maintenance** tasks and frequency of each task for the removal of objectionable wastes, fats, oils and grease, or any **other wastes** collected in private pre-treatment or separator **structures**;
- Planned routine **maintenance** for all private lift station and pumping facilities;
- Operation **maintenance** agreements for all private **service sewers** providing service to multiple **owners**;

- A description of applicable temporary and permanent access and **maintenance** easements granted or dedicated to, and accepted by, a governmental entity.

The **maintenance** for **sanitary sewer** systems should follow the guidance provided in document, Separate **Sanitary Sewer** Collection System Operation and **Maintenance** Manual for Local Agencies Tributary to the Metropolitan Sanitary **District** of Greater Chicago. This operation and **maintenance** guide was developed by Metcalf and Eddy, Inc. in 1989 on behalf of the **District** and is available on-line through the **District's** website at:

<https://www.mwrd.org/iri/portal/anonymous/Infiltration>

Private pre-treatment and separator **structures** that collect objectionable wastes, fats, oils and grease, or any other undesirable waste should be inspected and, if necessary, maintained every two weeks. **Maintenance** of these **structures** is usually performed by permitted haulers or recyclers, and consists of removing the material and then disposing of the material in accordance with local, State, and Federal laws.

To prevent stoppages in gravity sewers, sewer cleaning should be performed on a preventative basis. A regular cleaning schedule for sewers should be developed such that 100% of the pipes are cleaned annually. Some pipe sections may be prone to stoppages and may require more frequent cleaning, such as every month. Other pipe sections may not be susceptible to stoppages and therefore can be cleaned annually. The cleaning schedule should be customized based on information obtained during regular inspections of the system. When cleaning the sewer system, there are both hydraulic cleaning methods and mechanical cleaning methods available. Hydraulic methods utilize high-velocity water to clean the bottoms and walls of the pipes, whereas mechanical methods use equipment to physically remove the material from the bottoms and walls of the pipes.

Planned routine **maintenance** for all private lift station and pumping facilities should be based on the manufacturer's recommendations. The schedule of **maintenance activities** can be supplemented by information obtained during the regular inspections of the equipment. At a minimum, the **maintenance activities** and frequency should meet the manufacturer's recommendations.

#### Wetland Mitigation and Native Planting Conservation Areas

**Maintenance** plans must be prepared for **wetland mitigation** and **native planting conservation areas**. The plans shall cover the short term and long term (perpetual) **maintenance**. The short term plans will have set time frames based on the following examples. Actual timeframes will vary based on the complexity or difficulty of the project. The timeframes set a project length of the program; however, failure to meet the performance standards listed in the plan can extend the period until the project is approved. Long term plans are perpetual and intended to maintain the level of quality achieved during the short term period.

Short Term **Maintenance** Plan Example Timeframes:

- Temporary Impact Minimal Restoration, e.g. utility line installation - 1 year
- Enhancement/restoration of an existing area (more than minimal) - 3 years
- **Wetland Mitigation** - 5 years

The contents of the Short Term Plan are as follows:

- Proposed **wetland hydrology** and an inundation and duration analysis;
- Proposed soils and soil management activities;
- Proposed planting zones, species, quantities, sizes, locations, specifications, methodologies, and details;
- Proposed **maintenance** and monitoring plan with **maintenance activities** and performance criteria outlined;
- Schedule of earthwork, planting, monitoring, and **maintenance**; and
- A description of applicable temporary and permanent access and **maintenance** and conservation easements granted or dedicated to and accepted by a governmental entity.

The contents of the Long Term Plan are as follows:

- A plan for the continued management, operation, and **maintenance** of the **wetland mitigation** measures including the designation of funding sources and the **person** responsible for long-term operation and **maintenance**.

Riparian Environment Mitigation

**Maintenance** plans must be prepared for **riparian environments**. The plans shall cover the short term and long term (perpetual) **maintenance**. The short term plans will have set time frames based on the following examples. Actual timeframes will vary based on the complexity or difficulty of the project. The timeframes set a project length of the program; however failure to meet the performance standards listed in the plan can extend the period until the project is approved. Long Term plans are perpetual and intended to maintain the level of quality achieved during the short term period.

Short Term **Maintenance** Plan Example Timeframes:

- Temporary Impact Minimal Restoration, e.g. utility line installation - 1 year
- Mitigation/Enhancement/Restoration of an existing **riparian environment** - 3 years

The contents of the **Riparian** Short Term Plan are as follows:

- Proposed **wetland hydrology** and an inundation and duration analysis;
- Proposed soils and soil management activities;
- Proposed planting zones, species, quantities, sizes, locations, specifications, methodologies, and details;
- Proposed **maintenance** and monitoring plan with **maintenance activities** and performance criteria outlined;
- Schedule of earthwork, planting, monitoring, and **maintenance**;

- A plan for the continued management, operation, and **maintenance** of the **wetland mitigation** measures including the designation of funding sources and the **person** responsible for long-term operation and **maintenance**.

As applicable, the following shall also be included in the **maintenance** plan discussion.

- A description of applicable temporary and permanent access and **maintenance** and conservation easements granted or dedicated to and accepted by a governmental entity;
- The proposed naturalizing methods, such as meandering, pools, or riffles for relocated channels. Methods proposed are expected to be able to withstand all events up to the **base flood** without increased **erosion**;
- The methods by which the normal flow within the channel will be diverted to construct the new or relocated channel;
- The **erosion and sediment control practices** to be implemented;
- The appropriate hydrologic and hydraulic methods analyzing the impacts on **flood** flows and **flood** elevations (to be provided in the **floodplain** and **floodway** submittal) meeting all other requirements in the **Ordinance**, including the **floodplain** and **floodway** requirements outlined in §601 and §602 of the **Ordinance**;
- Proposed planting zones, species, quantities, sizes, locations, specifications, methodologies, and details;
- Scheduling of earthwork, planting, **maintenance**, and monitoring; and
- A description of applicable temporary and permanent access and **maintenance** and conservation easements granted or dedicated to, and accepted by, a governmental entity.

#### ***Wetland, Buffer, Riparian, and Native Planted Areas Maintenance & Monitoring Plan Format***

The WMO describes within §310 (**Maintenance** and Monitoring Plan Submittal) the required contents of the submittals for each of the **site** elements listed above. However, the WMO does not provide any specific guidance or criteria regarding performance standards or format of the document. Recommendations regarding the type of **maintenance** and monitoring plan to prepare and recommended performance standards regarding certain project elements are described below.

It is recommended that **maintenance** and monitoring plans be prepared following Adaptive Management Principles. **Maintenance** and monitoring plans will be tailored to suit the needs of each **development**. Applicants will be required to determine the applicability of each element and complete the required **maintenance** and monitoring in accordance with the approved plan.

Adaptive Management is a **structured** approach for addressing uncertainties by adjusting implementation, as necessary, to improve the probability of success. Adaptive management is seen as an evolving process involving learning (the accumulation of understanding over time) and adaptation (the adjustment of management over time). The sequential cycle of learning and adaptation leads naturally to two beneficial consequences:

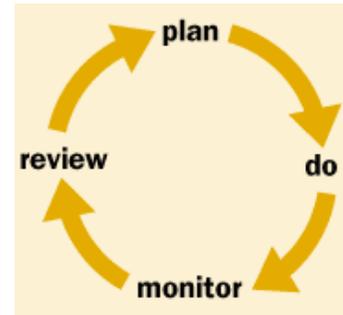
1. Better understanding of the resource system being managed, and
2. Better management based on that understanding.

### Adaptive Management Goals and Objectives

Plans are designed to be adaptive to changing **site** conditions observed through periodic monitoring of the **site**. The monitoring visits are important to determine the annual tasks needed. Those tasks are then completed and evaluated for effectiveness. New tasks are then defined as necessary to achieve the project goals and objectives.

#### **Plan:**

- Identify management issues (e.g. weed infestations)
- Identify management goals (e.g. weeds managed, native seeding);
- Determine management strategies available (e.g. herbicide, hand pulling, burning);
- Select appropriate management action (e.g. hand removal);
- Determine what will be monitored and how (e.g. establish a fixed point in field); and
- Determine how change and success will be evaluated (e.g. absence of weeds one month or one year after removal).



#### **Do:**

- Carry out action (e.g. remove weeds, complete prescribed burn).

#### **Monitor:**

- Monitor results (e.g. revisit **site** to determine success of activities).

#### **Review:**

- Assess previous management strategy and modify plan as necessary to adapt to current **site** conditions; and
- Return to Planning – begin again, adapt to new **site** conditions.

### Recommended Native Seeding Planting Performance Standards

For **wetland**, **riparian**, buffer, and **stormwater** areas proposed to contain native seeding or planting, the following minimum performance standards shall apply. Applicants may offer alternative standards for unique situations.

1. For projects which have or will receive a permit from the **US Army Corps of Engineers (Corps)**, applicants should follow the most current version of the *Chicago District Permittee Responsible Mitigation Requirements* to the mitigation areas for **wetland**, buffer, and **riparian environments**. The guide is available on-line through the **Corps** website at:

<http://www.lrc.usace.army.mil/Missions/Regulatory/MitigationRequirements.aspx>

2. For projects that do not have to receive a **Corps** permit, applicants should at a minimum achieve the following standard:
  - At least 80% of the vegetation present within the planted **wetland** and buffer restoration area shall be native, non-invasive species. This standard does not apply to emergent communities or existing previously vegetated areas that are not undergoing restoration or are lawn.

#### ***Maintenance Plan Implementation***

As specified in the WMO (§900.4), **maintenance** is the responsibility of the **co-permittee** and **permittee** of the **development**. The **maintenance** responsibility may be delegated to an entity that is acceptable to the **permittee**, however, ultimate responsibility for the **maintenance** of the facilities lies with the **permittee**.

**Maintenance** plans may be modified if **site** conditions change or issues arise, however, the **District** or **authorized municipality** has discretion as to whether or not to accept the requested modification.

**EXAMPLE MAINTENANCE PLAN FOR EXHIBIT R (RECORDING EXHIBIT)**

The Owner of the XYZ Development, with facilities as shown on Exhibit R, shall assume responsibility for the following perpetual maintenance activities:

**1. General**

Regular inspections and routine maintenance of general areas shall be performed on a monthly or as-needed basis. Specific items of concern include:

- Litter and debris shall be controlled
- Landscaped areas shall be maintained with regular mowing and restored with appropriate seeding/vegetation as necessary
- Accumulated sediment shall be disposed of properly, along with any wastes generated during maintenance operations
- Riprap areas shall be repaired with the addition of new riprap, as necessary, of similar size and shape
- Roads shall be swept, vacuumed and/or washed on a regular basis

**2. Stormwater Management Facilities**

All components of the stormwater management facilities shall be checked monthly between March and November and maintained as necessary to ensure proper performance. It is critical that all inflows and outflows to the detention facility are clean and performing as designed. In addition, the design volume of the detention facility shall also be maintained. Inspections for the following specific items should be conducted monthly between March and November:

**Side Slopes/Embankment/Emergency Overflow Structure**

- Inspect embankments for settlement and erosion
- Remove woody growth from the embankment
- Any breaks, hire Registered Professional Engineer for design resolution
- Seed and sod any eroded areas
- Signs of piping (leakage), repair
- Signs of seepage or wet spots on the downstream face of a berm, may require toe drains or chimney drains to solve problems
- Stabilize emergency overflow structure if erosion observed
- Remove obstructions blocking emergency overflow spillway

**Vegetated Areas**

- Regular mowing to control vegetation, no cutting of native vegetation
- Need for planting, reseeding or sodding. Supplement alternative native vegetation if a significant portion has not established (50% of the surface area). Reseed with alternative grass species if original grass cover has not successfully established.
- Evidence of grazing, motorbikes or other vehicles, repair
- Check for invasive vegetation, remove where possible
- All vegetation must be maintained per the approved planting plan

Outlet Control Structure

- Inspect restrictor and remove debris if clogged or discharge reduced
- Remove accumulated sediment at outlet
- Scour and erosion at outlet, repair and reseed
- Any ice damage to outlet of pipe, repair if necessary
- Condition of trash tracks, remove debris
- Outlet channel conditions downstream

Access for Maintenance Equipment

- Remove any obstructions placed in maintenance easements

Safety Features

- Access controls to hazardous areas
- Fences
- Loose or damaged posts
- Loose or broken wires
- Accumulated debris in fences
- Condition of gates
- Signs

Detention Volume

- Inspect all stormwater detention facilities to ensure that the constructed volume for detention is maintained. No sediment, topsoil, or other dumping into the facility shall be allowed. Specific locations in the stormwater management system, designed to accumulate sediment, shall be dredged as necessary to prevent sediment from reaching the invert of any gravity outlet pipe.

**3. Volume Control Facility**

Routine inspections and maintenance of volume control facilities shall be performed by the Owner on a yearly or as-needed basis. Specific items of concern include:

- Facility shall be inspected yearly using the monitoring well to verify the system is functioning properly.
- Surface of permeable pavement shall be cleaned with a low-pressure power washer.
- Accumulated sediment from surface shall be vacuumed out and disposed of properly.
- Appropriate signage shall be repaired if damaged or illegible.

**4. Stormwater Collection System**

The Owner shall perform monthly inspections of all components of the stormwater collection system. The monthly inspection shall occur between March and November and include the following specific areas of concern:

Storm Inlets/Manholes

- Remove accumulated leaves and other debris from grates

- \_\_\_ Reset covers/lids on as-needed basis
- \_\_\_ Remove accumulated sediment from bottom of manhole when 50% of sump is filled

**Storm Sewers/Culverts**

- \_\_\_ Visually inspect pipes by removing manhole lids, make repairs as necessary
- \_\_\_ Storm sewers and culverts shall be checked for siltation deposits at inlets, outlets, and within the conduit, clean out as necessary
- \_\_\_ Restore riprap at outfalls if erosion observed
- \_\_\_ Restore riprap at outfalls
- \_\_\_ Replant and reseed any eroded areas

**Overland Flow Routes (Ditches/Swales)**

- \_\_\_ Annual visual inspections shall be performed that verify the design capacity of the overland flow routes is maintained. The slope and cross-sectional area of the ditch/swale shall be verified during this inspection.
- \_\_\_ Remove any obstructions that have been placed in the drainage path
- \_\_\_ Seed and sod any eroded areas
- \_\_\_ Restore riprap as necessary
- \_\_\_ Regrade to provide positive drainage as necessary (A Professional Land Surveyor may be required to check grades to ensure positive drainage).
- \_\_\_ Regular mowing to control vegetation
- \_\_\_ Rototill bottom of dry swales if not drawing down within 48-hours

**5. Vegetated Areas**

- \_\_\_ Need for planting, reseeding, or sodding. Supplement alternative native vegetation if a significant portion has not established (50% of the surface area after second growing season). Reseed with alternative native grass species if original grass cover has not successfully established.
- \_\_\_ Evidence of grazing, motorbikes, or other vehicles, repair.
- \_\_\_ Check for invasive vegetation, remove when possible.
- \_\_\_ Regular mowing to control vegetation; it is recommended that native vegetation remain uncut.
- \_\_\_ Dead or damaged non-native grassy areas – repair with seeding with fertilization or seeding with mulch.
- \_\_\_ Compensatory storage area shall be reseeded with appropriate vegetation according to the approved planting plan.

**6. Qualified Sewer Construction**

- \_\_\_ Perform manhole inspections once every five years, make repairs as necessary.
- \_\_\_ Perform sewer inspections once every five years, make repairs as necessary.
- \_\_\_ Perform regular sewer cleaning so that every sewer segment is cleaned once every five years.
- \_\_\_ Remove any obstructions placed in maintenance easements that may impede maintenance equipment access.

## **SAMPLE - WETLAND MITIGATION**

### **5 YEAR MANAGEMENT AND MONITORING PLAN**

#### **DATE**

PREPARED FOR:

(USACE Application No. LRC-XXXX)  
(XYZ Project No. XX-XXXX)

#### **Introduction**

The (OWNER) will implement a 5-Year Wetland Management and Monitoring Plan for the wetland mitigation and natural areas within the \_\_\_\_\_ project area. The purpose of this Wetland Management and Monitoring Plan is to define the responsibilities of OWNER in regards to the wetland mitigation and restoration.

The success or failure of the project is largely dependent upon completion of maintenance and monitoring during the five-year management program. The following Wetland Management and Monitoring Plan includes a schedule describing Wetland Mitigation Performance Standards and Reporting and Compliance requirements.

#### **Vegetation Performance Standards**

The following Ecological Performance Standards apply to USACE wetland restoration and enhancement areas, and associated buffer that are providing wetland mitigation credit. The limits of these combined areas are shown on the attached map and identified as "USACE REGULATED WATERS, WETLAND, AND BUFFER LIMITS".

1. A temporary cover crop shall be planted on all slopes immediately upon completion of any earthwork to prevent soil erosion. Soil erosion and sediment control measures shall be in place during all construction work. An erosion control blanket may also be required depending on site conditions and season of planting. Within three (3) months, at least 90% of this area, as measured by aerial coverage, will be vegetated. If the desired long-term slope vegetation is not planted with the temporary crop, it shall then be planted in the first available growing season appropriate for each plant community. All cover crop species shall be non-persistent or native and not allelopathic.
2. Species selected for the planting shall be native to the county where the mitigation site is located (ref. Swink and Wilhelm, Plants of the Chicago Region, 1994), and shall be appropriate for the hydrologic zone to be planted.
  - **Marsh**- minimum of 15 native perennial species
  - **Sedge meadow/wet prairie**- minimum of 35 native perennial species
  - **Mesic Prairie** (buffer) - minimum of 25 native perennial species

3. At least 50% of the required minimum number of species shall occur at a 10% frequency or greater, within each plant community zone or area. Multiple transects within a given plant community may be combined for this frequency analysis.
4. A native mean coefficient of conservatism value (native mean C value) of greater than or equal to 3.5 shall be achieved in each separate vegetated plant community (e.g. wet prairie, marsh, mesic prairie buffer), and as measured over the entire mitigation site area. Native plant species coefficients of conservatism are designated in Swink, Floyd and Gerould Wilhelm, *Plants of the Chicago Region* (Indianapolis: Indiana Academy of Science, 4th edition, 1994).

**Interim Yearly Standards:**

- a. By the end of the first full growing season, at least 30% of the vegetation present within the planted wetland and buffer restoration area shall be native, non-invasive species. This standard does not apply to emergent communities or existing previously vegetated wetland or buffer.
  - b. By the end of the second full growing season, at least 50% of the vegetation present within the planted wetland and buffer restoration area shall be native, non-invasive species. This standard does not apply to emergent communities or existing previously vegetated wetland or buffer.
  - c. By the end of the third full growing season, at least 60% of the vegetation present within the planted wetland and buffer restoration area shall be native, non-invasive species. This standard does not apply to emergent communities or existing previously vegetated wetland or buffer.
  - d. By the end of the fourth and fifth full growing seasons, at least 80% of the vegetation present within the planted wetland and buffer restoration area shall be native, non-invasive species. This standard does not apply to emergent communities or existing previously vegetated wetland or buffer.
5. The native floristic quality index value (native FQI) shall be greater than or equal to 20 in each separate vegetated community zone and as measured over the entire mitigation site. The floristic quality assessment method is described in Swink and Wilhelm, *Plants of the Chicago Region*.

Steps # 4 and #5 are evaluated based upon the overall plant community inventories as well as transect summaries. If a portion of the site has achieved compliance with the performance standards, the standard shall be maintained in that portion until the final compliance sign off for the mitigation site.

6. No area over the entire mitigation site greater than 1 square meter shall be devoid of vegetation, as measured by aerial coverage, unless specified on approved mitigation plans. This standard does not apply to emergent, streamside and aquatic communities.
7. None of the three most dominant plant species in any of the wetland community zones may be non-native species or weedy species, including but not limited to:
  - *Typha angustifolia*
  - *Typha X glauca*
  - *Phragmites australis*
  - *Lythrum salicaria*
  - *Salix interior*
  - *Phalaris arundinacea*

These species shall not cumulatively comprise more than 5% of the total percent cover (not relative cover) for each planted restored community. This standard does not apply to existing emergent wetland, streamside and aquatic communities or enhancement areas.

8. The native perennial species within each wetland plant community shall represent at least 80% of the total dominance measure. A lower percent native perennial species of the total dominance measure may be acceptable if it is demonstrated with transect data that the remaining dominance percentage is by native annual and biennial wetland plant species and the FQI and mean C standards are exceeded.
9. A vegetation map of the mitigation site based on as-built drawings developed at the completion of implementation shall be submitted. This information shall be descriptive and define the limits of all vegetation areas by community type, based on field observations. The permanent transects shall be shown on this map. Representative photographs of each vegetation area by general community zone shall be submitted to the Corps.

## Hydrology Performance Standards

Consistent with the Corps of Engineers Wetlands Delineation Manual (1987) and/or any appropriate regional supplements, all areas to receive credit as wetland plant communities shall have soils saturated within 12 inches or less of the ground surface for at least 12.5% of the growing season as defined in this ICA. To meet this standard the mitigation site shall demonstrate inundated or saturated soils for 23 consecutive days during the growing season. In addition to this minimum, hydrology data should reflect a hydrologic regime that is appropriate to the native plant community proposed for establishment.

## Monitoring Standards

Monitoring and data collection are intended to assess whether the mitigation has attained the following performance standards for full credit release and certification. Monitoring is required for five (5) years from the completion of planting of the wetland area. It shall also be recognized that monitoring may need to continue beyond the five (5) year period until full performance standards are attained. This may be especially true for forested communities with a longer growing time to maturity.

### ***Wetland Delineation***

To meet full performance standards, a routine wetland delineation shall be performed to verify the total acreage of wetlands and waters achieved on site. If requested by the Corps, the wetland areas shall be staked for final inspection. The Corps may request that the property boundaries for the mitigation site shall be marked as well. The delineation shall be included/reported in the final monitoring report, if not before. It is recognized that the actual acreage of aquatic resources/wetland will vary from that in the plans; however, it shall approach or exceed the acreage specified in the permit.

### ***Vegetation Monitoring***

Permanent straight line sampling transects shall be established, plotted onto project drawings and a current aerial photograph of the site, across each proposed plant community of the mitigation site. Sufficient transects shall be established to provide full representation of all plant communities within the site, which might include more than one of each type. Each transect shall consist of a series of 1.0 square meter quadrats (no fewer than 10) at regular or random intervals (5-10m suggested interval). The number of quadrats depends on system complexity and the size of each plant community for which credit is sought. A rough guideline is 2 quadrats per acre in each plant community as a minimum. The plant sampling shall be done in May/June and August/September each year following the initial planting, throughout the monitoring period. Data shall be reported by plant community, and by transect. A total plant species list should be compiled over the entire site for which credit is sought. Data may be summarized by plant community for which credit is sought in monitoring reports, however, the full sampling data should be provided in an appendix to the annual monitoring report. Species dominance shall be determined by calculating importance values, with at least the following two parameters: frequency and percent cover. Absolute percent aerial cover data should be reported, though the frequency and cover may be relativized to calculate Importance Values (e.g.  $RF + RC = IV$ ).

## Monitoring Reports

1. The Chicago District shall determine the information to be included in monitoring reports. This information shall be sufficient for the Chicago District to determine how the compensatory mitigation project is progressing towards meeting its performance standards,

and may include plans (such as as-built plans), maps, and photographs to illustrate site conditions. Monitoring reports may also include the results of functional, condition, or other assessments used to provide quantitative or qualitative measures of the functions provided by the compensatory mitigation project site.

2. The permittee or sponsor is responsible for submitting monitoring reports in accordance with the special conditions of the DA permit or the terms of the instrument. Failure to submit monitoring reports in a timely manner may result in compliance action by the Chicago District.
3. Monitoring reports shall be provided by the Chicago District to interested federal, tribal, state, and local resource agencies, and the public, upon request.

### **Adaptive Management**

1. If the compensatory mitigation project cannot be constructed in accordance with the approved mitigation plans, the permittee or sponsor shall notify the Chicago District. A significant modification of the compensatory mitigation project requires approval from the Chicago District.
2. If monitoring or other information indicates that the compensatory mitigation project is not progressing towards meeting its performance standards as anticipated, the responsible party shall notify the Chicago District as soon as possible. The Chicago District will evaluate and pursue measures to address deficiencies in the compensatory mitigation project. The Chicago District will consider whether the compensatory mitigation project is providing ecological benefits comparable to the original objectives of the compensatory mitigation project.
3. The Chicago District, in consultation with the responsible party (and other federal, tribal, state, and local agencies, as appropriate), will determine the appropriate measures. The measures may include site modifications; design changes, revisions to maintenance requirements, and revised monitoring requirements. The measures shall be designed to ensure that the modified compensatory mitigation project provides aquatic resource functions comparable to those described in the mitigation plan objectives.
4. Performance standards may be revised in accordance with adaptive management to account for measures taken to address deficiencies in the compensatory mitigation project. Performance standards may also be revised to reflect changes in management strategies and objectives if the new standards provide for ecological benefits that are comparable or superior to the approved compensatory mitigation project. No other revisions to performance standards will be allowed except in the case of natural disasters.

### ***Long Term Management***

1. The applicant shall submit a long term management strategy with an associated financial assurance plan for Chicago District approval prior to authorization. The strategy shall include a description of long-term management needs, annual cost estimates for those needs, and identify the funding mechanism that will be utilized to meet the needs. The applicant shall also identify the entity responsible (and provide supporting documentation, e.g. agreement or letter of intent) for the ownership and long-term management of the site. Identifying the responsible entity prior to permit issuance will aid in the processing of the instrument. It is preferred that the proposed long term manager or organization have expertise in executing adaptive management procedures. Applicants shall establish agreements for long-term management with public or private conservation organizations with final approval of the Chicago District.
2. All land, including associated uplands, which are part of the mitigation site shall be protected from future development by a permanent conservation easement, deed restriction or other real estate instruments as deemed appropriate by the Chicago District. This easement or deed restriction, along with a map of the site, shall be recorded with the appropriate county register of deeds, attached to the abstract of title, with a certified copy of the registration provided to the Chicago District prior to authorization.

### **Compliance Signoff**

The Chicago District will issue final approval at the end of the management and monitoring period if the mitigation is in compliance and the Long Term Manager has been established for the site. The Long Term Manager shall provide supporting documentation stating their acceptance of the site in perpetuity. To be successful, the mitigation shall demonstrate the characteristics specified in the approved mitigation plan, the stated goals, and the Mitigation Requirements. Failure to comply with all the terms and conditions of a Department of the Army permit, including the mitigation plan and Mitigation Requirements, at any time may result in suspension and/or revocation of the permit and additional enforcement actions. The Corps may issue early compliance signoff if the required performance standards have been met. If the mitigation fails, the permittee will be required to determine the cause of the failure and to correct the error at the mitigation site, or to conduct additional mitigation activities.

The TOLLWAY shall also be responsible for successful completion and submittal of the required Special Condition project documentation to the Illinois Environmental Protection Agency, as listed in Item Number 8 of the IEPA October 16, 2013, Water Quality Certification.

## REFERENCES

Hillsborough County Public Works Department. 2006. Stormwater Facility Maintenance Manual. Available at:

<http://www.hillsborough.wateratlas.usf.edu/ccdpm/CanalStudy/Preventative%20Measures/Appendix%20A/SW%20Maintenance%20Manual.PDF>

Illinois Environmental Protection Agency. 2013. General NPDES Permit No. ILR10. Available at:

<http://www.epa.state.il.us/water/permits/storm-water/general-construction-permit.pdf>

Kane County Technical Reference Manual. Available at:

<http://www.countyofkane.org/FDER/Documents/waterOrdinances/technicalManual.pdf>

Metcalf and Eddy. 1989. Separate Sanitary Sewer Collection System Operation and Maintenance Manual for Local Agencies Tributary to the Metropolitan Sanitary District of Greater Chicago. Available at:

<https://www.mwrdd.org/iri/portal/anonymous/Infiltration>

Montgomery County Department of Environmental Protection. 1999. *Maintaining Urban Stormwater Facilities: A Guidebook for Common Ownership Communities*. Available at:

[http://www6.montgomerycountymd.gov/ocptmpl.asp?url=/content/ocp/ccoc/ccoc\\_index.as](http://www6.montgomerycountymd.gov/ocptmpl.asp?url=/content/ocp/ccoc/ccoc_index.as)

New England Interstate Water Pollution Control Commission (NEIWPCC). 2003. Operation, Maintenance and Rehabilitation Techniques, Chapter 7, Optimizing Operation, Maintenance, and Rehabilitation of Sanitary Sewer Collection Systems. Available at:

[http://www.neiwpcc.org/neiwpcc\\_docs/WEBOM&R.CH7.pdf](http://www.neiwpcc.org/neiwpcc_docs/WEBOM&R.CH7.pdf)

Santa Clara Valley Urban Runoff Pollution Prevention Program. 2005. *Example BMP Inspection and Maintenance Checklist*. Available at: [www.scvurppp-w2k.com/bmp\\_om\\_forms.htm](http://www.scvurppp-w2k.com/bmp_om_forms.htm)

US Environmental Protection Agency. 2000. "Collection Systems Technology Fact Sheet: Sewers, Lift Stations." Available at:

[http://water.epa.gov/scitech/wastetech/upload/2002\\_06\\_28\\_mtb\\_sewers-lift\\_station.pdf](http://water.epa.gov/scitech/wastetech/upload/2002_06_28_mtb_sewers-lift_station.pdf)

US Environmental Protection Agency. 2005. Guide for Evaluating Capacity, Management, Operation, and Maintenance Programs for Sanitary Sewer Collection Systems. Available at:

[http://www.epa.gov/npdes/pubs/cmom\\_guide\\_for\\_collection\\_systems.pdf](http://www.epa.gov/npdes/pubs/cmom_guide_for_collection_systems.pdf)

Water Environment Federation. 1998. *Urban Runoff Quality Management*. WEF Manual of Practice No. 23, ASCE Manual and Report on Engineering Practice No. 87.

## **APPENDIX 28**

Compliance Documentation  
Pollution Prevention/Good Housekeeping



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Village of Westchester: Home > Government > Departments > Public Works > Street Maintenance > [Snow Plowing](#)



Snow Plowing

Street Sweeping

Sidewalk Replacement Program

## Snow Plowing

Please visit <http://www.dot.state.il.us/winter.html> for tips on winter driving.

### Snow Route Ordinance

After a two-inch snowfall and except as otherwise posted, it is unlawful to park any vehicle or to permit any vehicle to remain parked between the hours of 8:30 am and 4:30 pm. on odd-numbered sides of the street (south and east sides of streets) on Tuesdays and Thursdays or on even-numbered sides of the street (north and west sides of the streets) on Mondays, Wednesdays, and Fridays. Odd sides of the street are defined as the south side of east and west streets, and the east side of the north and south streets. Even sides of the street are defined as the north side of east and west streets and the west side of north and south streets.

### Established - Parking Prohibited When

[Snow emergency routes](#) for the Village of Westchester are hereby established, prohibiting parking at any time after accumulation of two or more inches of snow and until said snow has been removed, at the locations set forth in Section 11.30.020. (Ord. 78-912 § 1, 1978)

### 11.30.020 - Designated

The following streets or portions of streets within the Village of Westchester are designated as snow emergency routes:

- Gladstone Street from Gardner Road to Westchester Boulevard
- Westchester Boulevard from Eisenhower Expressway to Cermak Road
- Drury Lane-Pelham Street from Gardner Road to Westchester Boulevard
- Canterbury Street from Gardner Road to Wolf Road
- Balmoral Avenue from Roosevelt Road to Mannheim Road
- Dorchester Avenue from Mannheim Road to Mayfair Avenue
- Sunnyside Avenue from Canterbury Street to Thirty-first Street
- Boeger Avenue from Roosevelt Road to Wakefield Street
- Windsor Drive from Belleview Avenue to Wolf Road
- Wakefield Street from Boeger Avenue to Wolf Road
- Wakefield Street from Sunnyside Avenue to Mayfair Avenue
- Mandel Avenue from Roosevelt Road to Canterbury Street
- Mayfair Avenue from Canterbury Street to Thirty-first Street
- Essex Street from the intersection of Windsor Drive and Downing Avenue to Sunnyside Avenue

A map of these locations is shown here:

[Map of Snow Emergency Routes.](#)

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Westchester Village Hall: 10300 West Roosevelt Road Westchester, IL 60154 • Phone: (708) 345-0020



# Village of Westchester

10300 Roosevelt RD. Westchester, IL 60154

Village Hall: (708) 345-0020

Police Dept.: (708) 345-0060

Fire Dept.: (708) 345-0433

## Snow Parking



### Streets

-  No Parking
-  Village Border

\* No parking between the hours of 8:30 a.m. and 4:30 p.m. on odd-numbered sides of the street on Tuesday and Thursdays, and on even-numbered sides of the street on Mondays, Wednesdays, and Fridays.

\* Snow emergency routes prohibit parking at any time after accumulation of two or more inches of snow until said snow has been removed



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Village of Westchester: Home > Government > Departments > Public Works > Street Maintenance > [Street Sweeping](#)



## Street Sweeping

[Snow Plowing](#)

### Schedule

[Street Sweeping](#)

Street sweeping will be the 2nd and 4th full week of the month. It is a 4 day sweeping schedule, Monday thru Thursday, with Friday as a makeup/rain day. The schedule is designed so that there is no garbage pickup on days that the streets are swept.

[Sidewalk Replacement Program](#)

#### Schedule:

Monday: From Mannheim Road west to Wolf Road and from Canterbury south to Cermak Road. Also, Waterford, Waverly, Camelot and Concord. Also, Roosevelt Road south to Cermak Road from Haase west to Heidom.

Tuesday: From Roosevelt Road north to the expressway and from Gardner Road west to Mannheim Road. Also, Roosevelt Road south from Balmoral west to Mannheim Road. Also, Martindale Drive to Wakefield, Boeger to Plymouth. Also, Enterprise Drive and Constitution.

Wednesday: Roosevelt Road south to Cermak Road from Gardner Road west to Westchester Blvd, including Crestwood Lane.

Thursday: Cermak Road south to 31st from Belleview to Sherwood and from Sunnyside to Becket. Also, Windsor Drive and Westminster Drive.

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NPDES Permit No. ILG870410

Illinois Environmental Protection Agency  
Division of Water Pollution Control  
1021 North Grand Avenue East  
P.O. Box 19276  
Springfield, Illinois 62794-9276  
[www.epa.state.il.us](http://www.epa.state.il.us)

**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM**

**General NPDES Permit  
For  
Pesticide Application Point Source Discharges**



**Expiration Date:** October 30, 2016

**Issue Date:** October 31, 2011

**Effective Date:** October 31, 2011

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

This permit is available to operators who discharge to waters of the State from the application of biological pesticides or chemical pesticides that leave a residue, when the pesticide application is for one of the following pesticide use patterns:

1. Mosquito and Other Insect Pest Control
2. Weed and Algae Pest Control
3. Animal Pest Control
4. Forested Areas Pest Control
5. Other Pest Control Activities

Discharges may be authorized to any surface water of the State excluding waters identified as impaired by that pesticide or its degradates. This permit does not authorize discharges, to any waters of the State which are designated as a outstanding resource water by the Agency in accordance with 35 Ill. Adm. Code 302.105(b).

To receive authorization to discharge under this general permit, an operator must submit the proper application form to the Illinois Environmental Protection Agency. Authorization, if granted, will be by letter and include a copy of this permit.

A handwritten signature in black ink that reads "Alan Keller".

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

NPDES Permit ILG87

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## 1.0 Coverage under this Permit

This permit covers any operator that meets the eligibility requirements identified in Part 1.1 and if so required, submits a Notice of Intent (NOI) in accordance with Part 1.2.

For the purpose of this permit, all operators are defined in Appendix A to be:

- a. The person(s) with control over the hiring of a contract applicator, or making the decision to perform pesticide applications, including the ability to modify those decisions, that results in a discharge to waters of the State, and/or
- b. The person(s) who performs the application of pesticides or who has day-to-day control of the pesticide application, that results in a discharge to waters of the State.

If the operator under part "a" of the definition is different than the operator actually performing the application of pesticides, only one of the two is required to obtain coverage under this permit.

This permit is not applicable for general use or restricted use pesticides that under Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), are not registered for application to or use in waters of the State.

Pursuant to section 12(f) of the Illinois Environmental Protection Act, no permit shall be required for any discharge for which a permit is not required under the Federal Water Pollution Control Act.

## 1.1 Eligibility

### 1.1.1 Activities Covered

This permit is available to operators who discharge to waters of the State from the application of (1) biological pesticides or (2) chemical pesticides that leave a residue (collectively called pesticides), when the pesticide application is for one of the following pesticide use patterns:

1. **Mosquito and Other Insect Pest Control** – to control public health/nuisance and other insect pests that develop or are present during a portion of their life cycle in or above standing or flowing water. Public health/nuisance and other insect pests in this use category include but are not limited to mosquitoes and black flies.
2. **Weed and Algae Pest Control** – to control weeds, algae, and pathogens that are pests in water and at water's edge, include but are not limited to ditches and/or canals.
3. **Animal Pest Control** – to control animal pests in water and at water's edge. Animal pests in this use category include, but are not limited to fish, lampreys, insects, mollusks, and pathogens.
4. **Forested Areas Pest Control** – application of a pesticide to a forested area to control the population of a pest species, (e.g., insect or pathogen) where, to target the pests effectively, a portion of the pesticide unavoidably will be applied over and deposited to water.
5. **Other Pest Control Activities** – any application of pesticides not identified above, which leave a residue, to waters of the State or at the water's edge.

A portion of every application of a pesticide over a water of the State will fall directly into the water of the State thereby requiring coverage under an NPDES permit. Any person who wishes to contest this determination must submit scientific data to prove that no quantity of the pesticide falls into a water of the State. A permit may not be necessary if IEPA receives scientific information which convinces the Agency that no portion of a chemical pesticide applied over a water of the State will fall into the water of the State.

A portion of every application of a pesticide into a water of the State will leave a residue in the water of the State thereby requiring coverage under an NPDES permit. Any person who wishes to dispute this determination must submit scientific data to prove that no quantity of the pesticide will remain as a residue in a water of the State. This information should include data to show what level of the pesticide can be detected in water, and at what level in

water the pesticide provides a pesticidal benefit. Such data should address the properties of the chemical pesticide under different water conditions (e.g., different pH, organic content, temperature, depth, etc.) that might affect the pesticide's properties. A permit may not be necessary if IEPA receives scientific information that convinces the Agency that a chemical pesticide applied into a water of the State will not remain as a residue in the water of the State.

### **1.1.2 Limitations on Coverage**

#### **1.1.2.1 Discharges to Water Quality Impaired Waters**

Operators are not eligible for coverage under this permit for any discharges from a pesticide application to waters of the State if the water is identified as impaired by a substance which either is an active ingredient in that pesticide or is a degradate of such an active ingredient. For purposes of this permit, impaired waters are those that have been identified by the State pursuant to Section 303(d) of the Clean Water Act (CWA) as not meeting applicable State water quality standards or not meeting the intended use of the water body. Impaired waters for the purposes of this permit may include both waters with USEPA-approved or USEPA-established Total Maximum Daily Loads (TMDLs) and waters for which USEPA has not yet approved or established a TMDL. A list of the 303(d) waters is available on the Internet at [www.epa.state.il.us/water/permits/pesticide/303d.html](http://www.epa.state.il.us/water/permits/pesticide/303d.html). If a discharge from a pesticide application would not be eligible under this permit because the water is listed as impaired for that specific pesticide, but there is evidence that shows the water is no longer impaired, operators may submit this information to IEPA and request that coverage be allowed under this permit.

#### **1.1.2.2 Discharges to Waters Designated as Outstanding Resource Waters for Antidegradation Purposes**

Operators are not eligible for coverage under this permit for discharges from a pesticide application to waters designated by the State as Outstanding Resource Waters for anti-degradation purposes under 35 Ill. Adm. Code 302.105(b).

### **1.2.3 Discharges Currently or Previously Covered by another Permit**

Pesticide discharges are not eligible for coverage under this permit if any of the following circumstances apply:

- a. The discharge is covered by another NPDES permit, or
- b. The discharge was included in a permit that in the past 5 years has been or is in the process of being denied, terminated, or revoked by IEPA (this does not apply to the routine reissuance of permits every 5 years).

## **1.2 Authorization to Discharge under This Permit**

### **1.2.1 How to Obtain Authorization**

To obtain authorization under this permit, an operator must:

- a. Meet the eligibility requirements identified in Part 1.1, and
- b. Submit a complete and accurate Notice of Intent (NOI) consistent with the requirements of Parts 1.2.2 and 1.2.3.

### **1.2.2 Operators Required to Submit a Notice of Intent**

The following operators are required to submit a Notice of Intent to obtain coverage under this general permit for discharges to waters of the State resulting from the application of pesticides:

- a. Person(s), group, or entity with control over the hiring of a contract applicator, or making the decision to perform pesticide application, that will result in a discharge to waters of the State; or
- b. Person(s), group, or entity performing the application of pesticides, that will result in a discharge to waters of the State.

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Operators must submit an NOI to IEPA electronically. Operators should refer to [www.epa.state.il.us/water/permits/pesticide/index.html](http://www.epa.state.il.us/water/permits/pesticide/index.html) for instruction on submitting the NOI. IEPA will post on the Internet, at [www.epa.state.il.us/water/permits/pesticide/notices.html](http://www.epa.state.il.us/water/permits/pesticide/notices.html), all NOIs received. Late NOIs will be accepted, but authorization to discharge will not be retroactive. NOI submissions must be in accordance with the deadlines in Part 1.2.3.

Coverage will be available for the duration of the permit for operators who file an NOI, including the operator's employees, contractors, subcontractors, and other agents, for all activities identified on the NOI unless coverage is terminated pursuant to Parts 1.2.5 or 1.3. If a submitted NOI is not timely, accurate, or complete, then any employee, contractor, subcontractor or other entity that discharges without the required NOI is not covered by this permit.

The NOI form is available on the Internet at [www.epa.state.il.us/water/permits/pesticide/forms.html](http://www.epa.state.il.us/water/permits/pesticide/forms.html).

### 1.2.3 Discharge Authorization Date

Unless modified, exempted, or stayed by legislative action or court order, discharges to waters of the State as a result of pesticide applications must be authorized under an NPDES permit. Operators that are eligible for coverage under Part 1.1 are authorized to discharge under this permit consistent with the NOI submission and the Table 1 below.

Table 1. Original NOI Submittal Deadlines and Discharge Authorization Date		
Category	NOI Submittal Deadline	Discharge Authorization Date
Operators are required to submit an NOI prior to commencement of discharge.	At least 14 days prior to commencement of discharge.	No earlier than 14 days after IEPA posts on the Internet the receipt of the complete and accurate NOI.
Operators commencing discharge in response to a <u>declared pest emergency situation</u> as defined in Appendix A.	No later than 30 days after commencement of discharge. <sup>1</sup>	Immediately, for activities conducted in response to declared pest emergency situation.

To remain authorized, all operators must submit NOI changes, as necessary, consistent with Table 2 below.

Table 2. NOI Change of Information Submittal Deadlines and Discharge Authorization Date		
Category	NOI Submittal Deadline	Discharge Authorization Date
Operators requiring permit coverage for a new use pattern or for a treatment area not within the pest management area, previously identified on a NOI submitted to IEPA.	At least 14 days prior to commencement of discharge in that newly identified treatment area.	No earlier than 14 days after IEPA posts on the Internet the receipt of the complete and accurate NOI.
Operators requiring permit coverage for a new use pattern or for a treatment area in response to a <u>declared pest emergency situation</u> not within the pest management area, previously identified on a NOI submitted to IEPA.	No later than 30 days after commencement of discharge. <sup>1</sup>	Immediately, for activities conducted in response to declared pest emergency situation.

<sup>1</sup> In the event that a discharge occurs prior to submitting an NOI, the operator must comply with all other requirements of this permit immediately.

Based on a review of the NOI or other information, IEPA may determine that additional technology-based and/or water quality-based effluent limitations are necessary, or deny coverage under this permit and require submission of an application for an individual NPDES permit, as detailed in Part 1.3.

Unless notified by the Agency to submit additional information, operators who submit an NOI in accordance with the requirements of this permit are authorized to discharge under the terms and conditions of this permit 30 days after the date the NOI is received by the Agency.

## 2.4 Continuation of this Permit

If this permit is not reissued or replaced prior to the expiration date, it will be administratively continued in accordance with 40 CFR 122.6 and 35 Ill. Adm. Code, Subtitle C, Chapter I and remain in force and effect. If a permittee was authorized to discharge under this permit prior to the expiration date, any discharges authorized under this permit will automatically remain covered by this permit until the earliest of the following:

- a. A permittee is authorized for coverage under a reissued permit or a replacement of this permit, following the timely and appropriate submittal of a complete NOI requesting authorization to discharge under the new permit and in compliance with the requirements of the NOI;
- b. The permittee submits a Notice of Termination (NOT) and that notice is processed consistent with Part 1.2.5.1;
- c. An individual NPDES permit for a discharge resulting from application of a pesticide that would otherwise be covered under this permit is issued or denied;
- d. IEPA issues a formal permit decision not to reissue this general permit, at which time IEPA will identify a reasonable time period for covered dischargers to seek coverage under an alternative general permit or an individual permit. Coverage under this permit will cease when coverage under another permit is granted/authorized; or
- e. IEPA has informed the permittee that the discharge is no longer covered under this permit.

## 1.2.5 Terminating Coverage

### 1.2.5.1 Submitting a Notice of Termination

To terminate permit coverage, a permittee must submit a complete and accurate Notice of Termination. Permittees must submit the Notice of Termination electronically. Permittees should refer to [www.epa.state.il.us/water/permits/pesticide/index.html](http://www.epa.state.il.us/water/permits/pesticide/index.html) for instruction on submitting the NOT. The authorization to discharge under this permit is terminated the day that a complete Notice of Termination is processed. If a permittee submits a Notice of Termination without meeting one or more of the conditions identified in Part 1.2.5.2, the Notice of Termination is not valid. Permittees are responsible for complying with the terms of this permit until authorization is terminated. If required to submit annual reports pursuant to Part 7, the permittee must file an annual report for the portion of the year up through the date of termination. The annual report shall be submitted with the completed Notice of Termination.

Permittees may not terminate coverage under this permit and reapply in order to remain below the annual treatment area thresholds.

The NOT form is available on the Internet at [www.epa.state.il.us/water/permits/pesticide/forms.html](http://www.epa.state.il.us/water/permits/pesticide/forms.html).

### 1.2.5.2 When to Submit a Notice of Termination

A permittee must submit a Notice of Termination within 30 days after one or more of the following conditions have been met:

- a. The permittee has ceased all discharges from the application of pesticides for which permit coverage was obtained and the permittee does not expect to discharge during the remainder of the permit term for any of the use patterns as identified in Part 1.1.1; or
- b. The permittee has obtained coverage under an individual NPDES permit or an alternative NPDES general permit for all discharges required to be covered by an NPDES permit, unless the permittee obtained coverage consistent with Part 1.3, in which case coverage under this permit will terminate automatically.

## 1.2.6 Transfer of Permit Coverage

If a new operator takes over responsibility of pest control activities covered under an existing NOI, the new operator must submit the following:

- a. A new NOI for the new operator; and
- b. A letter from the existing permittee referencing the existing NPDES permit number, date of coverage, and requesting transfer of the permit.

### **1.3 Alternative Permits**

#### **1.3.1 Requiring Coverage under an Alternative Permit**

In accordance with 40 CFR 122.64, 40 CFR 124.5, and 35 Ill. Adm. Code, Subtitle C, Chapter I, IEPA may require operators to apply for and/or obtain authorization to discharge under either an individual NPDES permit or an alternative NPDES general permit.

If IEPA requires an operator to apply for an individual NPDES permit, IEPA will notify the operator in writing that a permit application is required. This notification will include a brief statement of the reasons for the decision and will provide application information. In addition, for permittees whose discharges are authorized under this permit, any notice will set a deadline to file the permit application and will include a statement that on the effective date of the individual NPDES permit, coverage under this general permit will terminate. IEPA may grant additional time to submit the application if the operator submits a request setting forth reasonable grounds for additional time. If covered under this permit and the permittee fails to submit an individual NPDES permit application as required by IEPA, the applicability of this permit to such permittee is terminated at the end of the day specified by IEPA as the deadline for application submittal. IEPA may take enforcement action for any unpermitted discharge or violation of any permit requirement.

#### **1.3.2 Operator Requesting Coverage under an Alternative Permit**

If an operator does not want to be covered by this general permit, but needs permit coverage, the operator can apply for an individual NPDES permit. In such a case, the operator must submit an individual permit application in accordance with the requirements of 40 CFR 122.26(c)(1)(ii), with reasons supporting the request, to IEPA. The request may be granted by issuance of an individual NPDES permit or authorization of coverage under an alternative NPDES general permit.

When an individual NPDES permit is issued, or the operator is authorized under an alternative NPDES general permit to discharge a pollutant to waters of the State as a result of a pesticide application, authorization to discharge under this permit is terminated on the effective date of the individual NPDES permit or the date of authorization of coverage under the alternative NPDES general permit.

### **1.4 Severability**

Invalidation of a portion of this permit does not render the whole permit invalid. IEPA's intent is that the permit will remain in effect to the extent possible; if any part of this permit is invalidated, the remaining parts of the permit will remain in effect unless IEPA issues a written statement stating otherwise.

### **1.5 Other Federal and State Laws**

Permittees must comply with all other applicable federal and state laws and regulations that pertain to application of pesticides. For example, this permit does not relieve the permittee of the responsibility of complying with the requirements or provisions of the Federal Insecticide, Fungicide, and Rodenticide Act and its implementing regulations to use registered pesticides consistent with the product's labeling. In fact, applications in violation of certain FIFRA requirements could also be a violation of this permit and therefore a violation of the CWA (e.g. exceeding label application rates). Additionally, other laws and regulations might apply to certain activities that are also covered under this permit (e.g., United States Coast Guard regulations).

### **1.6 Endangered Species Compliance**

The location of the treatment areas must be submitted to the Illinois Department of Natural Resources (IDNR) EcoCAT website to determine if protected natural resources are in the vicinity, [www.dnrecocat.state.il.us/ecopublic](http://www.dnrecocat.state.il.us/ecopublic). Consultation with the Department is required under the Illinois Endangered Species Protection Act, 520 ILCS

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10/11(b) and the Illinois Natural Areas Preservation Act, 525 ILCS 30/17, for all permittees covered by this permit unless exempted below.

The following applications are exempt from consultation unless there will be an adverse impact to a listed species or its essential habitat or to a Natural Area:

1. Per consultation regulations (17 Ill. Adm. Code, Part 1075) – annual, routine cultivation of existing agricultural lands; and maintenance of existing lawns, yards and ornamental plantings.
2. Per a Memorandum of Understanding between IEPA and IDNR – microbial larvicide applied to catch basins and storm sewers.

**1.7 Reopener Clause**

If there is evidence indicating potential or realized adverse impacts on water quality due to any pesticide discharge covered by this permit, the permittee may be required to obtain an individual permit or an alternative general permit in accordance with Section 1.3.1 of this permit or the permit may be modified to include different limitations and/or requirements.

Permit modification or revocation will be conducted according to provisions of 35 Ill. Adm. Code, Subtitle C, Chapter I and the provisions of 40 CFR 122.62, 122.63, 122.64, and 124.5 and any other applicable public participations procedures.

The Agency will reopen and modify this permit under the following circumstances:

- a. The USEPA amends its regulations concerning public participation;
- b. A court of competent jurisdiction binding in the State of Illinois or the 7<sup>th</sup> Circuit issues an order necessitating a modification of public participation for general permits; or
- c. To incorporate federally required modifications to the substantive requirements of this permit.

**2.0 Technology-Based Effluent Limitations**

This part includes technology-based effluent limitations applicable to all permittees for any discharge authorized under this permit, with compliance required upon beginning such discharge. If the permittee is not the applicator, the technology-based effluent limitations are also applicable to the contract applicator.

If a permittee's discharge of pollutants results from the application of pesticides that is being used solely for the purpose of "pesticide research and development," as defined in Appendix A, the permittee must use such pesticide consistent with any applicable research plan and experimental use permit.

As stated in Part 1.5, this permit required all permittees to comply with other applicable federal or state laws and regulations that pertain to application of pesticides by the permittee.

**2.1 Level 1: Technology- Based Effluent Limitations**

All permittees must meet Level 1 of the technology-based effluent limitations in Part 2.1 to minimize the discharge of pesticides to waters of the State from the application of pesticides, through the use of Pest Management Measures, as defined in Appendix A. If the permittee is not the applicator, the Level 1 technology-based effluent limitations are also applicable to the contract applicator.

- 2.1.1 Use only the amount of pesticide and frequency of pesticide application necessary to control the target pest, using equipment and application procedures appropriate for this task.
- 2.1.2 Maintain pesticide application equipment in proper operating condition, including the requirement to calibrate, clean, and repair such equipment and prevent leaks, spills, or other unintended discharges.

- 1.3 Assess weather conditions (e.g. temperature, precipitation and wind speed) in the treatment area to ensure application is consistent with all applicable federal and state requirements.

## 2.2 Level 2: Technology-Based Effluent Limitations

Level 2 of the technology-based effluent limitations applies to permittees which exceed one or more of the annual (i.e. calendar year) treatment area threshold(s) listed in Table 3 below, as defined in Appendix A. If the permittee is not the applicator, the Level 2 technology-based effluent limitations are also applicable to the contract applicator.

<b>Section</b>	<b>Pesticide Use</b>	<b>Annual Threshold</b>
2.2.1	Mosquitoes and Other Insect Pest Control	
	- Adult Mosquitoes and Other Insect Pests	6,400 acres of treatment area
	- Mosquito and Other Insect Aquatic Larviciding	80 acres of treatment area (i.e. surface area)
2.2.2	Weed and Algae Pest Control	
	- In Water	80 acres of treatment area (i.e. surface area)
	- At Water's Edge	20 linear miles of treatment area
2.2.3	Animal Pest Control	
	- In Water	80 acres of treatment area (i.e. surface area)
	- At Water's Edge	20 linear miles of treatment area
2.2.4	Forested Area Pest Control	6,400 acres of treatment area
2.2.5	Other Pest Control Activities	
	- Ground or Aerial	6,400 acres of treatment area
	- In Water	80 acres of treatment area (i.e. surface area)
	- At Water's Edge	20 linear miles of treatment area

For calculating the annual treatment area, count each treatment area only once, regardless of the number of pesticide application activities when applying with the same pesticide product. For example, applying pesticides 3 times a year to the same 3,000 acre site using the same pesticide product, the annual treatment area should be counted as 3,000 acres. If a different pesticide product is applied to the same treatment area, these activities would be counted as separate treatment areas for each different pesticide product. For example, applying pesticides 3 times a year to the same 3,000 acre site using a different pesticide product each time the annual treatment area should be counted as 9,000 acres.

For linear features (e.g., a canal or ditch) use the length of the linear feature whether treating in or adjacent to the feature. For example, when treating the bank on one side of a 10 mile long ditch, banks on both sides of the ditch, and/or water in the ditch, the total treatment area is 10 miles.

### 2.2.1 Mosquito and Other Insect Pest Control

This part applies to discharges from the application of pesticides for mosquito and other insect pest control as defined in Part 1.1.1.

#### a. Identify the Problem

Prior to the first pesticide application covered under this permit that will result in a discharge to waters of the State, and at least once each calendar year thereafter prior to the first pesticide application for that calendar year, the permittee must do the following for each pest management area, as defined in Appendix A:

1. Establish densities for larval and adult mosquitoes or other insect pest populations or identify environmental condition(s), either current or based on historical data, to serve as action threshold(s) for implementing Pest Management Measures;
2. Identify target pest(s) to develop Pest Management Measures based on developmental and behavioral considerations for each pest;
3. Identify known breeding sites for source reduction, larval control program, and habitat management;

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4. Analyze existing surveillance data to identify new or unidentified sources of mosquito or other insect pest problems as well as sites that have recurring pest problems; and
5. In the event there is no data for the pest management area in the past calendar year, use other available data as appropriate to meet the permit conditions of Part 2.2.1.a.

**b. Pest Management Options**

Prior to the first pesticide application covered under this permit that will result in a discharge to waters of the State, and at least once each calendar year thereafter prior to the first pesticide application for that calendar year, the permittee must select and implement efficient and effective means of Pest Management Measures that minimize discharges resulting from application of pesticides to control mosquitoes or other insect pests. In developing the Pest Management Measures for each pest management area, the permittee must evaluate the following management options, including a combination of these management options, considering impacts to water quality, impacts to non-target organisms, feasibility, and cost effectiveness:

1. No action
2. Prevention
3. Mechanical or physical methods
4. Cultural methods
5. Biological control agents
6. Pesticides

**c. Pesticide Use**

If a pesticide is selected to manage mosquitoes or other insect pests and application of the pesticide will result in a discharge to waters of the State, the permittee must:

1. Conduct larval and/or adult surveillance in an area that is representative of the pest problem or evaluate existing larval surveillance data, environmental conditions, or data from adjacent areas prior to each pesticide application to assess the pest management area and to determine when action threshold(s) is met;
2. Reduce the impact on the environment and on non-target organisms by applying the pesticide only when the action threshold(s) has been met;
3. In situations or locations where practicable and feasible for effective control, use larvicides as a preferred pesticide for mosquito or other insect pest control when the larval action threshold(s) has been met; and
4. In situations or locations where larvicide use is not practicable or feasible for efficacious control, use adulticides for mosquito or other insect pest control when the adult action threshold(s) has been met.

**2.2.2 Weed and Algae Pest Control**

This part applies to discharges from the application of pesticides for weed, algae, and pathogens as defined in Part 1.1.1.

**a. Identify the Problem**

Prior to the first pesticide application covered under this permit that will result in a discharge to waters of the State, and at least once each calendar year thereafter prior to the first pesticide application for that calendar year, the permittee must do the following for each pest management area, as defined in Appendix A:

1. Identify areas with pest problems and characterize the extent of the problems, including, for example, water use goals not attained (e.g. wildlife habitat, fisheries, vegetation, and recreation);
2. Identify target pest(s);
3. Identify possible factors causing or contributing to pest problem (e.g., nutrients, invasive species, etc);

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4. Establish any pest-specific and site-specific action threshold(s), as defined in Appendix A , for implementing Part 2.2.2.b; and
5. In the event there is no data for the pest management area in the past calendar year, use other available data as appropriate to meet the permit conditions of Part 2.2.2.a.

**b. Pest Management Options**

Prior to the first pesticide application covered under this permit that will result in a discharge to waters of the State, and at least once each calendar year thereafter prior to the first pesticide application for that calendar year, the permittee must select and implement efficient and effective means of Pest Management Measures that minimize discharges resulting from application of pesticides to control pests. In developing the Pest Management Measures for each pest management area, the permittee must evaluate the following management options, including a combination of these management options, considering impacts to water quality, impacts to non-target organisms, feasibility, and cost effectiveness:

1. No action
2. Prevention
3. Mechanical or physical methods
4. Cultural methods
5. Biological control agents
6. Pesticides

**c. Pesticide Use**

If a pesticide is selected to manage pests and application of the pesticide will result in a discharge to waters of the State, the permittee must:

1. Conduct surveillance in an area that is representative of the pest problem prior to each pesticide application to assess the pest management area and to determine when the action threshold(s) is met; and
2. Reduce the impact on the environment and non-target organisms by applying the pesticide only when the action threshold(s) has been met.

**2.2.3 Animal Pest Control**

This part applies to discharges from the application of pesticides for control of animal pests as defined in Part 1.1.1.

**a. Identify the Problem**

Prior to the first pesticide application covered under this permit that will result in a discharge to waters of the State, and at least once each calendar year thereafter prior to the first pesticide application for that calendar year, the permittee must do the following for each pest management area, as defined in Appendix A:

1. Identify areas with pest problems and characterize the extent of the problems, including, for example, water use goals not attained (e.g. wildlife habitat, fisheries, vegetation, and recreation);
2. Identify target pest(s);
3. Identify possible factors causing or contributing to the problem (e.g., nutrients, invasive species);
4. Establish any pest-specific and site-specific action threshold(s), as defined in Appendix A, for implementing Part 2.2.3.b; and
5. In the event there is no data for the pest management area in the past calendar year, use other available data as appropriate to meet the permit conditions of Part 2.2.3.a.

**b. Pest Management Options**

Prior to the first pesticide application covered under this permit that will result in a discharge to waters of the State, and at least once each year thereafter prior to the first pesticide application during that calendar year, the permittee must select and implement efficient and effective means of Pest Management Measures that minimize discharges resulting from application of pesticides to control pests. In developing the Pest Management Measures for each pest management area, the permittee must evaluate the following management options, including a combination of these management options, considering impacts to water quality, impacts to non-target organisms, feasibility, and cost effectiveness:

1. No action
2. Prevention
3. Mechanical or physical methods
4. Biological control agents
5. Pesticides

**c. Pesticide Use**

If a pesticide is selected to manage pests and application of the pesticide will result in a discharge to waters of the State, the permittee must:

1. Conduct surveillance in an area that is representative of pest problem prior to each application to assess the pest management area and to determine when the action threshold(s) is met; and
2. Reduce the impact on the environment and non-target organisms by evaluating site restrictions, application timing, and application method in addition to applying the pesticide only when the action threshold(s) has been met.

**2.4 Forested Area Pest Control**

This part applies to discharges from the application of pesticides for forested area pest control as defined in Part 1.1.1.

**a. Identify the Problem**

Prior to the first pesticide application covered under this permit that will result in a discharge to waters of the State, and at least once each calendar year thereafter prior to the first pesticide application in that calendar year, the permittee must do the following for each pest management area, as defined in Appendix A:

1. Establish any pest-specific and site-specific action threshold(s), as defined in Appendix A, for implementing Part 2.2.4.b;
2. Identify target pest(s) to develop a Pest Management Measures based on developmental and behavioral considerations for each pest;
3. Identify current distribution of the target pest and assess potential distribution in the absence of Pest Management Measures; and
4. In the event there is no data for the pest management area in the past calendar year, use other available data as appropriate to meet the permit conditions of Part 2.2.4.a.

**b. Pest Management Options**

Prior to the first pesticide application covered under this permit that will result in a discharge to waters of the State, and at least once each calendar year thereafter prior to the first pesticide application for that calendar year, the permittee must select and implement efficient and effective means of Pest Management Measures that minimize discharges resulting from application of pesticides to control pests. In developing the Pest Management Measures for each pest management area, the permittee must evaluate the following management options, including a

combination of these management options, considering impacts to water quality, impacts to non-target organisms, feasibility, and cost effectiveness:

1. No action
2. Prevention
3. Mechanical/physical methods
4. Cultural methods
5. Biological control agents
6. Pesticides

**c. Pesticide Use**

If a pesticide is selected to manage forestry pests and application of the pesticide will result in a discharge to waters of the State, the permittee must:

1. Conduct surveillance in an area that is representative of the pest problem prior to each application to assess the pest management area and to determine when the pest action threshold(s) is met;
2. Reduce the impact on the environment and non-target organisms by evaluating the restrictions, application timing, and application methods in addition to applying the pesticide only when the action threshold(s) have been met; and
3. Evaluate using pesticides against the most susceptible developmental stage.

**2.2.5 Other Pest Control Activities**

This part applies to discharges from the application of pesticides not identified in Parts 2.2.1, 2.2.2, 2.2.3, or 2.2.4.

**a. Identify the Problem**

Prior to the first pesticide application covered under this permit that will result in a discharge to waters of the State, and at least once each calendar year thereafter prior to the first pesticide application in that calendar year, the permittee must do the following for each pest management area, as defined in Appendix A:

1. Establish any pest-specific and site-specific action threshold(s), as defined in Appendix A, for implementing Part 2.2.5.b;
2. Identify target pest(s) to develop Pest Management Measures based on developmental and behavioral considerations for each pest;
3. Identify current distribution of the target pest and assess potential distribution in the absence of Pest Management Measures; and
4. In the event there is no data for the pest management area in the past calendar year, use other available data as appropriate to meet the permit conditions of Part 2.2.5.a.

**b. Pest Management Options**

Prior to the first pesticide application covered under this permit that will result in a discharge to waters of the State, and at least once each calendar year thereafter prior to the first pesticide application for that calendar year, the permittee must select and implement efficient and effective means of Pest Management Measures that minimize discharges resulting from application of pesticides to control pests. In developing the Pest Management Measures for each pest management area, the permittee must evaluate the following management options, including a combination of these management options, considering impacts to water quality, impacts to non-target organisms, feasibility, and cost effectiveness:

1. No action
2. Prevention
3. Mechanical/physical methods

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4. Cultural methods
5. Biological control agents
6. Pesticides

**c. Pesticide Use**

If a pesticide is selected to manage other activities not covered under the other four use patterns and application of the pesticide will result in a discharge to waters of the State, the permittee must:

1. Conduct surveillance in an area that is representative of the pest problem prior to each application to assess the pest management area and to determine when the pest action threshold(s) is met;
2. Reduce the impact on the environment and non-target organisms by evaluating the restrictions, application timing, and application methods in addition to applying the pesticide only when the action threshold(s) have been met; and
3. Evaluate using pesticides against the most susceptible developmental stage.

**3.0 Water Quality-Based Effluent Limitations**

All permittees must control discharges as necessary to meet applicable numeric and narrative State water quality standards, for any discharge authorized under this permit, with compliance required upon the beginning of such discharge. Discharges covered by this permit, alone or in combination with other sources, shall not cause a violation of any applicable water quality standards outlined in 35 Ill. Adm. Code 302, in light of the provisions of 35 Ill. Adm. Code 302.210(g).

If at any time a permittee becomes aware (e.g., through self-monitoring or by notification from the State), or IEPA determines, that the discharge causes or contributes to an excursion of applicable water quality standards, the permittee must take corrective action as required in Part 6, up to and including the ceasing of the discharge, if necessary.

**4.0 Monitoring**

**4.1 Visual Monitoring Requirements**

During any pesticide application or post-application surveillance of any pesticide application with discharges authorized under this permit, all permittees must, when considerations for safety and feasibility allow and while observing reentry periods for pesticides application, visually assess the area to and around where pesticides are applied for possible and observable adverse incidents, as defined in Appendix A, caused by application of pesticides, including the unanticipated death or distress of non-target organisms and disruption of wildlife habitat, recreational or municipal water use.

If the permittee is not the applicator, this section is also applicable to the contract applicator.

**5.0 Pesticide Discharge Management Plan**

Permittees which exceed one or more of the annual treatment area thresholds listed in Table 3 must prepare and submit a Pesticide Discharge Management Plan (PDMP). This section does not apply to the following:

1. Any application made in response to a declared pest emergency situation, as defined in Appendix A.
2. Permittees who meet the definition of a small entity, as defined in Appendix A.
3. Permittees conducting pesticide application activities pursuant to the Vector Control Act (410 ILCS 95) which are funded by, conducted in accordance with, or under the supervision of the Illinois Department of Public Health or an associated municipal, county or regional department of public health or public health district.

For the first year of the permit the PDMP must be submitted 90-days after the date of coverage under this permit. After October 31, 2012, the PDMP and all supporting documents must be submitted with the NOI. The PDMP must be submitted electronically in Adobe Acrobat format to [epa.ILG87pestPDMP@illinois.gov](mailto:epa.ILG87pestPDMP@illinois.gov).

The plan must be kept up-to-date thereafter for the duration of coverage under this general permit, even if the discharges subsequently fall below the applicable treatment area thresholds listed in Table 3.

The PDMP does not contain effluent limitations as the effluent limitations are specified in Parts 2 and 3 of the permit. The PDMP documents how the permittee will implement the effluent limitations in Parts 2 and 3 of the permit, including the evaluation and selection of Pest Management Measures to meet those effluent limitations in order to minimize discharges. In the PDMP, the permittee may incorporate by reference any procedures or plans in other documents that meet the requirements of this permit. If the permittee relies upon other documents to comply with the effluent limitations in this permit, such as a pre-existing pest management plan, the permittee must attach to the PDMP a copy of any portions of any documents that are used to document the implementation of the effluent limitations.

## 5.1 Contents of the Pesticide Discharge Management Plan

The PDMP must include the following elements:

- a. Pesticide Discharge Management Plan Team
- b. Problem Identification
- c. Pest Management Options Evaluation
- d. Response Procedures
  1. Spill Response Procedures
  2. Adverse Incident Response Procedures
- e. Signature Requirements

### 5.1.1 PDMP Team

Permittees must identify all persons (by name and contact information) that compose the team as well as each person's individual responsibilities, including:

- a. Person(s) responsible for managing pests in relation to the pest management area;
- b. Person(s) responsible for developing and revising the PDMP; and
- c. Person(s) responsible for developing, revising, and implementing corrective actions and other effluent limitation requirements.

### 5.1.2 Problem Identification

Permittees must document the following:

- a. Pest problem description. Document a description of the pest problem at the pest management area, including identification of the target pest(s), source(s) of the pest problem, and source of data used to identify the problem in Parts 2.2.1, 2.2.2, 2.2.3, 2.2.4, and 2.2.5.
- b. Action Threshold(s). Describe the action threshold(s) for the pest management area, including the data used in developing the action threshold(s) and method(s) to determine when the action threshold(s) has been met.
- c. General location map. In the plan, include a general location map (e.g., USGS quadrangle map, a portion of a city or county map, or other map) that identifies the geographic boundaries of the area to which the plan applies and location of the waters of the State.
- d. Water quality standards. Document any water(s) identified as impaired by a substance which either is an active ingredient or a degradate of such an active ingredient.

### 5.1.3 Pest Management Options Evaluation

Permittees must document the evaluation of the pest management options, including combination of the pest management options, to control the target pest(s). Pest management options include the following: No action, prevention, mechanical/physical methods, cultural methods, biological control agent, and pesticides. In the evaluation, permittees must consider the impact to water quality, impact to non-target organisms, feasibility, cost effectiveness, and any relevant previous Pest Management Measures.

### 5.1.4 Response Procedures

Permittees must document the following procedures in the PDMP:

a. Spill Response Procedures – At a minimum, the permittees must have:

1. Procedures for expeditiously stopping, containing, and cleaning up leaks, spills, and other releases to waters of the State. Employees who may cause, detect, or respond to a spill or leak must be trained in these procedures and have necessary spill response equipment available. If possible, one of these individuals should be a member of the PDMP team.
2. Procedures for notification of appropriate facility personnel, emergency response agencies, and regulatory agencies.

b. Adverse Incident Response Procedures – At a minimum, the permittees must have:

1. Procedures for responding to any adverse incident resulting from pesticide applications.
2. Procedures for notification of the adverse incident, both internal to the permittee agency/organization and external. Contact information for State permitting agency, nearest emergency medical facility, and nearest hazardous chemical responder must be in locations that are readily accessible and available.

### 5.1.5 Signature Requirements

Permittees must sign, date and certify the PDMP in accordance with Appendix B.

### 5.2 Pesticide Discharge Management Plan Modifications

Permittees must modify the PDMP whenever necessary to address any of the conditions for corrective action in Part 6.1 or when a change in pest control activities significantly changes the type or quantity of pollutants discharged. Changes to the PDMP must be made before the next pesticide application that results in a discharge, if practicable, or if not, no later than 90 days after any change in pesticide application activities. The revised PDMP must be signed and dated in accordance with Appendix B. Permittees must submit the modified PDMP electronically to [epa.ILG87pestPDMP@illinois.gov](mailto:epa.ILG87pestPDMP@illinois.gov).

### 5.3 Pesticide Discharge Management Plan Availability

Permittees must retain a copy of the current PDMP, along with all supporting maps and documents, at the address provided on the NOI. The PDMP and all supporting documents must be readily available and copies of any of these documents provided, upon request, to IEPA or to any local agency governing discharges or pesticide applications within their respective jurisdictions; and to representatives of any federal or state agencies. IEPA may provide copies of the PDMP or other information related to this permit that is in its possession to members of the public. Any Confidential Business Information (CBI), as defined in 40 CFR Part 2, may be withheld from the public provided that a claim of confidentiality is properly asserted and documented in accordance with 40 CFR Part 2; however, CBI must be submitted to IEPA, if requested, and may not be withheld from those staff within IEPA, or any other state or federal agency cleared for CBI review.

## 6.0 Corrective Action

All permittees must comply with the provisions of Part 6 for any discharges authorized under this permit, with compliance required upon the beginning of such discharge. If the permittee is not the applicator, this section is also applicable to the contract applicator.

### 6.1 Situations Requiring Revision of Pest Management Measures

Permittees must review and, as necessary, revise the evaluation and selection of Pest Management Measures consistent with Parts 2.1 and 2.2 for the following situations:

- a. An unauthorized release or discharge associated with the application of pesticides (e.g., spill, leak, or discharge not authorized by this or another NPDES permit) occurs.
- b. Permittee becomes aware, or IEPA concludes, that Pest Management Measures are not adequate/sufficient for the discharge to meet applicable State water quality standards;
- c. Any monitoring activities indicate failure to meet applicable technology-based effluent limitations in Part 2.
- d. An inspection or evaluation of activities by IEPA reveals that modifications to the Pest Management Measures are necessary to meet the effluent limitations in this permit.
- e. Any permittee observes or is otherwise made aware of an adverse incident, as defined in Appendix A.

### 6.2 Corrective Action Deadlines

If a permittee determines that changes to the Pest Management Measures are necessary to eliminate any situation identified in Part 6.1, such changes must be made before or, if not practicable, as soon as possible after the next pesticide application that results in a discharge.

### 6.3 Effect of Corrective Action

The occurrence of a situation identified in Part 6.1 may constitute a violation of the permit. Correcting any situation identified in Part 6.1 does not absolve permittees of liability for any original violation. However, failure to comply with Part 6.2 constitutes an additional permit violation. IEPA will consider the appropriateness and promptness of corrective action in determining enforcement responses to permit violations.

IEPA may impose additional requirements and schedules of compliance, including requirements to submit additional information concerning the condition(s) requiring corrective action or schedules and requirements more stringent than specified in this permit. Those requirements and schedules will supersede those of Parts 6.1 and 6.2 if such requirements conflict.

### 6.4 Adverse Incident Documentation and Reporting

#### 6.4.1 Twenty-Four Hour Adverse Incident Notification

##### 6.4.1.1 Adverse Incident Notification Required

If a permittee observes or is otherwise made aware of an adverse incident, as defined in Appendix A, which may have resulted from a discharge from a pesticide application, made by the permittee or a contract applicator, the permittee must immediately notify the Illinois Emergency Management Agency (IEMA) and USEPA, Region 5, Pesticide Program. This notification must be made by telephone within 24 hours of the permittee becoming aware of the adverse incident and must include at least the following information:

- a. The caller's name and telephone number;
- b. Permittee's name and mailing address;
- c. NPDES permit number;

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- d. The name and telephone number of a contact person, if different than the person providing the 24-hour notice;
- e. How and when the permittee became aware of the adverse incident;
- f. Description of the location of the adverse incident;
- g. Description of the adverse incident identified and the pesticide product, including USEPA pesticide registration number, for each product applied in the area of the adverse incident; and
- h. Description of any steps the permittee has taken or will take to correct, repair, remedy, clean-up, or otherwise address any adverse effects.

If a permittee is unable to notify IEMA within 24 hours, the permittee must do so as soon as possible and also provide an appropriate rationale why the permittee was unable to provide such notification within 24 hours.

The adverse incident notification and reporting requirements are in addition to what the registrant is required to submit under FIFRA section 6(a)(2) and its implementing regulations at 40 CFR Part 159.

#### 6.4.1.2 Adverse Incident Notification Not Required

Reporting of adverse incidents is not required under this permit in the following situations:

- a. A permittee is aware of facts that indicate that the adverse incident was not related to toxic effects or exposure from the pesticide application;
- b. A permittee has been notified by IEMA and retains such notification, that the reporting requirement has been waived for this incident or category of incidents;
- c. A permittee receives information of an adverse incident, but that information is clearly erroneous; or
- d. An adverse incident occurs to pests that are similar in kind to potential target pests identified on the FIFRA label.

#### 6.4.2 Fifteen Day Adverse Incident Written Report

Within fifteen (15) business days of a reportable adverse incident pursuant to Part 6.4.1, permittees must provide a written report of the adverse incident to the IEMA Compliance Assurance Section. Permittees must submit the 15-day adverse incident report electronically to [epa.ILG87pest5day@illinois.gov](mailto:epa.ILG87pest5day@illinois.gov). The adverse incident report must include at least the following information:

- a. Information required to be provided in Part 6.4.1;
- b. Date and time the permittee contacted IEMA notifying the Agency of the adverse incident, who the permittee spoke with at IEMA, and any instructions received from IEMA;
- c. Location of incident, including the names of any waters affected and appearance of those waters (sheen, color, clarity, etc);
- d. A description of the circumstances of the adverse incident including species affected, estimated number of individual and approximate size of dead or distressed organisms;
- e. Magnitude and scope of the affected area (e.g. estimate aquatic surface area or total stream distance affected);
- f. Pesticide application rate; intended use site (e.g., on the bank, above waters, or directly to water), method of application; and name of pesticide product and USEPA pesticide registration number;
- g. Description of the habitat and the circumstances under which the adverse incident occurred (including any available ambient water data for pesticides applied);

- h. If laboratory tests were performed, an indication of what test(s) were performed, and when; additionally, a summary of the test results within 5 days after they become available if not available at the time of submission of the 15-day adverse incident report;
- i. Description of actions to be taken to prevent recurrence of adverse incidents; and
- j. Signature, date, and certification in accordance with Appendix B.

The Adverse Incident Report form is available on the Internet at [www.epa.state.il.us/water/permits/pesticide/forms.html](http://www.epa.state.il.us/water/permits/pesticide/forms.html).

#### **6.4.3 Adverse Incident to Federally Threatened or Endangered Species or Critical Habitat**

Notwithstanding any of the other adverse incident notification requirements of this section, if a permittee or contract applicator becomes aware of an adverse incident affecting a federally listed threatened or endangered species or its federally designated critical habitat which may have resulted from a discharge from the permittee's pesticide application, the permittee must immediately notify the United States Fish and Wildlife Service (FWS). This information must be made by telephone, to the contacts listed on USFWS's website at [www.fws.gov/offices](http://www.fws.gov/offices), immediately upon the permittee becoming aware of the adverse incident, and must include at least the following information:

- a. The caller's name and telephone number;
- b. Permittee name and mailing address;
- c. The name of the affected species;
- d. How and when the permittee became aware of the adverse incident;
- e. Description of the location of the adverse incident;
- f. Description of the adverse incident and the pesticide product, including the USEPA pesticide registration number, for each product applied in the area of the adverse incident, and;
- g. Description of any steps the permittee has taken or will take to alleviate the adverse impact to the species.

Additional information on federally listed threatened or endangered species and federally designated critical habitat is available from FWS ([www.fws.gov](http://www.fws.gov)) for terrestrial or freshwater species.

### **6.5 Reportable Spills and Leaks**

#### **6.5.1 Spill, Leak, or Other Unpermitted Discharge Notification**

Where a leak, spill, or other release into waters of the State containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under either 40 CFR Part 110, 40 CFR Part 117, or 40 CFR Part 302 occurs in any 24-hour period, the permittee or contract applicator must notify the National Response Center (NRC) at (800) 424-8802 in accordance with the requirements of 40 CFR Part 110, 40 CFR Part 117, and 40 CFR Part 302. The permittee must also notify IEMA at (800) 782-7860. Both of these Agencies shall be notified immediately and as soon as the permittee has knowledge of the release. Contact information must be in locations that are readily accessible and available in the area where the spill, leak, or other unpermitted discharge may occur.

Local requirements may necessitate also reporting spills or leaks to local emergency response, public health, or drinking water supply agencies.

#### **6.5.2 Fifteen-Day Spill, Leak, or Other Unpermitted Discharge Documentation**

If a permittee becomes aware of a spill, leak, or other unpermitted discharge which initiates the notification requirements in Part 6.5.1 and results in an adverse incident, then the permittee must report the incident per the requirements in Parts 6.4.1 and 6.4.2. If the spill, leak, or other unpermitted discharges initiates the notification

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requirements in Part 6.5.1, but does not result in an adverse incident, then permittee must document and retain the following information within 15 business days of becoming aware of the situation:

- a. Information required to be provided in Part 6.5.1
- b. Summary of corrective action taken or to be taken including date initiated and date completed or expected to be completed; and
- c. Any measures to prevent recurrence of such a spill or leak or other discharge, including notice of whether PDMP modifications are required as a result of the spill or leak.

#### 6.6 Other Corrective Action Documentation

For situations identified in Part 6.1, other than for adverse incidents (addressed in Part 6.4), or reportable spills or leaks (addressed in Part 6.5), permittees must document the situation requiring corrective action and the planned corrective action within fifteen (15) business days of becoming aware of that situation and retain a copy of this documentation. This documentation must include the following information:

- a. Identification of the condition requiring the need for corrective action review, including any ambient water quality monitoring that assisted in determining that discharges did not meet water quality standards;
- b. Brief description of the situation;
- c. Date the problem was identified.
- d. Brief description of how the problem was identified, how the permittee learned of the situation, and date the permittee learned of the situation;
- e. Summary of corrective action taken or to be taken, including date initiated and date completed or expected to be completed; and
- f. Any measures to prevent reoccurrence of such an incident, including notice of whether PDMP modifications are required as a result of the incident.

#### 7.0 Recordkeeping and Annual Reporting

The recordkeeping and annual reporting requirements vary depending on whether a permittee meets the definition of a small entity, as defined in Appendix A, and/or exceeds one or more of the annual treatment area thresholds listed in Table 3.

Permittees must keep written records as required in this permit for all discharges covered under this permit. These records must be accurate and complete to demonstrate the permittees compliance with the conditions of this permit. Permittees may rely on records and documents developed for other obligations, such as requirements under FIFRA, and state or local pesticide programs, provided all requirements of this permit are satisfied.

IEPA recommends that all permittees covered under this permit keep records of acres or linear miles treated for all applicable use patterns covered under this general permit. The records shall be kept up-to-date to help the permittee determine if the annual treatment area thresholds, as identified in Part 2.2, are met during any calendar year.

#### 7.1 Level 1: Recordkeeping

Level 1 recordkeeping applied to all permittees which must keep the following records:

- a. A copy of the NOI submitted to IEPA, any correspondence exchanged between the permittee and IEPA specific to coverage under this permit, and a copy of the IEPA acknowledgment letter assigning the permit number;
- b. A copy of this permit;

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- c. A copy of any Adverse Incident Reports (Part 6.4.2);
- d. Rationale for any determination that reporting of an identified adverse incident is not required consistent with allowances identified in Part 6.4.1.2;
- e. A copy of any corrective action documentation (Part 6.6);
- f. A copy of any spill, leak, or other unpermitted discharge documentation (Part 6.5.2); and
- g. Endangered Species Compliance Documentation

Permittees conducting pesticide application activities pursuant to the Vector Control Act (410 ILCS 95) which are funded by, conducted in accordance with, or under the supervision of the Illinois Department of Public Health or an associated municipal, county or regional department of public health or public health district are only required to perform Level 1 recordkeeping.

## 7.2 Level 2: Recordkeeping

Level 2 recordkeeping applies to permittees which exceed one or more of the annual treatment area thresholds listed in Table 3 and meet the definition of a small entity, as defined in Appendix A, must retain the following records at the address provided on the NOI. If the permittee is not the applicator, some of the records listed below shall be kept by the contract applicator.

- a. Documentation of equipment calibration; and
- b. Information on each treatment area to which pesticides are discharged, including:
  1. Description of treatment area, by name and/or location including the size (acres or linear feet) of treatment area, as well as the closest named waters of the State to which pesticide(s) discharged are tributary;
  2. Pesticide use pattern(s) (i.e., mosquito or other insect pest control, etc.)
  3. Target pest(s) and explanation of need for pest control;
  4. Description of pest management measures(s) implemented prior to the first pesticide application;
  5. If different from the permittee, company name and contact information for contract applicator;
  6. Name of each pesticide product used including the USEPA pesticide registration number;
  7. Quantity of each pesticide product applied to each treatment area;
  8. Pesticide application start and end date(s);
  9. Whether or not visual monitoring was conducted during pesticide application and/or post-application and if not; why not and whether monitoring identified any possible or observable adverse incidents caused by application of pesticides; and
  10. Name of any waters of the State in the treatment area currently listed as impaired for pesticides on the 303(d) list. This should include the name of the pesticide for which it is impaired.

An evaluation worksheet for documenting this information for each treatment area is available on the Internet at [www.epa.state.il.us/water/permits/pesticide/forms.html](http://www.epa.state.il.us/water/permits/pesticide/forms.html).

## 7.3 Level 3: Recordkeeping

Level 3 recordkeeping applies to permittees which exceed one or more of the annual treatment area thresholds listed in Table 3 and do not meet the definition of a small entity, as defined in Appendix A, must retain the following

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records at the address provided on the NOI. If the permittee is not the applicator, some of the records listed below shall be kept by the contract applicator.

- a. A copy of the PDMP, including any modifications made to the PDMP during the term of this permit;
- b. A copy of the annual reports submitted to IEPA;
- c. Documentation of equipment calibration; and
- d. Information on each treatment area to which pesticides are discharged, including:
  1. Description of treatment area, by name and/or location including the size (acres or linear feet) of treatment area, as well as the closest named waters of the State to which pesticide(s) discharged are tributary;
  2. Pesticide use pattern(s) (i.e., mosquito or other insect pest control, etc.)
  3. Target pest(s) and explanation of need for pest control;
  4. Action threshold(s);
  5. Method and/or data used to determine that action threshold(s) has been met;
  6. Description of pest management measures(s) implemented prior to the first pesticide application;
  7. If different from the permittee, company name and contact information for contract applicator;
  8. Name of each pesticide product used including the USEPA pesticide registration number;
  9. Quantity of each pesticide product applied to each treatment area;
  10. Pesticide application start and end date(s);
  11. Whether or not visual monitoring was conducted during pesticide application and/or post-application and if not; why not and whether monitoring identified any possible or observable adverse incidents caused by application of pesticides; and
  12. Name of any waters of the State in the treatment area currently listed as impaired for pesticides on the 303(d) list. This should include the name of the pesticide for which it is impaired.

#### 7.4 Additional Recordkeeping Requirements for All Permittees

All required records must be documented as soon as possible but no later than 15 business days following completion each pesticide application. Permittees must retain any records required under this permit for at least 3 years from the date that coverage under this permit expires or is terminated. Permittees must make available to IEPA, including an authorized representative of IEPA, all records kept under this permit upon request and provide copies of such records, upon request.

#### 7.5 Annual Reporting

Permittees which exceed one or more of the annual treatment area thresholds listed in Table 3 and do not meet the definition of a small entity, as defined in Appendix A, must submit an annual report to IEPA. Once the permittee meets the obligation to submit an annual report, the permittee must submit an annual report each calendar year thereafter for the duration of coverage under this general permit, whether or not the permittee has discharges from the application of pesticides in any subsequent calendar year. Permittees must submit the annual report electronically to [epa.ILG87pestAnnRep@illinois.gov](mailto:epa.ILG87pestAnnRep@illinois.gov). The annual report must be submitted to IEPA no later than February 15<sup>th</sup> of the following year for all pesticide activities covered under this permit occurring during the previous calendar year. Annual reports are to be submitted beginning in 2012 for discharges from pesticide applications beginning prior to January 1, 2012.

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Permittees conducting pesticide application activities pursuant to the Vector Control Act (410 ILCS 95) which are funded by, conducted in accordance with, or under the supervision of the Illinois Department of Public Health or an associated municipal, county or regional department of public health or public health district are not required to submit an annual report.

The annual report must include information for the calendar year, with the first annual report required to include activities for the portion of the calendar year after the effective date of the NOI. If the effective date is after December 1, the permittee is not required to submit an annual report for that first partial year but must submit annual reports thereafter, with the first annual report submitted also including information from the first partial year.

When permittees terminate permit coverage, as specified in Part 1.2.5, an annual report must be submitted for the portion of the year up through the date of termination. The annual report is due no later than 45-days after the termination date, or February 15<sup>th</sup> of the following year, whichever is earlier.

The annual report must contain the following information:

- a. Permittee's name and contact information;
- b. NPDES permit number;
- c. Contact person name, title, e-mail address (if any), and phone number; and
- d. For each treatment area, report the following information:
  1. Description of treatment area, by name and/or location including the size (acres or linear feet) of treatment area, as well as the closest named waters of the State to which pesticide(s) discharge are tributary;
  2. Pesticide use pattern(s) (i.e., mosquito and other insects, etc.) and target pest(s);
  3. Company name(s) and contact information for the pesticide applicator(s), if different from the permittee;
  4. Total amount of each pesticide product applied for the reporting year by the USEPA pesticide registration number(s) and by application method (e.g., aerially by fixed-wing or rotary aircraft, broadcast spray, etc.);
  5. Whether this pest control activity was addressed in the PDMP prior to pesticide application;
  6. If applicable, an annual report of any adverse incidents as a result of these treatment(s), for incidents, as described in Part 6.4.1; and
  7. If applicable, description of any corrective action(s), including spill responses, resulting from pesticide application activities and the rationale for such action(s).

The Annual Report form is available on the Internet at [www.epa.state.il.us/water/permits/pesticide/forms.html](http://www.epa.state.il.us/water/permits/pesticide/forms.html).

## 8.0 Contact Information and Mailing Addresses

Permittees must submit the following documents to the email addresses listed below.

- a. PDMP to [epa.ILG87pestPDMP@illinois.gov](mailto:epa.ILG87pestPDMP@illinois.gov)
- b. Annual Reports to [epa.ILG87pestAnnRep@illinois.gov](mailto:epa.ILG87pestAnnRep@illinois.gov)
- c. Within 15 business days of becoming aware of an adverse incident, permittees must send all incident reports under Part 6.4 to [epa.ILG87pest5day@illinois.gov](mailto:epa.ILG87pest5day@illinois.gov)

All other written correspondence concerning discharges covered under this permit and directed to the IEPA, including individual NPDES permit applications, must be sent to the IEPA Headquarters address listed below.

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Note: If IEPA notifies dischargers (either directly, by public notice, or by making information available on the Internet) of other reporting options that become available at a later date (e.g., electronic submission), permittees may take advantage of those options, in accordance with the instructions provided by IEPA, to satisfy the reporting requirements of this permit.

**8.1 IEPA Headquarters Address**

Illinois Environmental Protection Agency  
Division of Water Pollution Control, Mail Code #15  
Attention: Permit Section  
1021 North Grand Avenue East  
P.O. Box 19276  
Springfield, Illinois 62794-9276  
[www.epa.state.il.us/water/permits/pesticide/index.html](http://www.epa.state.il.us/water/permits/pesticide/index.html)

**8.2 USEPA, Region 5 Address**

United States Environmental Protection Agency  
Region 5  
Attention: Pesticide Program  
77 W. Jackson Blvd.  
Chicago, IL 60604

## Appendix A Definitions, Abbreviations, and Acronyms

### A.1. DEFINITIONS

**Action Threshold** – the point at which pest populations or environmental conditions cannot be tolerated necessitating that pest control action be taken based on economic, human health, aesthetic, or other effects. An action threshold may be based on current and/or past environmental factors that are or have been demonstrated to be conducive to pest emergence and/or growth, as well as past and/or current pest presence. Action thresholds are those conditions that indicate both the need for control actions and the proper timing of such actions.

**Active Ingredient** – any substance (or group of structurally similar substances if specified by the Agency) that will prevent, destroy, repel or mitigate any pest, or that functions as a plant regulator, desiccant, or defoliant within the meaning of FIFRA sec. 2(a). [40 CFR 152.3] Active ingredient also means a pesticidal substance that is intended to be produced and used in a living plant, or in the produce thereof, and the genetic material necessary for the production of such a pesticidal substance. [40 CFR 174.3]

**Adverse Incident** – means an unusual or unexpected incident that a permittee or contract applicator has observed upon inspection or of which the permittee otherwise become aware, in which:

1. There is evidence that a person or non-target organism has likely been exposed to a pesticide residue, and
2. The person or non-target organism suffered a toxic or adverse effect.

The phrase toxic or adverse effects includes effects that occur within waters of the State on non-target plants, fish or wildlife that are unusual or unexpected (e.g., effects are to organisms not otherwise described on the pesticide product label or otherwise not expected to be present) as a result of exposure to a pesticide residue, and may include:

- Distressed or dead juvenile and small fishes
- Washed up or floating fish
- Fish swimming abnormally or erratically
- Fish lying lethargically at water surface or in shallow water
- Fish that are listless or nonresponsive to disturbance
- Stunting, wilting, or desiccation of non-target submerged or emergent aquatic plants
- Other dead or visibly distressed non-target aquatic organisms (amphibians, turtles, invertebrates, etc.)

The phrase, toxic or adverse effects, also includes any adverse effects to humans (e.g., skin rashes) or domesticated animals that occur either from direct contact with or as a secondary effect from a discharge (e.g., sickness from consumption of plants or animals containing pesticides) to waters of the State that are temporally and spatially related to exposure to a pesticide residue (e.g., vomiting, lethargy).

**Annual Treatment Area Threshold** – an area (in acres) or in linear distance (in miles) in a calendar year to which a permittee is authorizing and/or performing pesticide applications in that area for activities covered under this permit.

**Applicator** – any person(s) who performs the application of a pesticide or who has day-to-day control of the application (i.e., they are authorized to direct workers to carry out those activities) that results in a discharge to waters of the State.

**Biological Control Agents** – these agents are organisms that can be introduced to operator sites, such as herbivores, predators, parasites, and hyperparasites. [Source: USFWS IPM Guidance, 2004]

**Biological Pesticides (also called biopesticides)** – include microbial pesticides, biochemical pesticides and plant-incorporated protectants (PIP). Microbial pesticide means a microbial agent intended for preventing, destroying, repelling, or mitigating any pest, or intended for use as a plant regulator, defoliant, or desiccant, that (1) is a eucaryotic microorganism including, but not limited to, protozoa, algae, and fungi; (2) is a procaryotic microorganism, including, but not limited to, Eubacteria and Archaeobacteria; or (3) is a parasitically replicating microscopic element, including but not limited viruses. [40 CFR 158.2100(b)] Biochemical pesticide mean a pesticide that (1) is a naturally-occurring substance or naturally-similar and functionally identical to a naturally-occurring substance; (2) has a history of exposure to humans and the environment demonstrating minimal toxicity, or in the case of a synthetically-derived biochemical pesticides, is equivalent to a naturally-occurring substance that has such a history; and (3) has a non-toxic mode of action to the target

pest(s). [40 CFR 158.2000(a)(1)] Plant-incorporated protectant means a pesticidal substance that is intended to be produced and used in a living plant, or in the produce thereof, and the genetic material necessary for production of such a pesticidal substance. It also includes any inert ingredient contained in the plant, or produce thereof. [40 CFR 174.3]

**Chemical Pesticides** – all pesticides not otherwise classified as biological pesticides.

**Contract Applicator** – any person(s) who make contractual pesticide applications for which they or their employer receives compensation (e.g., pest control companies).

**Cultural Methods** – manipulation of the habitat to increase pest mortality by making the habitat less suitable to the pest.

**Declared Pest Emergency Situation** – an event defined by a public declaration by a federal, state, or local governmental body or agency of a pest problem determined to require control through application of a pesticide beginning less than ten days after identification of the need for pest control. This public declaration may be based on:

1. Significant risk to human health;
2. Significant economic loss; or
3. Significant risk to:
  - i. Endangered species,
  - ii. Threatened species,
  - iii. Beneficial organisms, or
  - iv. The environment.

**Director** – means the Director of the Illinois Environmental Protection Agency or an authorized representative.

**Discharge** – when used without qualification, means the "discharge of a pollutant." [40 CFR 122.2]

**Discharge of a pollutant** – any addition of any "pollutant" or combination of pollutants to "waters of the State" from any point source," or any addition of any pollutant or combination of pollutants to the water of the "contiguous zone" or the ocean from any point source other than a vessel or other floating craft that is being used as a means of transportation. This includes additions of pollutants into waters of the State from: surface runoff that is collected or channeled by man; discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works. [Excerpted from 40 CFR 122.2]

**USEPA Approved or Established Total Maximum Daily Loads (TMDLs)** – "USEPA Approved TMDLs" are those that are developed by the State and approved by USEPA. "USEPA Established TMDLs" are those that are issued by USEPA.

**Facility or Activity** – any NPDES "point source" (including land or appurtenances thereto) that is subject to regulation under the NPDES program. [40 CFR 122.2]

**Impaired Water** (or "Water Quality Impaired Water" or "Water Quality Limited Segment") – a water is impaired for purposes of this permit if it has been identified by the State pursuant to Section 303(d) of the Clean Water Act as not meeting applicable State water quality standards (these waters are called "water quality limited segments" under 40 CFR 130.2(j)). Impaired waters include both waters with approved or established TMDLs, and those for which a TMDL has not yet been approved or established.

**Inert Ingredient** – any substance (or group of structurally similar substances if designated by the Agency), other than an active ingredient, that is intentionally included in a pesticide product. [40 CFR 152.3] Inert ingredient also means any substance, such as a selectable marker, other than the active ingredient, where the substance is used to confirm or ensure the presence of the active ingredient, and includes the genetic material necessary for the production of the substance, provided that genetic material is intentionally introduced into a living plant in addition to the active ingredient. [40 CFR 174.3]

**Mechanical/Physical Methods** – mechanical tools or physical alterations of the environment, for pest prevention or removal.

**Minimize** – to reduce and/or eliminate pesticide discharges to waters of the State through the use of Pest Management Measures to the extent technologically available and economically practicable and achievable.

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**Non-target Organisms** – includes the plant and animal hosts of the target species, the natural enemies of the target species living in the community, and other plants and animals, including vertebrates, living in or near the community that are not the target of the pesticide.

**Operator** – for the purpose of this permit, means any person(s) associated with the application of a pesticide that results in a discharge to waters of the State that meets either or both of the following two criteria:

- a. The person(s) with control over the hiring of a contract applicator, or making the decision to perform pesticide applications, including the ability to modify those decisions, that results in a discharge to waters of the State, or
- b. The person(s) who performs the application of pesticides or who has day-to-day control of the pesticide application, that results in a discharge to waters of the State.

**Outstanding Resource Water** – is a surface water body or water body segment that is of exceptional ecological or recreational significance and must be designated by the Illinois Pollution Control Board pursuant to 35 Ill. Adm. Code 102.Subpart H.

**Permittee** – an operator that has obtained coverage under this general permit.

**Person** – any individual, partnership, co-partnership, firm, company, limited liability company, corporation, association, joint stock company, trust, estate, political subdivision, state agency, or any other legal entity, or their legal representative, agent or assigns.

**Pest** – consistent with 40 CFR 152.5, any organism under circumstances that make it deleterious to man or the environment, if it is:

- a. Any vertebrate animal other than man;
- b. Any invertebrate animal, including but not limited to, any insect, other arthropod, nematode, or mollusk such as a slug and snail, but excluding any internal parasite of living man or other living animals;
- c. Any plant growing where not wanted, including any moss, alga, liverwort, or other plant of any higher order, and any plant part such as a root; or
- d. Any fungus, bacterium, virus, or other microorganism, except for those on or in living man or other living animals and those on or in processed food or processed animal feed, beverages, drugs (as defined in FFDCA sec. 201(g)(1)) and cosmetics (as defined in FFDCA sec. 201(i)).

**Pest Management Area** – the area of land, including any water, for which the permittee has responsibility for and is authorized to conduct pest management activities as covered by this permit (e.g., for a permittee who is a mosquito control district, the pest management area is the total area of the district).

**Pest Management Measure** – any practice used to meet the effluent limitations that comply with manufacturer specifications, industry standards and recommended industry practices related to the application of pesticides, relevant legal requirements and other provisions that a prudent permittee would implement to reduce and/or eliminate pesticide discharges to waters of the State.

**Pesticide** – means (1) any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest, (2) any substance or mixture of substances intended for use as a plant regulator, defoliant, or desiccant, and (3) any nitrogen stabilizer, except that the term "pesticide" shall not include any article that is a "new animal drug" within the meaning of section 201(w) of the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 321(w)), that has been determined by the Secretary of Health and Human Services not to be a new animal drug by a regulation establishing conditions of use for the article, or that is an animal feed within the meaning of section 201(x) of such Act (21 U.S.C. 321(x)) bearing or containing a new animal drug. The term "pesticide" does not include liquid chemical sterilant products (including any sterilant or subordinate disinfectant claims on such products) for use on a critical or semi-critical device, as defined in section 201 of the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 321). For purposes of the preceding sentence, the term "critical device" includes any device that introduced directly into the human body, either into or in contact with the bloodstream or normally sterile areas of the body and the term "semi-critical device" includes any device that contacts intact mucous membranes but

which does not ordinarily penetrate the blood barrier or otherwise enter normally sterile areas of the body. [FIFRA Section (u)]

The term "pesticide" applies to insecticides, herbicides, fungicides, rodenticides, and various other substances used to control pests. The definition encompasses all uses of pesticides authorized under FIFRA including uses authorized under sections 3 (registration), 5 (experimental use permits), 18 (emergency exemptions), 24(c) (special local needs registrations), and 25(b) (exemptions from FIFRA).

Note: Drugs used to control diseases of humans or animals (such as livestock and pets) are not considered pesticides; such drugs are regulated by the Food and Drug Administration. Fertilizers, nutrients, and other substances used to promote plant survival and health are not considered plant growth regulators and thus are not pesticides. Biological control agents, except for certain microorganisms, are exempted from regulation under FIFRA. (Biological control agents include beneficial predators such as birds or ladybugs that eat insect pests, parasitic wasps, fish, etc).

This permit uses the term "pesticide" when referring to the "pesticide, as applied." When referring to the chemical in the pesticide product with pesticidal qualities, the permit uses the term "active ingredient."

**Pesticide Product** – a pesticide in the particular form (including composition, packaging, and labeling) in which the pesticide is, or is intended to be, distributed or sold. The term includes any physical apparatus used to deliver or apply the pesticide if distributed or sold with the pesticide.

**Pesticide Research and Development** – activities undertaken on a systematic basis to gain new knowledge (research) and/or the application of research findings or other scientific knowledge for the creation of new or significantly improved products or processes (experimental development).

**Pesticide Residue** – includes that portion of a pesticide application that is discharged from a point source to waters of the State and no longer provides pesticidal benefits. It also includes any degradates of the pesticide.

**Point Source** – any discernible, 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 stormwater runoff. [40 CFR 122.2]

**Pollutant** – dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal, and agricultural waste discharged into water. [Excerpted from 35 Ill. Adm. Code 301.340] For purposes of this definition, a "biological pesticide" is considered a "biological material," and any "pesticide residue" resulting from use of a "chemical pesticide" is considered a "chemical waste." [Excerpted from 40 CFR 122.2]

**Small Entity** – any (1) public entity that serves a population of 10,000 or less, (2) a person(s) applying pesticides on private property where they or any member of their immediate family reside or property that they own or lease, or (3) a private enterprise that does not exceed the Small Business Administration size standard as identified at 13 CFR 121.201.

**Target Pest** – the organism(s) toward which pest management measures are being directed.

**Total Maximum Daily Loads (TMDLs)** – a TMDL is a calculation of the maximum amount of a pollutant that a water body can receive and still meet water quality standards, and an allocation of that amount of the pollutant's sources. A TMDL includes wasteload allocations (WLAs) for point source discharges, load allocations (LAs) for nonpoint sources and/or natural background, and must include a margin of safety (MOS) and account for seasonal variations. [See section 303(d) of the Clean Water Act and 40 CFR 130.2 and 130.7]

**Treatment Area** – the entire area, whether over land or water, where a pesticide application is intended to provide pesticidal benefits within the pest management area. In some instances, the treatment area will be larger than the area where pesticides are actually applied. For example, the treatment area for a stationary drip treatment into a canal includes the entire width and length of the canal over which the pesticide is intended to control weeds. Similarly, the treatment area for a lake or marine area is the water surface area where the application is intended to provide pesticidal benefits.

**Waters** – 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 this state.

**Water Quality Impaired** – see 'Impaired Water'.

**Water Quality Standards** – a water quality standard defines the water quality goals of a water body, or portion thereof, by designating the use or uses to be made of the water and by setting criteria necessary to protect the uses. Water quality standards also include an antidegradation policy and implementation procedures. See 35 Ill. Adm. Code 302.

**Wetlands** - means those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. [40 CFR 122.2]

**.2. ABBREVIATIONS AND ACRONYMS**

CFR	Code of Federal Regulations
CWA	Clean Water Act (or the Federal Water Pollution Control Act, 33 U.S.C. §1251 <i>et seq</i> )
FFDCA	Federal Food, Drug, and Cosmetic Act
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act, 7 U.S.C. §136 <i>et seq</i>
FWS	United States Fish and Wildlife Service
IDNR	Illinois Department of Natural Resources
IEPA	Illinois Environmental Protection Agency
IEMA	Illinois Emergency Management Agency
IPM	Integrated Pest Management
NOI	Notice of Intent
NOT	Notice of Termination
NPDES	National Pollutant Discharge Elimination System
NRC	National Response Center
ORW	Outstanding Resource Water
PDMP	Pesticide Discharge Management Plan
TMDL	Total Maximum Daily Load
U.S.C.	United States Code
USEPA	United States Environmental Protection Agency
WQS	Water Quality Standard

## Appendix B Standard Permit Conditions – Attachment H

### 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, administering, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 402, 318 and 405 of the Clean Water Act.

**EPA** 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 concentration 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.

**Composite Sample** 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.

**8-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.

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**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.

0) **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.

1) **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

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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.
- 3) **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

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- 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.

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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.

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