Stormwater Management Program Plan

Tributary to Squaw Creek – Fremont Township, IL Photo by: GHA

FREMONT TOWNSHIP

LAKE COUNTY, ILLINOIS

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SMPP

Prepared by
Gewalt Hamilton Associates, Inc.
625 Forest Edge Drive
Vernon Hills, IL 60061
Phone 847-478-9700 • Fax 847-478-9701

SMPP based on template prepared by:

The Lake County Stormwater Management Commission
333 Peterson Road
Libertyville, IL 60048
Phone 847-918-5260 • Fax 847-918-9826

and

Bleck Engineering Company, Inc.
313 East Lake Street
Silver Lake, WI 53170
Phone 262-889-2218 • Fax 262-889-2226

Table of Contents

1 Overview of the Stormwater Management Program Plan 6

1.1 Introduction 6

1.2 History 7

1.3 Water Quality Standards 9

1.3.A Designated Uses 9

1.3.B Water Quality Criteria 10

1.3.C Monitoring 10

1.3.D Total Maximum Daily Load (TMDL) 11

1.4 Watershed, Sub-watersheds and Receiving Waters 11

1.4.A Watershed Descriptions 14

1.4.B Identifying Outfalls (BMP C.1) 15

1.5 Status of Waters 17

1.6 Countywide Approach to NPDES Compliance 19

2 Program Management 20

2.1 Implementation of this SMPP 20

2.2 Intra-Department Coordination 20

2.2.A Stormwater Coordinator 20

2.2.B Engineering Department 22

2.2.C Public Works Department 22

2.3 Coordination with Lake County Stormwater Management Commission 22

2.4 Watershed Work Groups 22

2.4.A.1 Fox River Study Group 22

2.4.A.2 Des Plaines River Watershed Workgroup 23

2.5 Coordination with Consultants 24

2.6 Coordination of Contractors 24

2.7 Coordination with the Public 24

2.8 Coordination with the IEPA 24

2.9 Coordination with the Development Community 25

3 The Program 26

3.1 Qualified Local Program 27

3.1.A Public Education and Outreach 27

3.1.A.1 Distributed Paper Material (BMP A.1) 27

3.1.A.2 Speaking Engagement (BMP A.2) 28
3.1.A.3 Public Service Announcement (BMP A.3) 29
3.1.A.4 Outreach Events (BMP A.4) 29
3.1.A.5 Classroom Education Material (BMP A.5) 29
3.1.A.6 Other Public Education – Web Site (BMP A.6) 30
3.1.B Public Participation/Involvement 30
3.1.B.1 Public Panel (BMP B.1) 30
3.1.B.2 Stakeholder Meeting (BMP B.3) 31
3.1.B.3 Program Involvement (BMP B.6) 31
3.1.C Illicit Discharge Detection and Elimination 32
3.1.C.1 Regulatory Control Program (BMP C.2) 32
3.1.C.2 Other Illicit Discharge Controls (BMP C.10) 32
3.1.D Construction Site Runoff Control 33
3.1.D.1 Regulatory Control Program (BMP D.1) 33
3.1.D.2 Erosion and Sediment Control BMPs (BMP D.2) 34
3.1.D.3 Other Waste Control Program (BMP D.3) 35
3.1.D.4 Site Plan Review Procedures (BMP D.4, E.4) 35
3.1.D.5 Site Inspection/Enforcement Procedures (BMP D.6, E.5) 36
3.1.D.6 Public Information Handling Procedures (BMP D.5) 37
3.1.E BMP Reference Information 37
3.1.F Post-Construction Runoff Control 37
3.1.F.1 Regulatory Control Program (BMP E.2) 38
3.1.F.2 Long Term O&M (BMP E.3) 38
3.1.F.3 Runoff Volume Reduction Hierarchy (BMP E.4) 38
3.1.F.4 Other Post-Construction Runoff Controls (BMP E.7) 39
3.1.G Pollution Prevention / Good Housekeeping 40
3.1.G.1 Employee Training Program (BMP F.1) 40
3.1.G.2 Flood Management / Assess Guidelines (BMP F.5) 40
3.1.G.3 Winter Roadway Deicing (BMP F.6) 41
3.1.H Watershed Plans 41

3.2 Public Education and Outreach 44
3.2.A Distribution of Paper Materials (BMP A.1) 44
3.2.B Other Public Education - Web Site (BMP A.6) 45
3.2.C Outreach Events (BMP A.1, A.4) 46
3.2.D Household Hazardous Wastes (BMP A.4) 46
3.2.E Septic System Maintenance (BMP A.6) 47
3.2.F Vehicle Fluid Maintenance (BMP A.6) 47
3.2.G Car / Outdoor Washing (BMP A.6) 48
3.2.H Lawn and Garden Care (BMP A.6) 48
3.2.I Green Infrastructure (BMP A.6) 49
3.2.J Pool Dewatering (BMP A.6) 49

3.3 Public Participation and Involvement 50
3.3.A Stakeholder Meeting (BMP B.3) 50
3.3.B Public Review Process (BMP B.4) 50
3.3.B.1 Environmental Justice Areas 51
3.3.B.2 Complaints, Suggestions and Requests (BMP B.7) 51

3.3.C Program Involvement (BMP B.6, C.6) 52
3.3.D Illicit Discharge/Illegal Dumping Hotline (BMP B.7, D.5) 52

3.4 Illicit Discharge Detection and Elimination 53
3.4.A Regulatory Authority (BMP C.2) 53
3.4.A.1 Watershed Development Ordinance 54
3.4.A.2 Illicit Discharge Ordinance 54
3.4.B Understanding Outfalls and Illicit Discharges 54
3.4.B.1 Potential Sources of Illicit Discharges 54
3.4.B.2 Exclusions 55
3.4.B.3 Prohibited Discharges 55
3.4.B.4 Pollutant Indicators 56
3.4.C Indirect Connection Program (BMP C.3) 66
3.4.C.1 Groundwater Seepage 66
3.4.C.2 Spills 66
3.4.C.3 Dumping 67
3.4.C.4 Outdoor washing activities 67
3.4.C.5 Non-target irrigation from landscaping or lawns 67
3.4.D Direct Connection Illicit Discharge Program (BMP C.3 – C.8) 67
3.4.D.1 Program Planning 68
3.4.D.2 Outfall Inspection (BMP C.3, C.7, C.8) 71
3.4.D.3 Follow Up Investigation and Program Evaluation (BMP C.4) 76
3.4.D.4 Removal of Illicit Discharges (BMP C.5, C.8) 78

3.5 Construction Site Runoff Control 80
3.5.A Regulatory Program (BMP D.1) 80
3.5.B Responsible Parties (BMP D.1) 80
3.5.B.1 Applicant 80
3.5.B.2 DECI – Designated Inspectors 80
3.5.B.3 Enforcement Officer 81
3.5.C Erosion and Sediment Control BMPs (BMP D.2) 82
3.5.D Construction Site Waste Control (BMP D.3) 82
3.5.E Site Plan Review (BMP D.4, E.4) 82
3.5.F Site Inspection Procedures (BMP D.6, E.5) 83
3.5.G Public Information Handling Procedures (BMP D.5) 83
3.5.H Performance Guarantees (BMP D.6) 84
3.5.I Violation Notification Procedures (BMP D.6) 84

3.6 Post Construction Runoff Control 84
3.6.A Regulatory Program (BMP E.2) 85
3.6.B Long Term Operation and Maintenance (BMP E.3) 85
3.6.C Runoff Volume Reduction Hierarchy (BMP E.4) 86
3.6.D Watershed Plans (BMP E.7) 86
3.6.E Site Inspections (BMP E.6) 87
3.6.E.1 Shorelines, Streambanks and Stream Bed Sediment Accumulation 87
3.6.E.2 Detention / Retention Pond 88

3.7 Pollution Prevention and Good Housekeeping 89
3.7.A Inspection and Maintenance Program 90
3.7.A.1 Street Sweeping (BMP E.7, F.4) 91
3.7.A.2 Drainageways (BMP E.7, F.2) 91
3.7.A.3 Landscape Maintenance 92
3.7.A.4 Snow Removal and Ice Control (BMP F.3) 93
3.7.A.5 Vehicle and Equipment Operations (BMP F.4) 94
3.7.A.6 Animal Nuisance Control (BMP F.4) 95
3.7.A.7 Waste Management (BMP F.4) 95
3.7.A.8 Water Conservation & Irrigation 97
3.7.A.9 Green Infrastructure (BMP F.3) 97
3.7.A.10 Special Events (BMP F.4) 97
3.7.B Spill Response Plan (BMP F.6, C.9) 98
3.7.B.1 Spill Prevention 98
3.7.B.2 Non-Hazardous Spills/Dumping 99
3.7.B.3 Hazardous Spills 99
3.7.C Employee Training (BMP F.1) 100
3.7.C.1 Training Approach 100
3.7.C.2 Training Schedule and Frequency 101

4 Program and Performance Monitoring, Evaluation and Reporting 102

4.1 Monitoring Program 102
4.1.A Fox River Study Group 103
4.1.B Des Plaines River Watershed Workgroup 104
4.1.C Lake County Health Department Lakes Management Unit 104
4.1.C.1 Inland Beaches 105
4.1.D Community Monitoring 105

4.2 Program Evaluation (BMP C.6) 107
4.2.A Monitoring Program Evaluation 107
4.2.B IDDE Program Evaluation 108
4.2.C SMPP Document Evaluation 108

5 Appendices 110

5.1 List of Acronyms 111

5.2 Stormwater Outfall Screening Equipment Checklist 112

5.3 Stormwater Outfall Inspection Data Form 113

5.4 Pre-Construction Meeting Form 114

5.5 Soil Erosion and Sediment Control Inspection Form 115

5.6 Sample Notice of Violation Letter 116

5.7 Indirect Illicit Discharge Tracking and Summary Forms 117

5.8 Spill Response Notice 118

5.9 Sample Maintenance Plans 119

5.10 Yearly Tracking Forms 120
5.11 Pool Dewatering Fact Sheet 121
5.12 General Permit ILR40 122
5.13 Bibliography and References 123

List of Tables and Figures

Figure 1: Designated Uses *9*
Figure 2: Mississippi River Watershed *11*
Figure 3: Lake County's Watersheds & Subwaterheds *11*
Figure 4: Major Sub-watersheds and Receiving Streams *13*
Figure 5: Significant Outfall Locations *16*
Figure 6: Impaired Waters 2014 303d and 305b Reports by IEPA *17*
Figure 7: Roles of MS4 *21*
Figure 8: Watershed Based Plan Status *43*
Figure 9: Turbidity Severity Examples *58*
Figure 10: Natural Sheen versus Synthetic *59*
Figure11: Characterizing Submersion and Flow *74*
Figure 12: Outfall Inspection Procedure Flow Chart *75*
Figure 13: SMC Stream and Detention Basin Inventory Status *88*
Figure 14: Countywide Monitoring Efforts *103*
Figure 15: Impaired Lake Michigan Segments *Error! Bookmark not defined.*
Figure 16: Additonal Community Monitoring Locations *106*

Table 1: Odor or Potential Illicit Discharges (adapted from CWP) *56*
Table 2: Color of Potential Illicit Discharges (adapted from CWP) *56*
Table 3: Floatables in Potential Illicit Discharges (adapted from CWP) *60*

1 Overview of the Stormwater Management Program Plan

Fremont Township, IL Photo by GHA

1.1 Introduction

This Stormwater Management Program Plan (SMPP) was developed by Fremont Township based off a SMPP template provided by the Lake County Stormwater Management Commission. The purpose of the SMPP is to meet the minimum standards required by the United States Environmental Protection Agency (USEPA) under the National Pollutant Discharge Elimination System (NPDES) Phase II program. Federal regulations through the USEPA require that all Municipal Separate Storm Sewer Systems (MS4s), partially or fully in urbanized areas based on the 2000 census, obtain stormwater permits for their discharges into receiving waters. Illinois EPA has issued a new version of its MS4 Permit. The new version of the permit became effective on March 1, 2016. According to the new permit, MS4s have 180 days from the effective date of the permit to comply with any changes or new provisions contained in the permit.

The SMPP describes the procedures and practices that can be implemented by Fremont Township toward the goal of reducing the discharge of pollutants within stormwater runoff in order to comply with Federal standards. Compliance with the plan is intended to protect water quality thus contributing to the following amenities:

- cleaner lakes and streams,
- improved recreational opportunities and tourism,
- flood damage reduction,
- better aesthetics and wildlife habitat, and

- a safer and healthier environment for the citizens.

The SMPP addresses the primary program elements, including the manner in which Fremont Township :

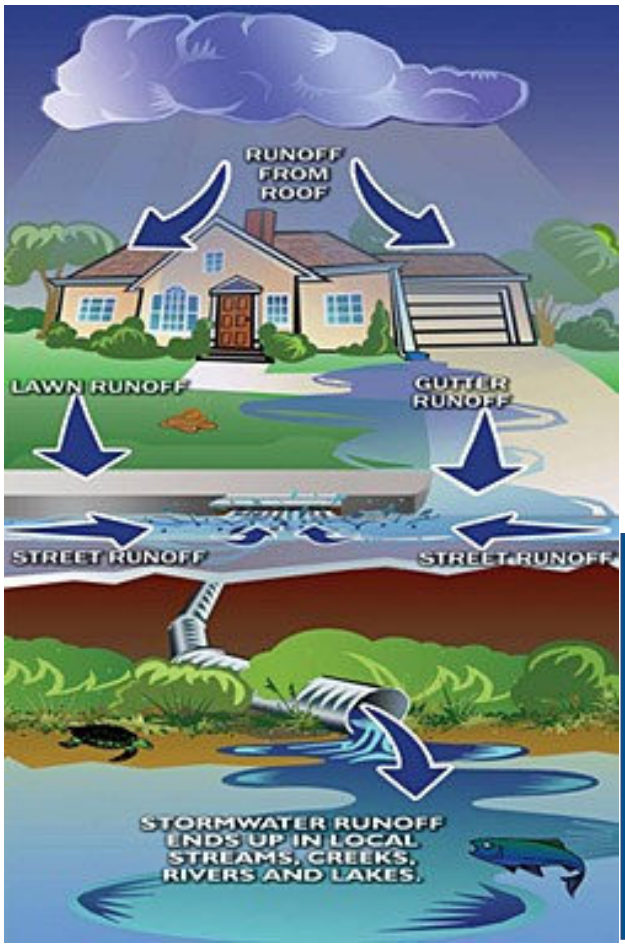
- reviews, permits and inspects construction activity within its limits;
- manages the planning, design and construction of projects performed within its limits;
- maintains its facilities and performs its day-to-day operations;
- works toward protecting the receiving waters from illicit discharges;
- provides public education and outreach;
- trains its employees in carrying out and reporting program activities; and
- continually monitors and evaluates the program.

1.2 History

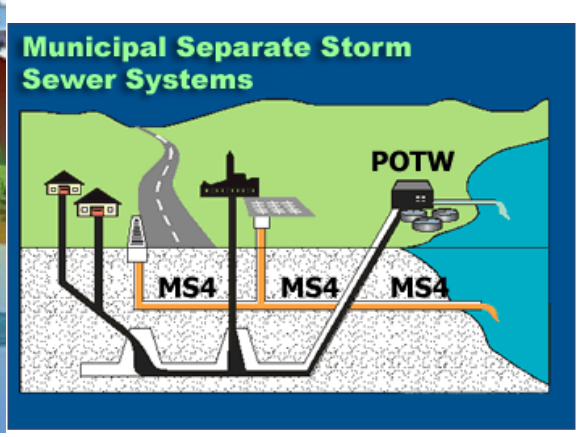
In 1948 the Federal Water Pollution Control Act was enacted to encourage water pollution control at the state and local levels. Between 1949 and 1969 the Cuyahoga River in Ohio caught fire ten times.

To better protect these public assets the 1948 Act was amended in 1972. The focus of the '72 Act was to obtain fishable and swimmable waters and eliminate the discharge of point source pollutants into navigable waters (such as industrial and waste water treatment plant outfalls). This was the beginning of the National Pollutant Discharge Elimination System (NPDES) program.

The Act was further refined in 1977, to extend deadlines and better define types of pollutants. It became commonly referred to as the Clean Water Act (CWA).



In 1987 the NPDES permit program was expanded to also regulate discharges from Municipal Separate Storm Sewer Systems (MS4) as point source discharges instead of non-point source discharges.



The NPDES permit process regulates the discharge from MS4s, construction sites and industrial activities based on amendments to CWA in 1987 and the subsequent 1990 and 1999 regulations by the U.S. Environmental Protection Agency (USEPA). In Illinois, the USEPA has delegated administration of the federal NDPES program to the Illinois Environmental Protection Agency (IEPA). On December 20, 1999 the IEPA issued a general NPDES Phase II permit for all MS4s. Under the General Permit each MS4 was required to submit a Notice of Intent (NOI) declaring compliance with the conditions of the permit by March 10, 2003. The original NOI describes the proposed activities and best management practices that occurred over the original 5-year period toward the ultimate goal of developing a compliant SMPP. At the end of the 5th year (March 1, 2008) the components of the SMPP were required to be implemented; per the ILR40 permit. The IEPA reissued the ILR 40 permit on April 1, 2009 and again on March 1, 2016, including revisions each time.

Additionally, under the General ILR10 permit also administered IEPA, all construction projects that disturb greater than 1 acre of total land area are required to obtain an NPDES permit from IEPA prior to the start of construction. Municipalities covered by the General ILR40 permit, are automatically covered under ILR10 30 days after the IEPA receives the NOI from the municipality.

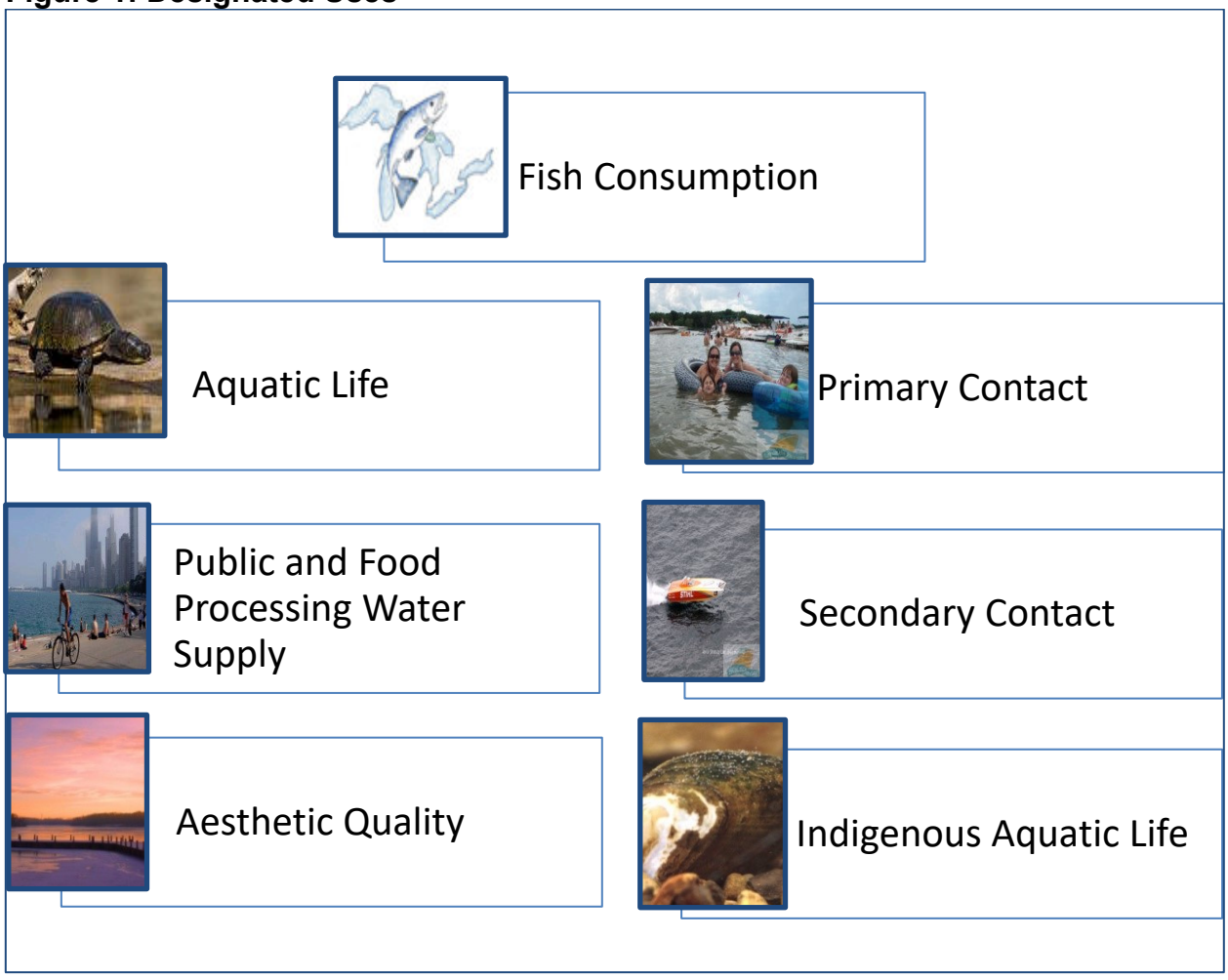
1.3 Water Quality Standards

The 1987 Water Quality Act also established new requirements and funding, through the Clean Water Act Section 319, for states to development and implement nonpoint source pollution control. Specifically, Section 319 required each state to: (1) identify navigable waters that, without government action to control non-point sources of pollution, cannot be reasonably expected to maintain applicable water quality standards or goals; (2) identify nonpoint sources that add significant amounts of pollution to affected waters; and (3) development a nonpoint source water pollution plan on a watershed-by-watershed basis. The Illinois Environmental Protection Agency (IEPA) created a program to comply with these federal regulations. This program has 3 basic components.

1.3.A Designated Uses

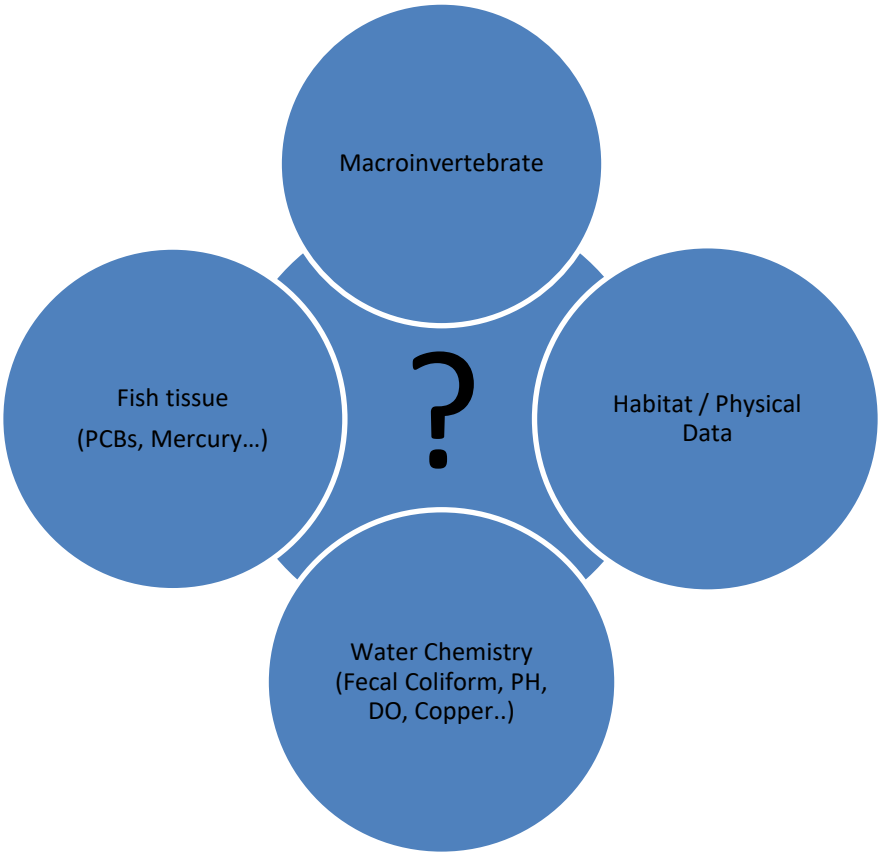
One of IEPA's first steps in achieving compliance with the Act was to identify all uses its waters should support. IEPA identified 7 designated uses, as depicted on **Figure 1**. Then each navigable water was evaluated to identify the designated uses it should support.

Figure 1: Designated Uses



1.3.B Water Quality Criteria

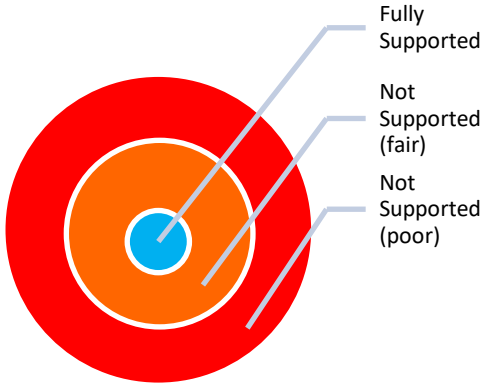
IEPA determined a set of water quality criteria that need to meet based on each of the 7 designated uses. Some criteria are applicable for multiple Designated Uses.



1.3.C Monitoring

IEPA is required to conduct a monitoring program for all of its receiving streams based on the water quality criteria it should be meet for each of its designated uses according to the following process.

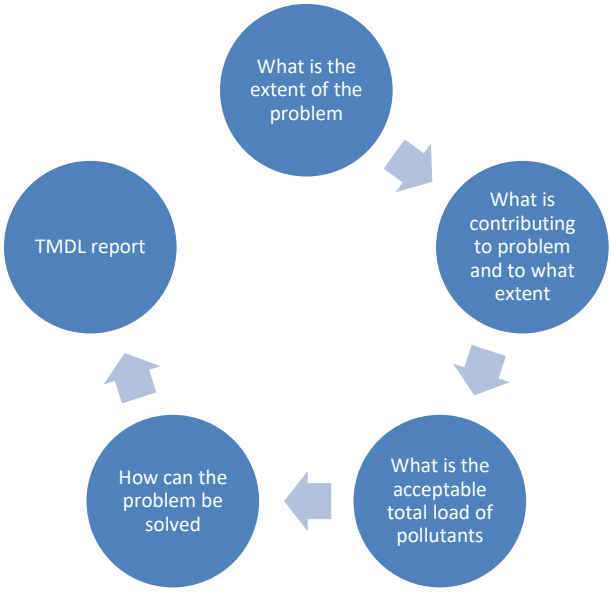
- Conduct Monitoring per Designated Use
- Determine if Water Quality Criteria are met
- Include Non-Supporting Waters on Impaired Waters report
- Rank non-supporting waters based on severity of problem.



IEPA is required to submit the monitoring results [305(b) report] to USEPA every 2 years. The impaired waters report [303(d) report] and ranking are part of this report.

1.3.D Total Maximum Daily Load (TMDL)

Total Maximum Daily Load (TMDL) reports are created by IEPA for impaired waters. These reports are created by IEPA based on severity. IEPA creates TMDL reports for impaired waters with the highest ranks. The majority of impaired waters do not yet have TMDL reports. This graphic identifies the pieces of a TMDL report. Once the TMDL report is approved by the USEPA, the recommended strategies should be implemented by the affected MS4.



1.4 Watershed, Sub-watersheds and Receiving Waters

Figure 2: Mississippi River Watershed

All storm water runoff from the Village discharges into the Illinois River, a tributary to the Mississippi River. Receiving streams in the Township flow to the Fox and Des Plaines Rivers (tributary to the Illinois River). These streams include Squaw Creek and Slocum Lake Drain (Fox), and Indian Creek, Bull Creek, and Mill Creek (Des Plaines).

Topographic characteristics of the Village are typical of those in northeastern Illinois. Floodplains tend to be broad and flat with relatively small channels.

Watershed: The land area that contributes storm water to one of the four major Rivers in Lake County.

***Sub-Watershed*:** The land area that contributes storm water to one of the receiving waters tributary to a major River.

Receiving Water: A natural or man-made system into which storm water or treated wastewater is discharged, including the four major rivers in Lake County, their tributary stream systems and other Waters of the U.S.

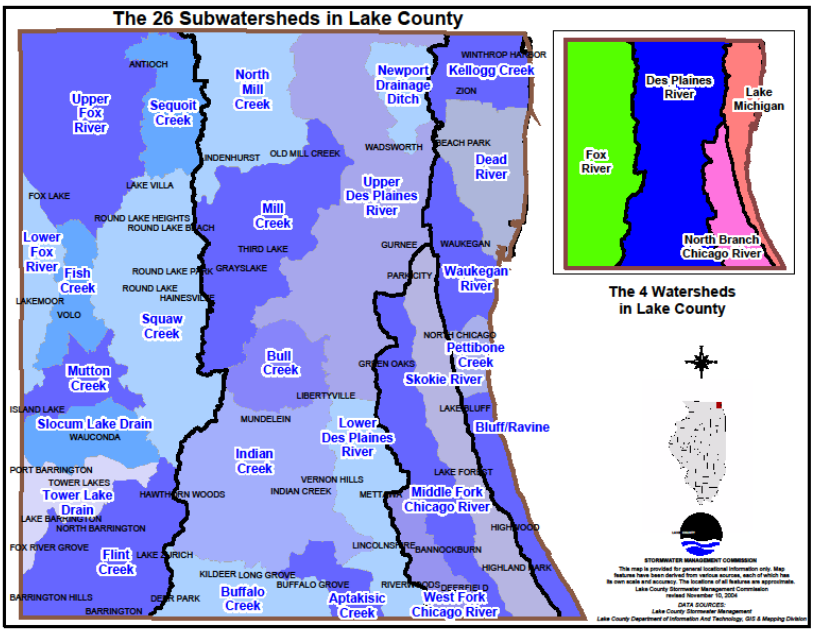


Figure 3: Lake County's Watersheds & Subwatersheds

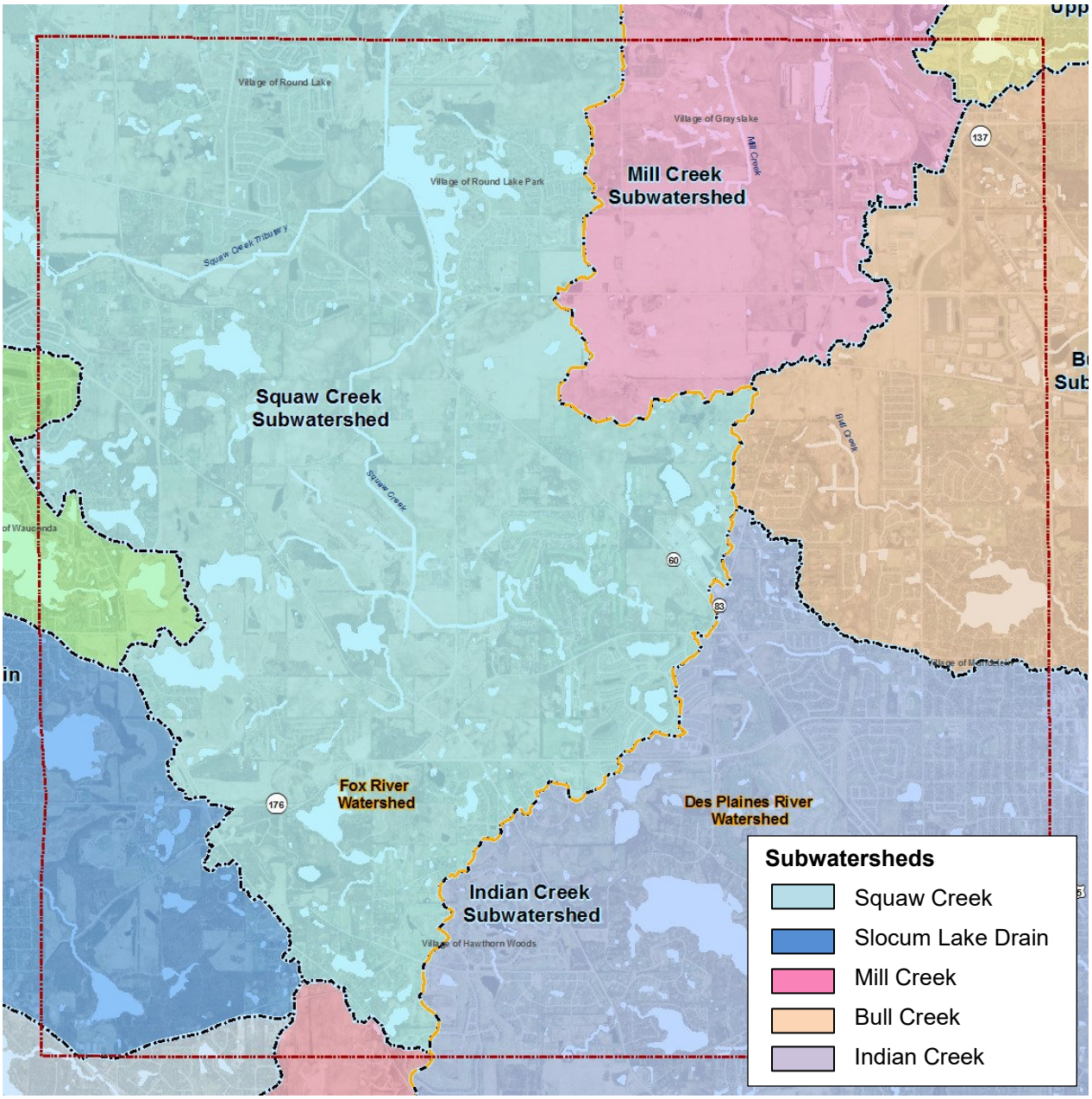


Figure 4: Major Sub-watersheds and Receiving Streams

1.4.A Watershed Descriptions

Des Plaines River Watershed

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

Within Lake County, the Des Plaines River watershed includes the communities of Buffalo Grove, Deer Park, Grayslake, Gurnee, Hawthorn Woods, Indian Creek, Kildeer, Libertyville, Lincolnshire, Lindenhurst, Long Grove, Mettawa, Mundelein, Old Mill Creek, Riverwoods, Third Lake, Vernon Hills, Wadsworth and Wheeling. Open space areas are concentrated along the floodplain of the Des Plaines River, where the Lake County Forest Preserve District has substantial holdings that stretch uninterrupted from the Wisconsin-Illinois border into Cook County.

Fox River Watershed

The Fox River originates about 15 miles northwest of Milwaukee, Wisconsin. The river enters the northwest corner of Lake County in the Chain O'Lakes area and then enters McHenry County, but reenters Lake County south of Fox River Valley Gardens. About 163 square miles of Lake County drains to the Fox River.

Along the Fox River from the state line to Algonquin, the terrain is flat and contains many lakes and low-lying wetlands. The upland areas of the watershed include gently sloping topography to steep hilly terrain.

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

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

1.4.B Identifying Outfalls (BMP C.1)

An Outfall (is defined at 40 CFR 122.26(B)(9)) means a point source (as defined by 40 CFR 122.2) at the point where a municipal separate storm sewer discharges into a "receiving water". 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 are not considered Outfalls. For the purposes of this manual the following definitions shall be used:

> ***Outfall:*** **Storm sewer outlet, or other open conveyance point discharge location, that discharges into a Waters of the U.S, receiving stream or another MS4.**

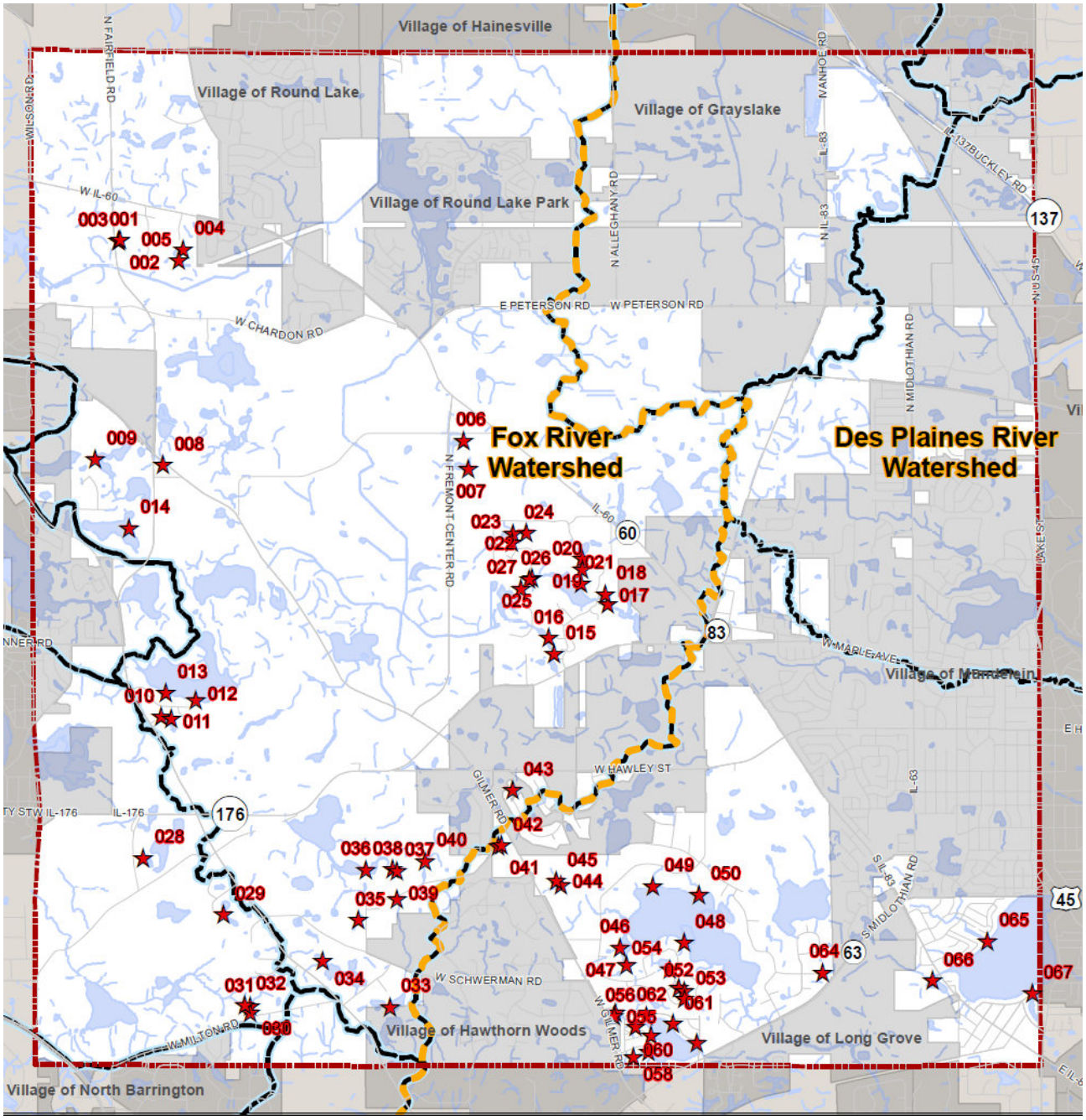
Regulated systems include the conveyance or system of conveyances including roads with drainage systems, municipal streets, catch basins, gutters, ditches, swales, manmade channels or storm sewers. High priority outfalls are defined, for the purpose of implementing this SMPP, as outfalls at which a potential illicit discharge has previously been identified. Approximately 67 outfalls have been identified in Fremont Township, 25% of which are inspected on an annual basis. High priority outfalls are included in annual inspections.

The outfall map should be revised to incorporate permitted outfalls associated with new developments. An outfall inventory should be performed every 5 years in conjunction with pre-screening efforts (Chapter 3.4.D.2); the focus of this effort is to search for new outfalls.

Measurable Goal(s):

- Maintain outfall inventory, searching for new outfalls every 5 years.
- Identify high priority outfalls

Figure 5: Significant Outfall Locations



1.5 Status of Waters

As can be seen on **Figure 6,** there are several lakes listed as impaired within the unincorporated areas of Fremont Township. These include: Countryside Lake, Diamond Lake, Drummond Lake, Heron Pond, Lake Fairfield, Lake Holloway, Old Oak, Schreiber Lake, Sylvan Lake, and Taylor Lake. Squaw Creek is not assessed, and Indian Creek is listed as impaired. The most recent 303(d) list may be found at http://www.epa.illinois.gov/topics/water-quality/watershed-management/tmdls/303d-list.

Information regarding TMDLs may be found at http://www.epa.state.il.us/water/tmdl/.

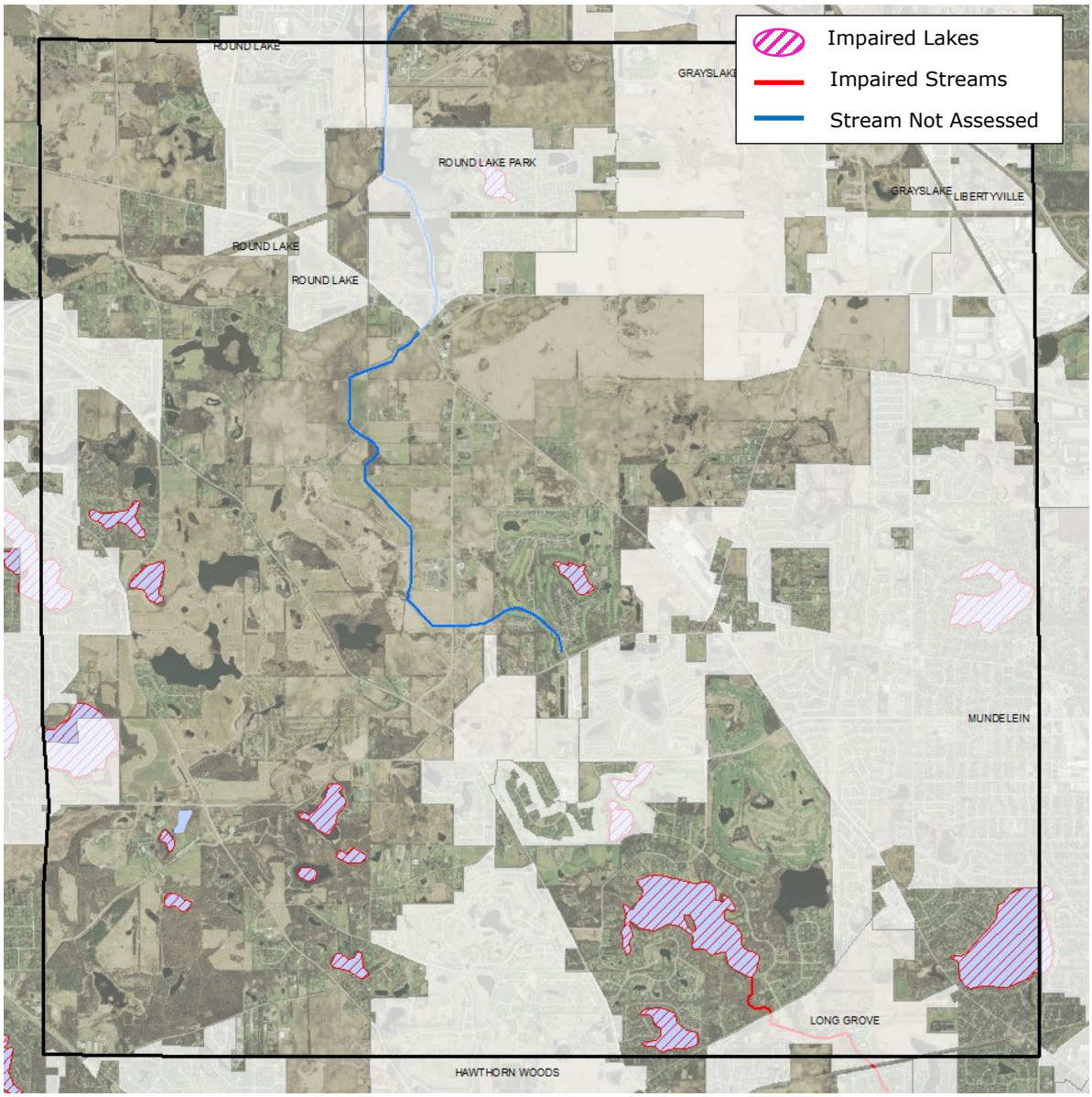


Figure 6: Impaired Waters 2016 303d and 305b Reports by IEPA

Segment	Impaired DU	Potential Cause	Potential Source	TMDL Status
Squaw Creek (IL_DTL-02)	Not Assessed	N/A	N/A	None
Indian Creek (IL_GU-02)	Aquatic life	Dissolved Oxygen	Source Unknown	None
Countryside Lake (IL_RGQ)	Aesthetic quality	TSS, Total phosphorus, Aquatic plants	Rural (residential areas), Runoff from forest/grassland/parkland	Approved for Total phosphorus
Diamond Lake (IL_RGB)	Aesthetic quality	TSS, Total phosphorus, Aquatic plants	Littoral/shore area modifications, Sediment resuspension, Internal nutrient recycling, On-site treatment systems (septic), Yard maintenance, Source unknown	Approved for Total phosphorus
Drummond Lake (IL_UTI)	Aesthetic quality	TSS, Total phosphorus, Aquatic plants	Source Unknown	Stage 3 for Total phosphorus and TSS
Heron Pond (IL_STY)	Aesthetic quality	Total phosphorus, Aquatic plants	Source unknown, Agriculture, Urban runoff/storm sewers, Runoff from forest/grassland/parkland	None
Lake Fairfield (IL_RCZJ)	584, Aesthetic quality	Total dissolved solids, TSS, Total phosphorus	Impacts from Hydrostructure flow regulation/modification, Crop production, Runoff from forest/grassland/ parkland	Approved for Manganese (2008)
Lake Holloway (IL_UTK)	Aesthetic quality	TSS, Total phosphorus	Source Unknown	None
Old Oak (IL_UTJ)	Aesthetic quality	Cause Unknown	Source Unknown	None
Schreiber Lake (IL_UTD)	Aesthetic quality	Cause Unknown	Source Unknown	None
Sylvan Lake (IL_RGZF)	Aesthetic quality	Fecal coliform, TSS, Total phosphorus	Source unknown, Littoral/shore area modifications	Approved for Fecal coliform and Total Phosphorus
Taylor Lake (IL_VTZY)	Aesthetic quality	TSS, Total phosphorus, Aquatic plants	Source unknown, Urban runoff/storm sewers, Runoff from forest/grassland/ parkland	None

TMDL requirements have been issued for various receiving waters within the MS4, including: Countryside Lake, Diamond Lake, Lake Fairfield. And Sylvan Lake. TMDL statuses will be reviewed as part of each year's annual reports, and described in the "State of Lake County's Waters" segment provided by the QLP, refer to Chapter 3.1. Upon issuance of a TMDL requirement, an implementation strategy or plan will be created by the

MS4 and described in the annual report. Each annual report will also include a summary of BMPs implemented by the MS4 to meet the TMDL requirement(s) and an assessment of the program's effectiveness toward meeting Waste Load Allocation (WLA) goals.

1.6 Countywide Approach to NPDES Compliance

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

The General Permit allows for MS4s to take credit for activities being performed by a Qualifying Local Program (QLP) toward meeting its permit requirements. The Lake County Stormwater Management Commission (SMC) is a Qualifying Local Program for MS4s in Lake County. As part of their ongoing services, SMC performs some functions related to each of the six minimum control measures (MCM). SMC has been providing services under four of the six minimum control categories since it began implementing a comprehensive, countywide stormwater program in 1991. However, MS4s are required to provide additional services for each of the Minimum Control Measures with the greatest effort in the Illicit Discharge Detection and Elimination and Pollution Prevention/Good Housekeeping categories. A detailed discussion of the QLP program is described in **Chapter 3.1**.

2 Program Management

This Chapter describes the organizational structures of Fremont Township, the County and IEPA. It further discusses the roles and responsibilities of the various involved parties.

2.1 Implementation of this SMPP

The SMPP includes detailed discussions on the types of tasks that are required to meet the permit conditions under the NPDES II program and how to perform these tasks. **Appendix 5.10** includes related tracking forms. The tracking forms are broken out into three categories (based on the frequency of occurrence). There are three different tracking forms included: Annual, As-Needed and On-Going. These forms should be printed annually and the progress of all tasks tracked. At the end of the yearly reporting period (March 1 – February 28/29) the forms should be filed in a binder to document SMPP related activities to IEPA, or their authorized agent, in the case of an audit. It is anticipated that implementation of this SMPP constitutes compliance with the program. The SMPP must be posted on Fremont Township website.

Annual Reports, Monitoring Data, NOI and Stormwater Management Plans shall be kept for a minimum of 5-years after the expiration of this permit (March 1, 2022).

2.2 Intra-Department Coordination

The Board of Trustees is the policy and budget setting authority for Fremont Township. The Township Highway Commissioner and the Township Engineer work together to implement this SMPP. The Stormwater Coordinator has primary responsibility for managing the overall program.

2.2.A Stormwater Coordinator

The Township Highway Commissioner is the Stormwater Coordinator and is responsible for the oversight and implementation of this SMPP. The Stormwater Coordinator has many different responsibilities, he/she:

- is the lead contact for coordination with the Lake County Stormwater Management Commission, the Illinois Environmental Protection Agency, contractors, the development community and other external regulatory agencies;
- understands the requirements of ILR40, ensures that the SMPP meets the requirements of the permit and that the Township effectively implements the SMPP;

- ensures, or assists the Enforcement Officer in ensuring, that the Township complies with all minimum Watershed Development Ordinance (WDO) provisions;
- ensures that the Facilities comply with all minimum ILR40 permit requirements;
- is aware when a Project is required to be authorized under the ILR10 permit. In these cases the Stormwater Coordinator should ensure that the NOI is received by IEPA at least 30 days prior to the start of construction;
- assists the development community in understanding when a ILR10 permit is required and whether construction sites comply with the general ILR10 and WDO permit conditions; and
- understands the role illicit discharges play in the overall NPDES II program. In general, an incidence of non-compliance must be filed with IEPA for illicit discharges exiting an MS4's outfall into a receiving water. Additionally, if the illicit discharge is generated by a construction site, it may be necessary for both the applicant and the MS4 to file the ION form with IEPA.

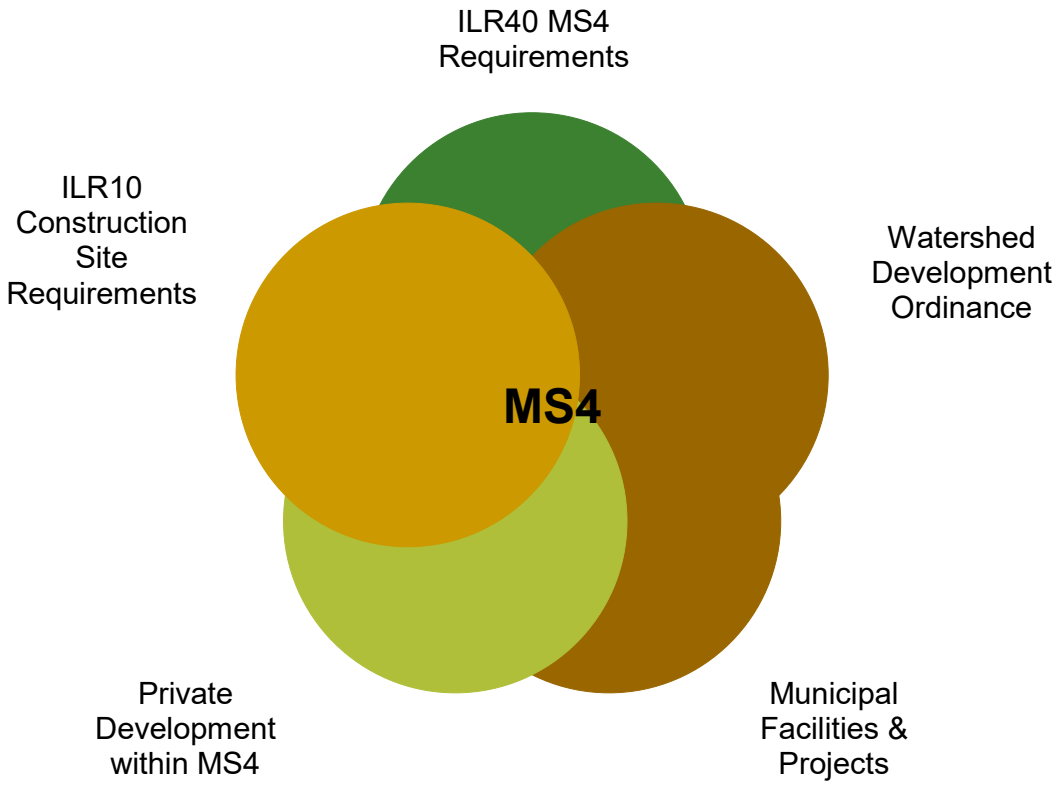


Figure 7: Roles of MS4
provided by Gewalt Hamilton Associates, Inc.

2.2.B Engineering Department

Engineering personnel support the Stormwater Coordinator in obtaining compliance with both the NDPES and WDO programs.

The SMC Chief Engineer is the Enforcement Officer with respect to the administration and enforcement of the Lake County Watershed Development Ordinance (WDO). The Enforcement Officer has the responsibility to concur that projects meet WDO standards prior to the issuance of permits, and oversee site inspections during construction. Refer to Chapter 3.1.D, 3.1.E, 3.5 and 3.6 for additional information on this process.

2.2.C Public Works Department

Infrastructure maintenance activities within the MS4 are carried out by Public Works personnel. Public Works personnel are designated as the primary entity responsible for performing the duties specified under Chapter 3.4 Illicit Discharge Detection and Elimination and Chapter 3.7 Pollution Prevention and Good Housekeeping.

2.3 Coordination with Lake County Stormwater Management Commission

Coordination between the MS4 and the Lake County Stormwater Management Commission (SMC) occurs through both participation in the SMC sponsored MAC forums and through the Certified Community Status under the Lake County Watershed Development Ordinance (WDO). The MS4's Stormwater Coordinator is the lead contact for participation in the MAC forums.

SMC is the primary entity responsible for meeting Public Education and Outreach and Public Participation and Involvement MCMs. Additionally, SMC and has the lead responsibility for Construction Site Runoff Control and Post Construction Runoff Control MCMs in Non-Certified Communities. If the MS4 is a Certified Community, the MS4's Enforcement Officer has lead responsibility for Construction Site Runoff Control and Post Construction Runoff Control MCMs.

2.4 Watershed Work Groups

2.4.A.1 Fox River Study Group

The Fox River Study Group (FRSG) is a diverse coalition of stakeholders working together to assess water quality in the Fox River watershed. Participants include Friends of the Fox River, Sierra Club, Fox River Water Reclamation District (Elgin), Fox Metro Water Reclamation District (Aurora), Fox River Ecosystem Partnership, Illinois Environmental Protection Agency (IEPA) and Blackberry Creek Watershed Plan Implementation Council as well as representatives from Algonquin, Aurora, Batavia, Crystal Lake, Elgin, Geneva, Island Lake, Kane County, Lake in the Hills, St. Charles and Yorkville.

The FRSG began meeting in the summer of 2001 to plan how to prepare for the upcoming Total Maximum Daily Load (TMDL) study on the river. A TMDL study is required by federal law because three segments of the Fox River appeared on the Illinois Environmental Protection Agency's list of impaired waters (the 1998 303(d) list). These segments, which lie between Holiday Hills and North Aurora, were listed because results from at least one water sample suggest there are water quality concerns. The most common concerns include low dissolved oxygen levels or high concentrations of fecal coliform bacteria. The 303(d) listing was updated in 2002, and now includes the entire length of the Fox River from the Wisconsin state line to the river's mouth at Ottawa with the most numerous causes listed as flow alteration, habitat alteration, low dissolved oxygen, nutrients, organic enrichment, PCBs, siltation or suspended solids.
The mission of the Fox River Study Group is to bring together a diverse coalition of stakeholders to work together to preserve and/or enhance water quality in the Fox River watershed.

The activities of the Fox River Study Group shall include, but are not limited to, the following:

- Participation in water quality monitoring efforts in the Fox River watershed;
- Development of a computer model of the Fox River watershed;
- Maintenance of the computer model as a management tool to promote efficient use of taxpayer and private money on watershed projects, assess the effect of various development options throughout the watershed, educate stakeholders, evaluate management priorities, identify sensitive regions within the watershed, develop continuing monitoring programs;
- Development of a plan to preserve and/or enhance the water quality of the Fox River; and
- Promotion, as needed, of the adoption of the watershed plan by appropriate entities who have the authority for its implementation.

Additional information and a copy of the Fox River Implementation Plan can be found at http://www.foxriverstudygroup.org/index.htm.

2.4.A.2 Des Plaines River Watershed Workgroup

The Des Plaines River Watershed Workgroup (DRWW) is a voluntary, dues paying organization with a mission to bring together a diverse coalition of stakeholders to work together to improve water quality in the Des Plaines River and its tributaries in a cost effective manner to meet IEPA requirements. Membership of the DRWW consists of communities, Publicly Owned Treatment Works (POTWs), and other interested parties. The Workgroup consists of Agency members represented by NPDES permit holders, Associate members which are non-permit holding organizations, and individual members. The DRWW will monitor water quality in the river and tributaries, prioritize and implement water quality improvement projects, and secure grant funding to offset the cost. Monitoring data will allow for a greater understanding of the water quality impairments, identify priority restoration activities, and track water quality improvements. The Workgroup is committed

to an approach for attaining water quality standards that focuses on stakeholder involvement, monitoring, and locally led decision-making based on sound science.

Additional information can be found at http://www.drww.org.

2.5 Coordination with Consultants

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

2.6 Coordination of Contractors

The Township also has a responsibility to hire contractors who are knowledgeable of the applicable requirements of the ILR40 and ILR10 permits. The Township will require documentation that appropriate training has been attended for all contractors responsible for municipal green infrastructures and ensure they are aware of good housekeeping/ pollution prevention practices.

2.7 Coordination with the Public

Coordination with the Public occurs on several levels. In addition to the avenues described in this SMPP the Public has the opportunity to comment on proposed preliminary and final plats through the Plan Commission and Municipal Board process established in the Municipal Code.

2.8 Coordination with the IEPA

The Township is required to complete annual reports which describes the status of compliance with the ILR40 permit conditions and other related information as presented on the annual report template provided by the QLP. The annual report must be posted on the Township website and submitted to the IEPA by the first day of June each year. Annual reporting to IEPA should consist of “implemented SMPP” for all tasks completed in accordance with this SMPP. Additional information should be provided for areas of enhancement or tasks not completed.

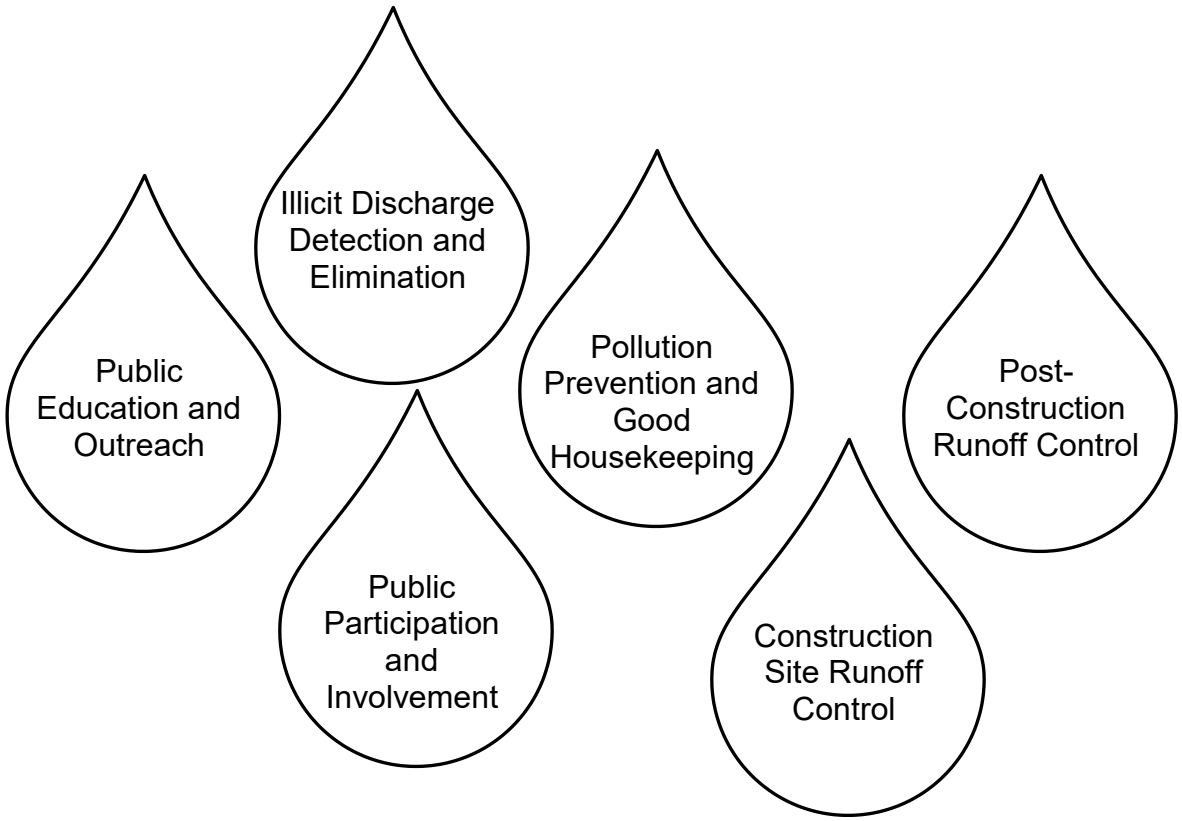
Records regarding the completion and progress of the SMPP commitments must be kept by the community. The tracking form, described in Chapter 2.1, should be updated throughout the year. The completed forms should be located in a binder with necessary supporting documentation. The binder must be available for inspection by both IEPA and the general public.

2.9 Coordination with the Development Community

Fremont Township has a responsibility to assist the development community in understanding when an ILR10 permit is required and whether construction sites comply with the general ILR10 and WDO permit conditions. In general, an incidence of non-compliance must be filed with IEPA for illicit discharges exiting an MS4's outfall into a receiving water. Additionally, if the illicit discharge is generated by a construction site, it may be necessary for both the applicant and the MS4 to file the ION form with IEPA.

Furthermore, the municipality has a responsibility to inform the development community that they are required to hire contractors which meet the qualifications necessary under the program, refer to Chapter 3.5.B for additional information on qualified personnel.

3 The Program



This Stormwater Management Program Plan includes six Minimum Control Measure (MCM) categories, each of which is necessary in an effort to reduce/eliminate stormwater pollution in receiving water bodies. The QLP role in addressing each MCM is described in Chapter 3.1. Additional MS4 efforts are described in the subsequent chapters. Chapter 3.2 describes the efforts to educate the public about stormwater pollution and stormwater pollution prevention. The manner in which Fremont Township incorporates public participation and involvement into the SMPP is explained in Chapter 3.3. Chapter 3.4 describes the approach to detecting and eliminating stormwater illicit discharges. Construction and post construction runoff control is addressed in Chapters 3.5 and 3.6. Lastly, Chapter 3.7 discusses responsibilities for the care and upkeep of its general facilities, associated maintenance yards, and municipal roads and to minimize pollution. This chapter also discusses necessary training for employees on the implementation of the SMPP.

3.1 Qualified Local Program

SMC requires – through the Lake County Watershed Development Ordinance – local stormwater management programs to implement one or more of the minimum control measures specified in the Illinois Environmental Protection Agency's (IEPA's) General NPDES Permit No. ILR40 (MS4 Permit), making it a Qualifying Local Program (QLP). Consistent with the County's comprehensive, countywide approach to stormwater management, as a QLP, SMC has been working since the early 2000's, when began the process of expanding its NPDES Stormwater Program to include small MS4s, to assist Lake County MS4s in developing and implementing efficient and effective stormwater management programs. Although SMC is not itself an MS4, as it does not own or operate a separate storm sewer system, it does perform activities related to each of the six minimum control measures (MCMs) described in Illinois EPA's General NPDES Permit No. ILR40. SMC remains committed to performing a variety of stormwater management activities across the County – which are described in more detail below – to provide Lake County with a baseline Countywide stormwater management program that can be built upon by each of the individual MS4s. In addition to the stormwater management activities described below, SMC program is continually evolving, to better assist Lake County MS4s in meeting the requirements of the new 2016 MS4 Permit.

Measurable Goal(s):

- Provide NOI template in accordance with 2016 ILR40s permit
- Provide yearly annual reporting template including a description of QLP activities for the applicable permit year.
- Research, compile, and make available information regarding receiving waters, impaired waters, pollutants causing such impairments, and the status of TMDL development on such waters. Expand the "State of Lake County Water's segment of the annual report template accordingly.
- Provide Stormwater Pollution Plan template for use Lake County MS4s.

3.1.A Public Education and Outreach

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

3.1.A.1 Distributed Paper Material (BMP A.1)

SMC compiles, develops, and distributes throughout Lake County a variety of materials related to stormwater management. SMC has produced a number of pamphlets and brochures related to stormwater management and prepares a quarterly newsletter, "Mainstream," as well as an Annual Report, which highlight successful stormwater management activities conducted throughout Lake County. SMC also prepares project fact sheets that provide information about ongoing and recently completed stormwater management projects. In addition, SMC has developed or collaborated on a number of manuals related to stormwater management, such as "Riparian Areas Management: A

Citizen's Guide," "A Citizen's Guide to Maintaining Stormwater Best Management Practices," and the "Streambank Stabilization Manual," and will continue to develop or collaborate on such manuals or manual updates on an as-needed basis.

Additionally, SMC researches and compiles materials related to stormwater management from a variety of sources including the QLP, IEPA, USEPA, Center for Watershed Protection, Chicago Metropolitan Agency for Planning "CMAP"(previously Northeastern Illinois Planning Commission "NIPC"), University of Wisconsin Extension, Solid Waste of Lake County (SWALCO) and other agencies and organizations. SMC is a clearing house for MS4 communities by making available the following types of materials available through their take-a-way rack or web-site:

- Informational sheets/pamphlets regarding storm water best management practices including cost-benefits and implementation guidance,
- Informational sheets/pamphlets regarding water quality best management practices,
- Informational sheets/pamphlets regarding construction site activities (soil erosion and sediment control best management practices),
- Storage and disposal of fuels, oils and similar materials used in the operation of or leaking from, vehicles and other equipment;
- Use of soaps, solvents or detergents used in the outdoor washing of vehicles, furniture and other property,
- Paint and related décor;
- Lawn and garden care; and
- Winter de-icing material storage and use.
- Informational sheets/pamphlets regarding green infrastructure strategies such as green roofs, rain gardens, rain barrels, bioswales, permeable piping, dry wells and permeable pavement.
- Informational sheets/pamphlets regarding the hazards associated with illegal discharges and improper disposal of waste and the manner in which to report such discharges.

Measurable Goal(s):

- Distribute informational materials from "take away" rack at SMC.
- Upon request, distribute informational materials directly to Lake County MS4s for local distribution.

3.1.A.2 Speaking Engagement (BMP A.2)

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

will provide educational presentations related to IEPA's NPDES Stormwater Program to Lake County MS4s.

Measurable Goal(s):

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

3.1.A.3 Public Service Announcement (BMP A.3)

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

SMC also utilizes social media to reach out to additional target audiences. Both Facebook and Twitter feeds are updated to include relevant water quality information and promote educational opportunities across the County.

Measurable Goal(s):

- Include public service announcement related to IEPA's NPDES Stormwater Program in its quarterly newsletter, "Mainstream," at least once each year.
- Post watershed identification signage in cooperation and collaboration with LCDOT.
- Provide information via social media (Facebook and Twitter).

3.1.A.4 Outreach Events (BMP A.4)

SMC regularly sponsors and co-sponsors educational and technical training workshops on a variety of stormwater management-related topics. Each year, SMC will sponsor or co-sponsor at least one workshop on a topic related to IEPA's NPDES Stormwater Program, such as soil erosion and sediment control or stormwater best management practices (BMPs) that can be used to protect and improve water quality. SMC also offers an annual deicing workshop and a training workshop on green infrastructure practices; made available to both public employees and contractors.

Measurable Goal(s):

- Sponsor or co-sponsor workshop(s) on a topics related to IEPA's NPDES Stormwater Program.
- Track workshops and events.

3.1.A.5 Classroom Education Material (BMP A.5)

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

Measurable Goal(s):

- Upon request, develop and compile materials for inclusion in a stormwater education kit.
- Upon request, provide information, materials, and training to local students, teachers and/or stakeholders interested in conducting storm drain stenciling.

3.1.A.6 Other Public Education – Web Site (BMP A.6)

SMC maintains a website that contains a variety of materials and resources related to stormwater management. The website provide information about IEPA's NPDES Stormwater Program, provide information about stormwater best management practices (BMPs), allow for download of stormwater management-related publications and documents, provide notices of upcoming meetings and ongoing projects, includes watershed plans and watershed workgroup information, and provide links to a number of other stormwater management-related resources including materials described in 3.1.A.1.

SMC will research, compile and make available materials about the impacts of climate change on precipitation and stormwater runoff and the pollution prevention practices that can be used by private property owners, and an evaluation of the impacts of climate change on existing flood control techniques and practices used to achieve runoff volume reduction. A link to the USEPA's climate change website http://www3.epa.gov/climatechange is included on SMC's website.

Measurable Goal(s):

- Maintain and update the portion of the SMC website dedicated to IEPA's NPDES Stormwater Program with resources such as model ordinances, case studies, brochures, and links including information related to climate change.
- Make "The Big Picture: Water Quality, Regulations & NPDES" presentation available to Lake County MS4s.

3.1.B Public Participation/Involvement

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

3.1.B.1 Public Panel (BMP B.1)

SMC provides procedural guidance and implements its Citizen Inquiry Response System (CIRS) for receiving and taking action on information provided by the public regarding

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

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

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

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

Measurable Goal(s):

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

3.1.B.2 Stakeholder Meeting (BMP B.3)

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

Measurable Goal(s):

- Provide notice of stakeholder meetings on SMC website.
- Track number of watershed committee meetings conducted.
- Establish watershed planning committees for each new watershed planning effort.

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3.1.B.3 Program Involvement (BMP B.6)

Consistent with Lake County's comprehensive, countywide approach to stormwater management, SMC serves as a Qualifying Local Program (QLP) for all Lake County MS4s.

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

Measurable Goal(s):

- Track number of MAC meetings conducted.
- Prepare annual report template for use by Lake County MS4s including a description of the Qualifying Local Program stormwater management activities.
- Prepare SMPP template for use by Lake County MS4s in creating their own SMPP.

3.1.C Illicit Discharge Detection and Elimination

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

Measurable Goal(s):

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

3.1.C.1 Regulatory Control Program (BMP C.2)

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

Measurable Goal(s):

- Provide model and example illicit discharge ordinances to Lake County MS4s.
- Continue to administer and enforce the WDO.

3.1.C.2 Other Illicit Discharge Controls (BMP C.10)

SMC regularly sponsors and co-sponsors educational and technical training workshops on a variety of stormwater management-related topics. Each year, SMC will sponsor or co-sponsor an illicit discharge detection and elimination workshop or other training workshop

related to IEPA's NPDES Stormwater Program and track the number of attendees that attend the workshop as previously described in Chapter 3.1.A.4.

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

As described in Chapter 4.1 the Lake County Health Department's Lake Management unit performs extensive monitoring of inland lakes and Lake Michigan Beaches. Upon receiving a request for service, LMU staff investigates possible pollution sources, fish kills and other lake or pond related inquires throughout the county. Although the Lakes Management Unit is not an enforcement agency, they direct non-jurisdictional issues to appropriate agencies for enforcement, if necessary.

Measurable Goal(s):

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

3.1.D Construction Site Runoff Control

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

The WDO is implemented primarily at the local level. The majority of the fifty-three municipalities in the county were "Certified Communities." The designation allows those communities to enforce WDO standards within their own jurisdictions. Note, however, that the primary responsibility for the implementation of the Construction Site Runoff Control MCM in certified communities (i.e., communities certified by SMC to administer and enforce the provisions of the WDO) lies with the MS4.

SMC will continue to support Lake County MS4s in the implementation of the Construction Site Runoff Control MCM by administering and enforcing the WDO and performing other stormwater management activities, as described below. SMC administers the WDO and issues permits for the developments within the Non-Certified Communities.

3.1.D.1 Regulatory Control Program (BMP D.1)

The WDO is the regulatory mechanism that requires the use of soil erosion and sediment controls on development sites throughout Lake County. The soil erosion and sediment control provisions are included in Article 6 of the WDO. At a minimum, these standards apply to any development project that hydrologically disturbs 5,000 square feet of land or more.

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

- Continue to administer and enforce the WDO.
- Continue to administer the Designated Erosion Control Inspector (DECI) program outlined by the WDO.

3.1.D.2 Erosion and Sediment Control BMPs (BMP D.2)

§600 of the WDO specifies the soil erosion and sediment control measures that must be used in conjunction with any land disturbing activities conducted on a development site. Ordinance provisions include but are not limited, to the following:

- Grading, soil erosion and sediment control plan. The plan must:
    - Minimize soil disturbance
    - Prevent discharge of sediment from the site through the implementation of soil erosion control practices, primarily, and sediment control secondarily
    - Protect receiving waters, natural areas and adjacent properties from damage which may result from the proposed grading
    - complete installation of soil erosion and sediment control features prior to commencement of hydrologic disturbance
    - stabilize disturbed areas within 7 days of active disturbance
    - avoid disturbance of streams whenever possible
    - use controls that are appropriate for the size of the tributary drainage area
    - protect functioning storm sewers from sediment
    - prevent sediment from being tracked onto adjoining streets
    - limit earthen embankments to slopes of 3H:1V
    - identify soil stockpile areas

    - utilize statewide standards and specifications as guidance for soil erosion and sediment control.
- Waste control;
- Runoff Volume Reduction Hierarchy and Water Quality;
- Established inspection duties for the applicant and procedures for inspections;
- Record keeping and reporting procedures;
- Security deposits to ensure faithful performance;
- Enforcement measures to achieve compliance; and
- One year warranty period, for applicable developments.

SMC has maintains technical guidance documents to accompany the WDO. The guidance documents and the Illinois Urban Manual 2014 are used to guide the creation of development plans that are in compliance with the provisions of the WDO and provides detailed information on the use of soil erosion and sediment control BMPs.

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

Measurable Goal(s):
- Continue to administer and enforce the WDO.
- Continue to maintain technical guidance documents.

3.1.D.3 Other Waste Control Program (BMP D.3)

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

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

3.1.D.4 Site Plan Review Procedures (BMP D.4, E.4)

A community's designated enforcement officer is responsible for reviewing and permitting development plans and for administering and enforcing the provisions of the WDO. Within certified communities (i.e., communities certified by SMC to administer and enforce the provisions of the WDO), responsibility for reviewing and permitting development plans and for administering and enforcing the provisions of the WDO lies with the MS4; within non-

certified communities, the designated enforcement officer is SMC's chief engineer. All designated enforcement officers must pass an exam in order to qualify to act as such. SMC administers this enforcement officer program, providing training on an as-needed basis to all enforcement officers to assist them in passing the exam, and maintains an up-to-date list identifying each community's designated enforcement officer. In addition to administering the enforcement officer program, SMC periodically reviews each community's WDO administration and enforcement records, using the results of such review to evaluate the performance of certified communities and designated enforcement officers.

SMC maintains technical guidance documents to accompany the WDO. These documents are used to guide the creation of development plans that are in compliance with the provisions of the WDO and provides additional guidance on the administration and enforcement of the ordinance.

Measurable Goal(s):

- Administer the Enforcement Officer (EO) program outlined by the WDO.
- Maintain an up-to-date list identifying each community's designated enforcement officer.
- Periodically review each community's WDO administration and enforcement records.
- Continue to maintain technical guidance documents.

3.1.D.5 Site Inspection/Enforcement Procedures (BMP D.6, E.5)

Article 5 of the WDO contains both recommended and minimum requirements for the inspection of development sites. Within certified communities, the community's designated enforcement officer is responsible for conducting these inspections; within non-certified communities, SMC's chief engineer is responsible for conducting these inspections. Per the ordinance, these inspections may be conducted by a community's designated enforcement officer at any stage in the construction process. For major developments, as defined by the WDO, the enforcement officer conducts site inspections, at a minimum, upon completion of installation of soil erosion and sediment controls, prior to the start of any other land disturbing activities, and after final stabilization and landscaping, prior to the removal of soil erosion and sediment controls.

Article 12 of the WDO specifies the legal actions that may be taken and the penalties that may be imposed if the provisions of the WDO are violated. If development activities on a development site are not in compliance with the requirements of the WDO, the enforcement officer may issue a stop work order on all development activity on the development site or on the development activities that are in direct violation of the WDO. In addition, failure to comply with any of the requirements of the WDO constitutes a violation of the WDO, and any person convicted of violating the WDO may be fined.

Measurable Goal(s):

- Document and track the number of site inspections conducted by SMC.

3.1.D.6 Public Information Handling Procedures (BMP D.5)

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

Measurable Goal(s):

- Document and track the number of soil erosion and sediment control-related complaints received and processed by SMC.

3.1.E BMP Reference Information

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

- Native Plant Guide,
- Lake County SMC's Technical Reference Manual,
- Illinois Urban Manual, 2014
- SMC's
    - soil erosion and sediment checklist,
    - soil erosion and sediment control notes,
    - typical construction sequencing,
- Construction details are available on the website,
- Center for Watershed Protection documents, and
- IEPA and USEPA publications.

3.1.F Post-Construction Runoff Control

As described above, Lake County has adopted a countywide Watershed Development Ordinance (WDO) that establishes the minimum stormwater management requirements for development in Lake County, including requirements for post-construction runoff control. SMC will continue to support Lake County MS4s in the implementation of the Post-Construction Runoff Control MCM by administering and enforcing the WDO and

performing other stormwater management activities, as described below. Note, however, that the primary responsibility for the implementation of the Post-Construction Runoff Control MCM in certified communities (i.e., communities certified by SMC to administer and enforce the provisions of the WDO) lies with the MS4.

3.1.F.1 Regulatory Control Program (BMP E.2)

The WDO requires all applicants to adopt stormwater management strategies for controlling post-construction stormwater runoff on development sites. As outlined in Se 5 of the WDO, all applicants must adopt stormwater management strategies that minimize increases in stormwater runoff rates, volumes, and pollutant loads from development sites. Proposed stormwater management strategies must address the runoff volume reduction requirements described in §503 of the WDO and must include appropriate stormwater BMPs to address the other applicable post-construction runoff control requirements of the WDO.

Measurable Goal(s):

- Continue to administer and enforce the WDO.

3.1.F.2 Long Term O&M (BMP E.3)

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

Concerns related to a completed development or re-development shall be route to the Enforcement Officer, or designee. Site inspections and/or follow-up maintenance recommendations will be made to the property owner on a case by case basis.

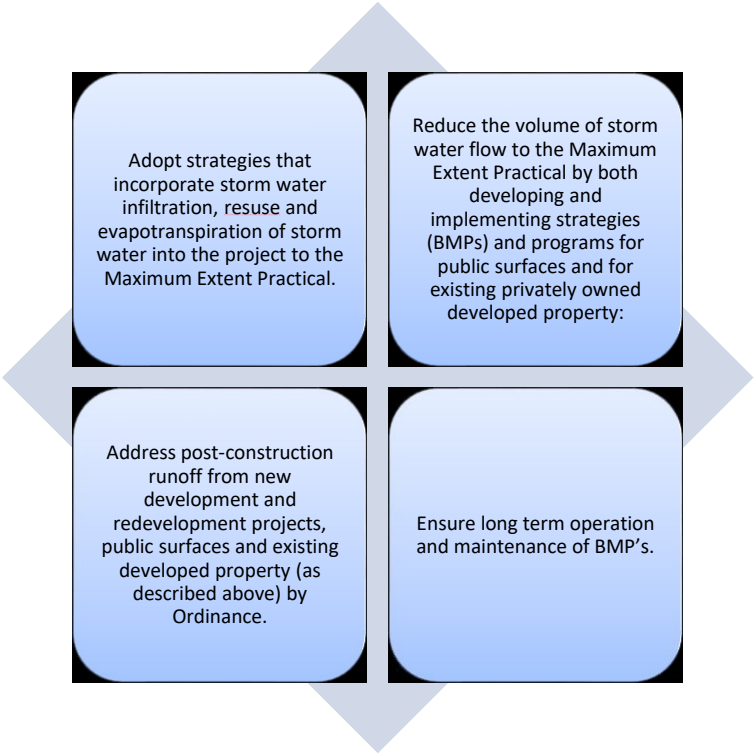
Measurable Goal(s):

- Continue to administer and enforce the WDO.

3.1.F.3 Runoff Volume Reduction Hierarchy (BMP E.4)

As described above, a community's designated enforcement officer is responsible for reviewing and permitting development plans and for administering and enforcing the provisions of the WDO. This includes a review of the stormwater BMPs that will be used to meet the post-construction runoff control requirements of the WDO. Developments that exceed the thresholds identified in the WDO are required to quantify the RVR provided by

the site design, including a combination of structural and/or non-structural BMPs that will reduce the discharge of pollutants, the volume and velocity of storm water flow to the maximum extent practicable. The permittee should ensure that the development plan addresses these provisions during the plan review process. The WDO was written to specifically address the following ILR40 permit requirements.



Each permittee is also required to adopt strategies that incorporate storm water infiltration, reuse and evapotranspiration of storm water into the project to the maximum extent practicable in accordance with the qualitative RVR provisions of the WDO. Types of techniques include green roofs, rain gardens, rain barrels, bioswales, permeable piping, dry wells and permeable pavement.

Measurable Goal(s):

- Continue to administer and enforce the WDO.

3.1.F.4 Other Post-Construction Runoff Controls (BMP E.7)

Through the Watershed Management Board (WMB), SMC provides partial funding for flood damage reduction and surface water quality improvement projects. The WMB, which includes representatives from the Lake Michigan, North Branch of the Chicago River, Fox River, and Des Plaines River watersheds, meets annually to review potential projects and to make recommendations on stormwater BMP project funding. Members of the WMB include chief municipal elected officials, township supervisors, drainage district chairmen, and county board members from each district found within each of Lake County's four major watersheds. The goal of the WMB program is to maximize opportunities for local

units of government and other groups to have input and influence on the solutions used to address local stormwater management problems. Previous WMB-funded projects have reduced flooding, improved surface water quality, and enhanced existing stormwater management facilities throughout Lake County.

Measurable Goal(s):

- Conduct annual WMB meeting.
- Contribute funding to flood damage reduction and water quality improvement projects through the WMB.

3.1.G Pollution Prevention / Good Housekeeping

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

3.1.G.1 Employee Training Program (BMP F.1)

SMC will assist Lake County MS4s with the development and implementation of their employee training programs by maintaining a list of known employee training resources and opportunities, making available a software-based employee training program, and providing, upon request, technical assistance to local MS4s in developing and implementing their employee training programs. The Center for Watershed Protection's *URSM Manual 9: Municipal Pollution Prevention Practice* is a key resource. In addition, each year, SMC will sponsor or co-sponsor training workshops as previously described in Chapter 3.1.A.4.

Measurable Goal(s):

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

3.1.G.2 Flood Management / Assess Guidelines (BMP F.5)

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

Measurable Goal(s):

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

3.1.G.3 Winter Roadway Deicing (BMP F.6)

Measurable Goal(s):

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

3.1.H Watershed Plans

SMC has collaborated on a number of watershed based plans throughout the County. Watershed plans are implemented by SMC and local communities and organizations as plan recommended best management practices and projects are fleshed out with designs and budgets and funding is secured.

These plans were created in part to identify opportunities for watershed communities to integrate multi-objective watershed management in community decisions and activities; establish an inventory of stormwater and pollutants; and to improve degraded conditions in the watershed by implementing best management practices and programs to retrofit existing flood control techniques and problem areas and prevent future problems from occurring. The adoption of these Plans will guide the successful implementation of a series of individual site-specific projects and watershed-wide programmatic actions to: improve water quality, reduce flood damage potential, protect and enhance natural resources including the watershed's lakes, streams and wetlands; and in addition, will provide watershed education and recreation opportunities and improve community cooperation and participation in watershed improvement activities.

The creation and adopted watershed based plans were completed on a voluntary basis and not to meet any ILR40 permit requirements. However, implementation of individual site-specific projects or programmatic actions without the use of 319 funding can be cited by an MS4 community toward meeting ILR40 permitting requirements. The status of the County's watershed planning efforts is depicted on Figure 8 below.

Des Plaines River Watershed

The Lake County Stormwater Management Commission (SMC) has completed watershed management plans for the Indian Creek, Bull Creek/Bull's Brook, North Mill Creek-Dutch Gap Canal, Mill Creek, and Buffalo Creek sub-watersheds, and is currently developing an umbrella watershed-based plan for the entire Des Plaines watershed in Lake County that will be completed in 2018.

Fox River Watershed

Watershed management plans have been completed for the Fish Lake Drain, Flint, Mutton, Sequoit, Slocum, Squaw and Tower Lake Drain, subwatersheds. The Sequoit and Squaw watershed plans are older and do not meet the current EPA requirements for an approved watershed-based plan.

North Branch of the Chicago River Watershed

Completed watershed plans include the North Branch of the Chicago River Watershed-Based Plan, North Branch Chicago River Open Space Plan and the Skokie River Headwaters/North Chicago Flood Damage Reduction Study.

Lake Michigan Watershed

Watershed-based plans have been completed and approved for the Dead River Kellogg Creek, and Waukegan subwatersheds. Extensive ravine and stream inventories have been completed for the entire Lake Michigan Watershed, excluding stream segments in the coastal plain of Illinois Beach State Park.

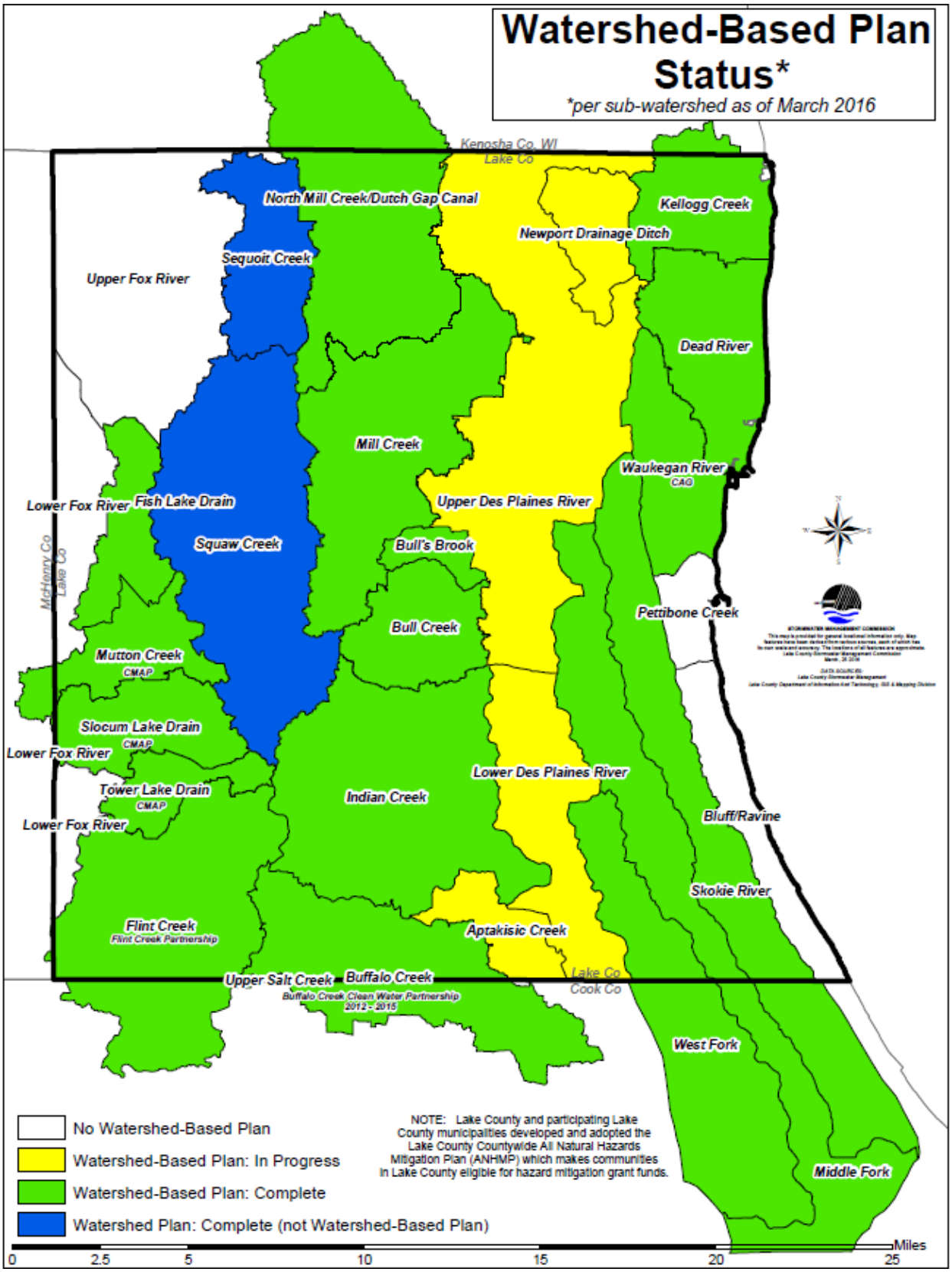


Figure 8: Watershed Based Plan Status

3.2 Public Education and Outreach

In additional to the extensive QLP efforts, which are described in more detail in Chapter 3.1, the Township utilizes a variety of methods to educate and provide outreach to the public about the importance of managing pollutants that potentially could enter the stormwater system. The program includes the following activities which are discussed in greater detail in this chapter.

- Distribute information sheets regarding stormwater BMP, water quality BMP, and proper hazardous waste use and disposal.
- Post water quality/stormwater information in the Township newsletter.
- Attend/sponsor outreach activities to homeowners / property owner associations, commercial / industrial facilities, schools, and other events.
- Coordinate, publicize, and participate in bi-annual SWALCO events.
- Maintain website which offers links to additional educational information, and ways to contact Township personnel.
- Advise on the potential impacts and effects on stormwater discharge due to climate change http://epa.gov/climatechange with more links located at www.gha-engineers.com/ms4

3.2.A Distribution of Paper Materials (BMP A.1)

In addition to the QLP's efforts to obtain and distribute informational materials throughout Lake County, the Township provides contact information on outreach publications to encourage residences to report environmental concerns and distributes the following additional types of materials:

.

- The “Guidelines for Draining Swimming Pools” door hanger,
- The “Protect Our Water” door hanger,
- Informational sheets/pamphlets regarding the hazards associated with illegal discharges and improper disposal of waste and the manner in which to report such discharges.
- Informational sheets/pamphlets published by SWALCO regarding proper hazardous waste use and disposal, and

Publications are provided in the following manner:

- At take-a-away racks,
- At outreach events,
- The municipal newsletter, a monthly publication,
- At Earth Day/Green Day events held in the community, and
- At scheduled meetings with the general public. These meetings are on an as needed or as requested basis and may be with the home owners associations, businesses, or local schools.

Measurable Goal(s):

- Support QLP efforts.
- Distribute informational materials from “take away” racks and other appropriate forms.
- Include SMPP related article in newsletter

3.2.B Other Public Education - Web Site (BMP A.6)

In addition to the QLP’s efforts to distribute information via its website, which are described in more detail in Chapter 3.1.A.6, maintain a website that contains materials and resources related to stormwater management. The website includes a webpage that provides information about IEPA’s NPDES Stormwater Program, information about the stormwater management program, including its SMPP, NOI, Permit, Annual Report and Green Practices, and links to a number of other stormwater management-related resources, including the Lake County Stormwater Management Commission’s (i.e., QLP’s) website.

Measurable Goal(s):

- Maintain and update the portion of the website dedicated to its stormwater management program including links to SMC, IEPA and SWALCO.
- Post SMPP, the NOI and current Annual Report and previous 5 Annual Reports on the website.

3.2.C Outreach Events (BMP A.1, A.4)

In addition to the QLP's efforts to sponsor or co-sponsor workshops and provide educational presentations, which are described in more detail in Chapter 3.1, when possible attend and/or sponsors outreach events and scheduled meetings with the general public on stormwater management-related topics. Events sponsored by the QLP often offer the opportunity to share information and facilitate a collective focus on potential solutions to the challenges faced by the County, Villages, and other stakeholders. These events are held on an as needed or as requested basis. Audiences may include the home owners associations, lake associations, businesses, and neighborhood groups.

Measurable Goal(s):

- Support QLP efforts.

3.2.D Household Hazardous Wastes (BMP A.4)

The average garage contains a lot of products that are classified as hazardous wastes, including paints, stains, solvents, used motor oil, pesticides and cleaning products. While some household hazardous waste (HHW) may be dumped into storm drains, most enters the storm drain system as a result of outdoor rinsing and cleanup. Improper disposal of HHW can result in acute toxicity to downstream aquatic life. The desired neighborhood behavior is to participate in HHW collection days, and to use appropriate pollution prevention techniques when conducting rinsing, cleaning and fueling operations.

Support the efforts of the Solid Waste Agency of Lake County (SWALCO) to implement programs throughout Lake County. There programs are aimed at reducing our reliance on landfills through source reduction, recycling and energy recovery. In general, the programs help residents dispose of problem wastes, such as household chemicals, electronic equipment, and yard waste. Their recycling programs are targeted at both commercial and residential markets in order to divert as much solid waste as possible from reaching landfills. They also administer a public information and education program including the “Earth Flag” and “Earth Flag Every Day” programs in the schools, promoting SWALCO events, and publishing various resources and public service announcements. As part of these waste management efforts, SWALCO:

- Conduct dozens of household hazardous chemical waste and electronic collection events each year at various locations throughout the county.
- Mass media campaigns to educate residents about proper outdoor cleaning/ rinsing techniques
- Conventional outreach materials notifying residents about HHW and collection days
- Providing curbside disposal options for some HHW
- Providing mobile HHW pickup

Measurable Goal(s):

- Support and publicize SWALCO efforts.

3.2.E Septic System Maintenance (BMP A.6)

Failing septic systems can be a major source of bacteria, nitrogen, and phosphorus, depending on the overall density of systems present in a subwatershed . Failure results in illicit surface or subsurface discharges to streams. Septic systems are a classic case of out of sight and out of mind. Many owners take their septic systems for granted, until they back up or break out on the surface of their lawn. Subsurface failures, which are the most common, go unnoticed. In addition, inspections, pump outs, and repairs can be costly, so many homeowners tend to put off the expense until there is a real problem. Lastly, many septic system owners are not aware of the link between septic systems and water quality.

Lake County is responsible for septic system maintenance for Townships.

Measurable Goal(s):

- Support county efforts

3.2.F Vehicle Fluid Maintenance (BMP A.6)

Dumping of automotive fluids into storm drains can cause major water quality problems, since only a few quarts of oil or a few gallons of antifreeze can severely degrade a small stream. Dumping delivers hydrocarbons, oil and grease, metals, xylene and other pollutants to streams, which can be toxic during dry-weather conditions when existing flow cannot dilute these discharges. The major culprit has been the backyard mechanic who changes his or her own automotive fluids. The Township may utilize a range of tools to minimize illicit discharges:

- Outreach materials distributed at the Township Office

Measurable Goal(s):

- Promote safe vehicle maintenance through previously described BMPs: *Distribution of Paper Materials* (Chapter 3.2.A), Web Site (Chapter 3.2.B) and Outreach Events (Chapter 3.2.C)

3.2.G Car / Outdoor Washing (BMP A.6)

Car washing is a common neighborhood behavior that can produce transitory discharges of sediment, nutrients and other pollutants to the curb, and ultimately the storm drain. Communities have utilized many innovative outreach tools to promote environmentally safe car washing, including:

- Outreach materials distributed at the Township Office

Measurable Goal(s):

- Promote safe car washing through previously described BMPs: *Distribution of Paper Materials* (Chapter 3.2.A), Web Site (Chapter 3.2.B) and Outreach Events (Chapter 3.2.C)

3.2.H Lawn and Garden Care (BMP A.6)

Our yards are our outdoor homes: fun, beautiful, great spaces for relaxing. Fertilization decisions should be based on the nutritional and growth requirements of plant and the soil conditions. Adding unneeded fertilizer in the yard does not benefit plants and could end up in the storm water system or polluting streams, lakes, and aquifers. By taking care of our lawns and gardens properly, we can save money, time and help the environment. Green

Scaping encompasses a set of landscaping practices that can improve the health and appearance of your lawn and garden while protecting and preserving natural resources. This is further described in EPA's Green Scaping Publication.
https://www.epa.gov/sites/production/files/2014-04/documents/greenscaping_-_the_easy_way_to_a_greener_healthier_yard.pdf

Measurable Goal(s):

- Promote healthy lawn care through previously described BMPs: *Distribution of Paper Materials* (Chapter 3.2.A), Web Site (Chapter 3.2.B) and Outreach Events (Chapter 3.2.C)

3.2.I Green Infrastructure (BMP A.6)

Encourage residents' use of storm water infiltration, reuse and evapotranspiration of storm water practices on their properties. Types of techniques include green roofs, rain gardens, rain barrels, bioswales, permeable piping, dry wells and permeable pavement.

Measurable Goal(s):

- Promote the use of green infrastructure on private property through previously described BMPs: *Distribution of Paper Materials* (Chapter 3.2.A), Web Site (Chapter 3.2.B) and Outreach Events (Chapter 3.2.C)

3.2.J Pool Dewatering (BMP A.6)

Chlorinated water discharged to surface waters, roadways or storm sewers has an adverse impact on local stormwater quality. High concentrations of chlorine are toxic to wildlife, fish and aquatic plants. The pH of the water should be between 6.5 and 8.5. Algaecides such as copper or silver can interrupt the normal algal and plant growth in receiving waters and should not be present when draining. Prepare appropriately before draining down a pool. It is recommended that one of the following measures be used:

1) De-chlorinate the water in the pool prior to draining through mechanical or chemical means; these types of products are available at local stores.

2) De-chlorinate the water in the pool through natural means. Pool water must sit at least 2 days with a reasonable amount of sun, after the addition of chlorine or bromine. It is recommended that the chlorine level be tested after 2 days to ensure that concentrations are at a safe level (below 0.1-mg/l).

3) Drain the pool slowly over a several day period across the lawn; or drain directly into the sanitary sewer using the following additional guidelines:
   a) Avoid discharging suspended particles (e.g. foreign objects blown into the pool like leaves, seedlings, twigs etc) with pool water.
   b) When draining your pool, do not discharge directly onto other private properties or into public right-of-way **including storm sewer inlets**.

Measurable Goal(s):

- Promote safe pool dewatering through previously described BMPs: *Distribution of Paper Materials* (Chapter 3.2.A), Web Site (Chapter 3.2.B) and Outreach Events (Chapter 3.2.C). Efforts should be targeted each fall, preferably September and may incorporate the use of Pool ***Dewatering Fact Sheet*** **(Appendix 5.11).**

3.3 Public Participation and Involvement

The public participation and involvement program allows input from citizens during the development and implementation of the SMPP.

3.3.A Stakeholder Meeting (BMP B.3)

The QLP is actively involved in watershed planning throughout Lake County. Watershed stakeholder meetings are regularly held throughout Lake County as part of new and/or ongoing watershed planning and/or project implementation efforts. When Fremont Township is a stakeholder in a watershed planning and/or project implementation effort (i.e., any part of Fremont Township is located within boundaries of a watershed subject to a planning and/or project implementation effort), the MS4 participates in scheduled stakeholder meetings.

Measurable Goal(s):

- Support QLP efforts.
- Participate in stakeholder/watershed groups, as appropriate.

3.3.B Public Review Process (BMP B.4)

In addition to the QLP's efforts to coordinate and conduct public meetings as well as committee meetings that are open to the public throughout Lake County, the Township presents each year's annual report to the Board during an open meeting and provide for input from the public as to the adequacy of the permittee's MS4 program. Comments are evaluated for inclusion and incorporated into the next revision of the SMPP as appropriate.

Measurable Goal(s):

- Present each year's annual report to the Board during an open meeting and provide for input from the public as to the adequacy of the permittee's MS4 program.
- Support QLP efforts.

3.3.B.1 Environmental Justice Areas

Environmental justice is 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. EPA has this goal for all communities and persons across this nation. It will be achieved when everyone enjoys:

- the same degree of protection from environmental and health hazards, and
- equal access to the decision-making process to have a healthy environment in which to live, learn, and work.

"Potential" EJ communities have been identified based on IEPA guidance to include communities 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 that 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. The following web application is another resource that can be used to determine if an area would qualify for consideration as an environmental justice community. https://ejscreen.epa.gov/mapper/index.html.

Measurable Goal(s):

- Identify EJA, if any, within the community and ensure that BMP efforts are targeted at these areas. Based on the EJ Screen tool, most of Fremont Township is in the "less than 50 percentile" range for environmental justice variables. Three block groups in the southeast corner of the township are in the ~65 percentile for several EJ variables.

3.3.B.2 Complaints, Suggestions and Requests (BMP B.7)

The Township encourages the submission of complaints, suggestions and requests related to its stormwater program. Calls are screened, logged and routed to the appropriate department for action. General program related calls are directed to the Stormwater Coordinator, or designee. Construction activity related telephone calls are directed to the Enforcement Officer, or designee

Measurable Goal(s):

- Encourage submission of complaints, suggestions and requests by publicizing contact information on previously described BMPs: Distributed Paper Materials (Chapter 3.2.A.) and on the Website (Chapter 3.2.B).

3.3.C Program Involvement (BMP B.6, C.6)

As described in Chapter 3.1.B.3, SMC proactively formed the Municipal Advisory Committee (MAC) to provide a forum for representatives of local MS4s to discuss, among other topics, the implementation of IEPA's NPDES Stormwater Program. SMC facilitates quarterly MAC meetings to bring Lake County MS4s together to discuss the implementation of IEPA's NPDES Stormwater Program. The Township will continue to attend and participate in the quarterly MAC meetings.

Measurable Goal(s):

- Attend and participate in MAC meetings
- Support QLP efforts

3.3.D Illicit Discharge/Illegal Dumping Hotline (BMP B.7, D.5)

The community publicizes a contact/outreach form to contact the Township and the Stormwater Coordinator through the webpage located at: www.gha-engineers.com/ms4. Residents may also call the Township office. Telephone calls received from residents, other Township Departments or other agencies are logged on the **Indirect Illicit Discharge Tracking Form** (**Appendix 5.7)**. Primary advertisement venues include the website and all related municipal publications.

Measurable Goal(s):

- Log reports on the **Indirect Illicit Discharge Tracking Form** (**Appendix 5.7)**.
- Investigate potential illicit discharges

3.4 Illicit Discharge Detection and Elimination[1]

Currently, illicit discharges (defined in 40 CFR 122.26(B)(2)) contribute considerable pollutant loads to receiving waters. There are two primary situations that constitute illicit discharges; these include non-stormwater runoff from contaminated sites and the deliberate discharge or dumping of non-stormwater. Illicit discharges can enter the storm sewer system as either an indirect or direct connection.

Program objectives and procedures for the identification and removal of direct connections of pollutants into the storm water management systems (including wetlands and receiving waters) are included in this manual. Step-by-step instructions for identifying storm sewers suspected of containing pollutants, suggestions for actions to be taken to determine the sources of identified pollutants, and steps for correcting identified problems are provided. The results of the procedures presented in this manual are intended to serve as indicators of pollution, rather than to provide specific quantitative analysis. If the presence of pollutants is indicated, the detective work of identifying the source of the discharge can begin. Once the source is identified, it can then be corrected.

3.4.A Regulatory Authority (BMP C.2)

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

[1] Chapter 3.5 is a revision of the Lake Michigan Watershed Stormwater Outfall Screening Program Training Program (April 1994 by SMC), and incorporates material from the Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments (October 2004 by the Center for Watershed Protection and Robert Pitt, University of Alabama).

3.4.A.1 Watershed Development Ordinance

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

The WDO allows SMC to require inspection deposits, performance bonds, and to adopt/enforce violation procedures. These tools assist in achieving complaint construction sites. These items are further discussed in Chapters 3.1.D, 3.1.E, 3.5 and 3.6.

Measurable Goal(s):

- Support QLP efforts.
- Enforce Watershed Development Ordinance

3.4.A.2 Illicit Discharge Ordinance

The Township has not created an Illicit Discharge Ordinance, but it supports the Watershed Development Ordinance and the efforts of SMC to enforce the WDO.

Measurable Goal(s):

- Support SMC enforcement of WDO

3.4.B Understanding Outfalls and Illicit Discharges

Understanding the potential locations and the nature of illicit discharges in urban watersheds is essential to find, fix and prevent them.

3.4.B.1 Potential Sources of Illicit Discharges

Inspecting storm water outfalls during dry-weather conditions reveals whether non-storm water flows exist. If non-storm water flows are observed, they can be screened and tested to determine whether pollutants are present.

There are two primary situations that constitute illicit discharges; these include non-storm water runoff from contaminated sites and the deliberate discharge or dumping of non-storm water. Deliberate discharge or dumping can enter the storm sewer system in two ways:

- direct connections – through direct piping connections to the storm sewer system, and
- indirect connections – through subtle connections, such as dumping or spillway of materials into storm sewer drains.

Direct connections are more likely to result in continuous pollutant discharges than indirect connections, which often produce limited, intermittent discharges of pollutants. USEPA guidance indicates that direct connections to storm sewer systems most likely originate from commercial/industrial facilities. Thus, the focus of this manual is the identification of illicit discharges from commercial/industrial facilities.

3.4.B.2 Exclusions

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

- Water line flushing,
- Landscaping irrigation,
- Diverted stream flows,
- Rising groundwaters,
- Uncontaminated groundwater infiltration,
- Uncontaminated pumped groundwater,
- Discharges from potable water sources,
- Flows from foundation drains,
- Air conditioning condensation,
- Irrigation water,
- Springs,
- Water from crawl spaces,
- Lawn watering,
- Individual car washing,
- Flows from riparian habitats and wetlands,
- Dechlorinated swimming pool water, and
- Street wash water.
- Discharges from dewatering activities, if managed by appropriate controls as specified in a project's SMPP, erosion and sediment control plan, or stormwater management plan.

3.4.B.3 Prohibited Discharges

It is noted the following non-stormwater discharges are prohibited by the ILR40 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 O&M,
- Soaps, solvents, or detergents,
- Toxic or hazardous substances from a spill or other release
- Any other pollutant that could cause or tend to cause water pollution

3.4.B.4 Pollutant Indicators

3.4.B.4.a PHYSICAL POLLUTANT INDICATORS

Adapted from New Hampshire Estuaries Project and the IDDE Guidance Manual by the Center for Watershed Protection.

Odor

Water is a neutral medium and does not produce odor; however, most organic and some inorganic chemicals contribute odor to water. Odor in water may originate from municipal and industrial waste discharges, from natural sources such as decomposition of vegetative matter, or from associated microbial activity.

Table 1: Odor or Potential Illicit Discharges (adapted from CWP**)**

Odor	**Possible Cause**
Sewage	Wastewater treatment facilities, domestic waste connected into storm drain, failing septic system
Sulfide (rotten eggs)	Decaying organic waste from industries such as meat packers, dairies and canneries
Rancid/sour	Many chemicals, including pesticides and fertilizers, emit powerful odors that may produce irritation or stinging sensations.
Petroleum/gas	Industry associated with vehicle maintenance or petroleum product storage; gas stations
Laundry	Laundromat, dry cleaning, household laundry

Color

Color is a numeric computation of the color observed in a water quality sample, as measured in cobalt-platinum units. Both industrial liquid wastes and sewage tend to have elevated color values. Unfortunately, some “clean” flow types can also have high color values. A color value higher than 500 units may indicate an industrial discharge.

Table 2: Color of Potential Illicit Discharges (adapted from CWP)

Water Color	**Possible Cause**	**Images**

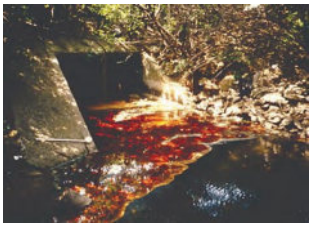
Brown Water – water ranging in color from light-tea to chocolate milk; it may have a rotten egg odor.	Human causes may be eroded, disturbed soils from constr. sites, animal enclosures, destabilized stream banks and lake shore erosion due to boat traffic.	
Yellow –	Human causes may include textile facilities, chemical plants or pollen.	
Gray Water – water appears milky and may have a rotten egg smell and/or soap odor. There may also be an appearance of cottony slime.	Human causes may be illicit connections of domestic wastewater; untreated septic system discharge; illegal boat discharge; and parking lot runoff.	
Green Water – ranging from blue green to bright green color and may impart odor. Conditions typically occur from May to October.	Human causes may be over-fertilizing lawns, boat discharges, septic systems, agriculture operations, or discharging poorly treated wastewater.	
Orange/Red -	Human causes may include meat packing facilities or dyes.	
Green Flecks – resembling floating blue-green paint chips or grass clippings. These *Blooms* and are potentially toxic.	Human cause is excessive nutrients. Fertilizers used on lawns can contaminate surface and ground water.	

Table 2 (continued)

Water Color	Possible Cause	Images
Green Hair-Like Strands - bright or dark green, resembling cotton candy and often in floating mats.	Human causes are excessive nutrients from fertilizers or failed on-shore septic systems.	
Multi-Color Water – various or uniform color, other than brown, green or gray. For rainbow sheen see floatables.	Human causes include oil or hazardous waste spill, paint and paint equipment rinsed into storm drains or into failing septic systems.	

Turbidity

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.

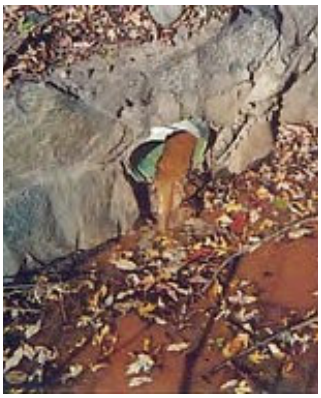
Turbidity and color are related terms but are not the same. Remember, turbidity is a measure of how easily light can penetrate through the sample bottle, whereas color is defined by the tint or intensity of the color observed.

Figure 9 Turbidity Severity Examples

(adapted from CWP)

Turbidity
Severity 1

Turbidity
Severity 2



Turbidity
Severity 3

Floatables

The presence of sewage, floating scum, foam, oil sheen, or other materials can be obvious indicators of an illicit discharge. However, trash originating from areas adjacent to the outfall is this section.

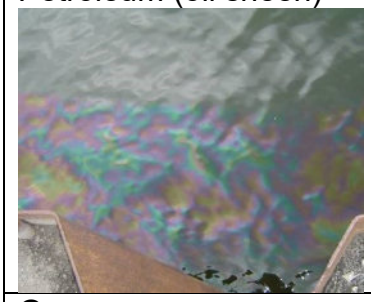
- If you think the floatable is sewage, you should automatically assign it a severity score of three since no other source looks quite like it.
- Suds are rated based on their foaminess and staying power. A severity score of three is designated for thick foam that travels many feet before breaking up. Natural foam breaks apart easily, can be brown, black or yellowish and may smell fishy or musty.
- Surface oil sheens are ranked based on their thickness and coverage. In some cases, surface sheens may not be from oil discharges, but instead created by in-stream processes. A petroleum sheens doesn't break apart and quickly flows back together.

Figure 10 Natural Sheen versus Synthetic
(adapted from CWP)

Sheen from natural bacteria forms a swirl-like film that cracks if disturbed

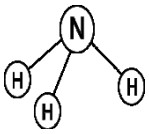
Synthetic oil forms a swirling pattern

Table 3: Floatables in Potential Illicit Discharges (adapted from CWP)

Floatables	
Sewage	Human causes include connection of domestic wastewater, leaking sanitary sewers or failing septic systems.
Suds and Foam –	Common human causes of unnatural foam include leaking sewer lines, boat discharges, improper sewer connections to storm sewers and detergents from car washing activities.
Petroleum (oil sheen) 	Human causes may include leaking underground storage tank or illegal dumping.
Grease	Common human causes include overflow from sanitary systems (due to clogging from grease) and illegal dumping.

3.4.B.4.b CHEMICAL POLLUTANT INDICATORS

Ammonia



Ammonia is a good indicator of sewage, since its concentration is much higher there than in groundwater or tap water. High ammonia concentrations (>50 mg/l) may also indicate liquid wastes from some industrial sites. Ammonia is relatively simple and safe to analyze. Some challenges include the potential generation of wastes from non-human sources, such as pets or wildlife.

Potential ID NH3-N: > 0.1 mg/L

Chlorine

Chlorine is used throughout the country to disinfect tap water, except where private wells provide the water supply. Chlorine concentrations in tap water tend to be significantly higher than most other discharge types. Unfortunately, chlorine is extremely volatile, and even moderate levels of organic materials can cause chlorine levels to drop below detection levels. Because chlorine is non-conservative, it is not a reliable indicator, although if very high chlorine levels are measured, it is a strong indication of a water line break, swimming pool discharge, or industrial discharge from a chlorine bleaching process.

Copper

Concentrations of copper in dry-weather flows can be a result of corrosion of water pipes or automotive sources (for example, radiators, brake lines, and electrical equipment). The occurrence of copper in dry-weather flows could also be caused by inappropriate discharges from facilities that either use or manufacture copper-based products. A copper value of >0.025-mg/L indicates an industrial discharge is present.

Industrial sources of copper include the following:

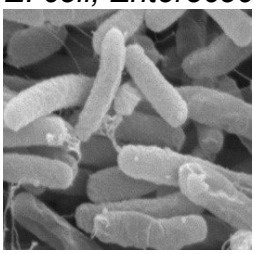
- Copper manufacturing (smelting),
- Copper metal processing/scrap remelting,
- Metal plating,
- Chemicals manufacturing,
- Analytical laboratories,
- Power plants,
- Electronics,
- Wood preserving, and
- Copper wire production.

In each of these industries, wastes containing copper would normally be discharged to a treatment facility. Sludge from the waste treatment facility, whether on-site (including lagooning) or publicly operated treatment facilities, would contain copper. If the sludge (or the treatment process) is not managed properly, copper could enter the storm sewer system.

Detergents

Most illicit discharges have elevated concentration of detergents. Sewage and wash water discharges contain detergents used to clean clothes or dishes, whereas liquid wastes contain detergents from industrial or commercial cleansers. The nearly universal presence of detergents in illicit discharges, combined with their absence in natural waters or tap water, makes them an excellent indicator. Research has revealed three indicator parameters that measure the level of detergent or its components-- surfactants, fluorescence, and surface tension. Surfactants have been the most widely applied and transferable of the three indicators. Fluorescence and surface tension show promise, but only limited field testing has been performed on these more experimental parameters; therefore these are not tested. Refer to Boron and Surfactants descriptions.

E. coli, Enterococci and Total Coliform



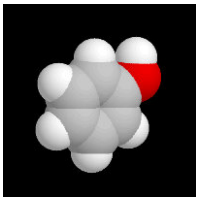
Each of these bacteria is found at very high concentrations in sewage compared to other flow types, and is a good indicator of sewage or seepage discharges, unless pet or wildlife sources exist in the subwatershed. Overall, bacteria are good supplemental indicators and can be used to find “problem” streams or outfalls that exceed public health standards.

Potential ID Range: Fecal Coliform > 2,000 mg/L indicates waste water contamination.
Potential ID Range: E. coli bacteria > 1,000/100 ml indicates waste water contamination.

Fluoride

Fluoride, at a concentration of two parts per million, is added to drinking water supplies in most communities to improve dental health. Consequently, fluoride is an excellent conservative indicator of tap water discharges or leaks from water supply pipes that end up in the storm drain. Fluoride is obviously not a good indicator in communities that do not fluorinate drinking water, or where individual wells provide drinking water. Fluoride levels greater than 0.6-mg/L indicate a potable water source is connected to the stormwater system.

Phenol



Phenol is a very commonly occurring chemical and can be found in foods, medicines, and cleaning products, as well as industrial products and by-products. Generally, the appearance of phenols in stormwater would indicate a misconnected industrial sewer to a storm drain or ditch. Exceptions would include runoff from treated wood storage yards (for example, treated lumber and telephone poles) and improper disposal (flash dumping) of cleaning products. A phenol value greater than 0.1-mg/L indicate an illicit discharge is present.

Industrial sources of phenol include the following:

- Chemical manufacturing (organic),
- Textile manufacturing,
- Paint and coatings manufacturing,
- Metal coating,
- Resin manufacturing,
- Tire manufacturing,
- Plastics fabricating,
- Electronics,
- Oil refining and re-refining,
- Naval stores (turpentine and other wood treatment chemicals),
- Pharmaceutical manufacturing,
- Paint stripping (for example, automotive and aircraft),
- Military installations (rework and repair facilities),
- Coke manufacturing,
- Iron production, and
- Ferro-alloy manufacturing.

Other sources of phenol include improper handling and disposal of cleaning compounds by institutions such as hospitals and nursing homes.

pH

Most discharge flow types are neutral, having a pH value around 7, although groundwater concentrations can be somewhat variable. pH is a reasonably good indicator for liquid wastes from industries, which can have very high or low pH (ranging from 3 to 12). The pH of residential wash water tends to be rather basic (pH of 8 or 9). The pH of a discharge is very simple to monitor in the field with low cost test strips or probes. Although pH data is often not conclusive by itself, it can identify problem outfalls that merit follow-up investigations using more effective indicators.

Potential ID Range: <6.5 and > 8.5

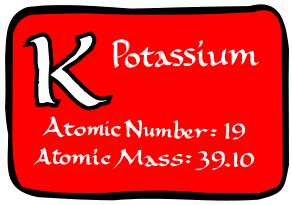
Phosphorus

Phosphorus is recognized as the controlling factor in plan and algae frown. Small increases in phosphorus can fuel substantial increases in aquatic plant and algae grown. In addition to reducing the recreational use of the water body the increased plant and algae growth lowers dissolved oxygen levels. Low dissolved oxygen levels often results in

the death of certain fish, invertebrates and other aquatic animals, reduce recreational use, property values and public health. A key source of phosphorus comes from runoff pollution, as rain or melting snow wash over fertilized areas or manure.

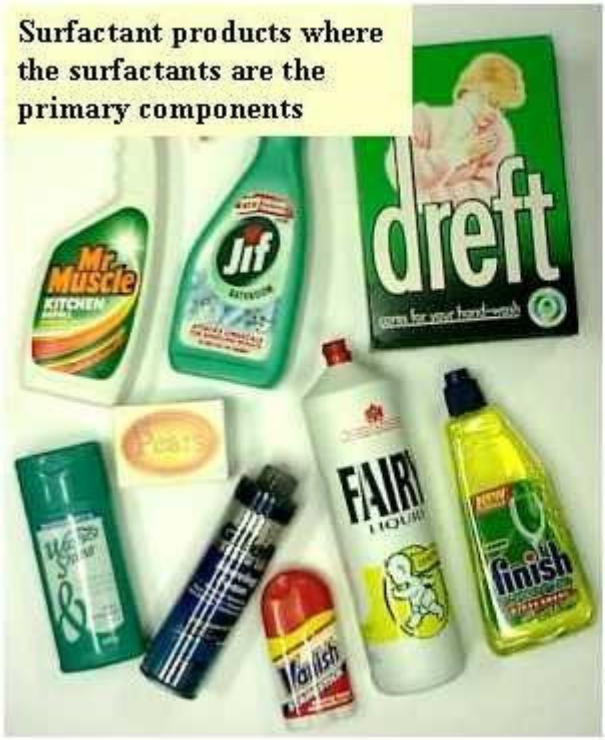
Potential ID Range: >1 mg/L

Potassium



Potassium is found at relatively high concentrations in sewage, and extremely high concentrations in many industrial process waters. Consequently, potassium can act as a good first screen for industrial wastes, and can also be used in combination with ammonia to distinguish wash waters from sanitary wastes. An ammonium to potassium ratio of >1 or <1indicate waste water or wash water discharge respectively. A potassium value of >20-mg/l is a good indicator for industrial discharges.

Surfactants



Surfactants are the active ingredients in most commercial detergents, and are typically measured as Methyl Blue Active Substances (or MBAS). They are a synthetic replacement for soap, which builds up deposits on clothing over time. Since surfactants are not found in nature, but are always present in detergents, they are excellent indicators of sewage and wash waters. The presence of

surfactants in cleansers, emulsifiers and lubricants also makes them an excellent indicator of industrial or commercial liquid wastes. A surfactant value of > 0.25-mg/L within residential areas indicates that either a sewage or wash water is present in the stormwater; a value of >5-mg/L within non-residential areas indicates that there is an industrial discharge (refer to Table 46 from the Illicit Discharge Detection and Elimination manual by the Center for Watershed Protection for use in determining industrial flow types).

3.4.C Indirect Connection Program (BMP C.3)

Indirect connections are subtle connections, such as dumping or spillage of materials into storm sewer drains. Flash dumping is a common type of indirect connection. Generally, indirect modes of entry produce intermittent or transitory discharges, with the exception of groundwater seepage. There are five main modes of indirect entry for discharges.

Upon observing or receiving notification of a potential illicit discharge, the Illicit Discharge Incident Tracking Form, found in **Appendix 5.7** is used to log and investigate the incident. Appropriate procedures found within this chapter are implemented in the event an illicit discharge has been confirmed.

Measurable Goal

- Track efforts related to indirect illicit discharges.

3.4.C.1 Groundwater Seepage

Seepage discharges can be either continuous or intermittent, depending on the depth of the water table and the season. Groundwater seepage usually consists of relatively clean water that is not an illicit discharge by itself, but can mask other illicit discharges. If storm drains are located close to sanitary sewers, groundwater seepage may intermingle with diluted sewage. Addressing seepage that is observed during the outfall screening process is described in more detail in this chapter.

3.4.C.2 Spills

These transitory discharges occur when a spill travels across an impervious surface and enters a storm drain inlet. Spills can occur at many industrial, commercial and transport-

related sites. A very common example is an oil or gas spill from an accident that then travels across the road and into the storm drain system. The Spill Response Plan is described in Chapter 3.7.B.

3.4.C.3 Dumping

Dumping a liquid into a storm drain inlet: This type of transitory discharge is created when liquid wastes such as oil, grease, paint, solvents, and various automotive fluids are dumped into the storm drain. Liquid dumping occurs intermittently at sites that improperly dispose of rinse water and wash water during maintenance and cleanup operations. A common example is cleaning deep fryers in the parking lot of fast food operations. The "Homeowner Factsheet" is designed to minimize dumping; these programs were previously described in Chapter 3.2. The procedure for handling a dumping incident is described in Chapter 3.7.B.2.

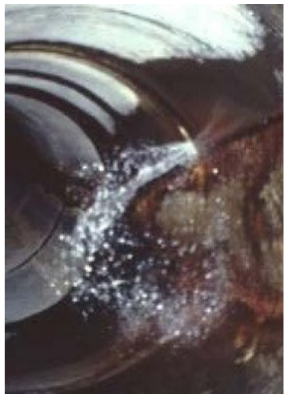
3.4.C.4 Outdoor washing activities

Outdoor washing may or may not be an illicit discharge, depending on the nature of the generating site that produces the wash water. For example, hosing off individual sidewalks and driveways may not generate significant flows or pollutant loads. On the other hand, routine washing of fueling areas, outdoor storage areas, and parking lots (power washing), and construction equipment cleanouts may result in unacceptable pollutant loads. Individual washing activities are addressed through the Public Education and Outreach Program in Chapter 3.2 whereas observed/documented routine washing activities should be addressed through the Removal of Illicit Discharges Procedure in Chapter 3.4.D.4.

3.4.C.5 Non-target irrigation from landscaping or lawns

Irrigation can produce intermittent discharges from over-watering or misdirected sprinklers that send tap water over impervious areas. In some instances, non-target irrigation can produce unacceptable loads of nutrients, organic matter or pesticides. The most common example is a discharge from commercial landscaping areas adjacent to parking lots connected to the storm drain system. This type of discharge is addressed by the Public Education and Outreach Program in Chapter 3.2.I.

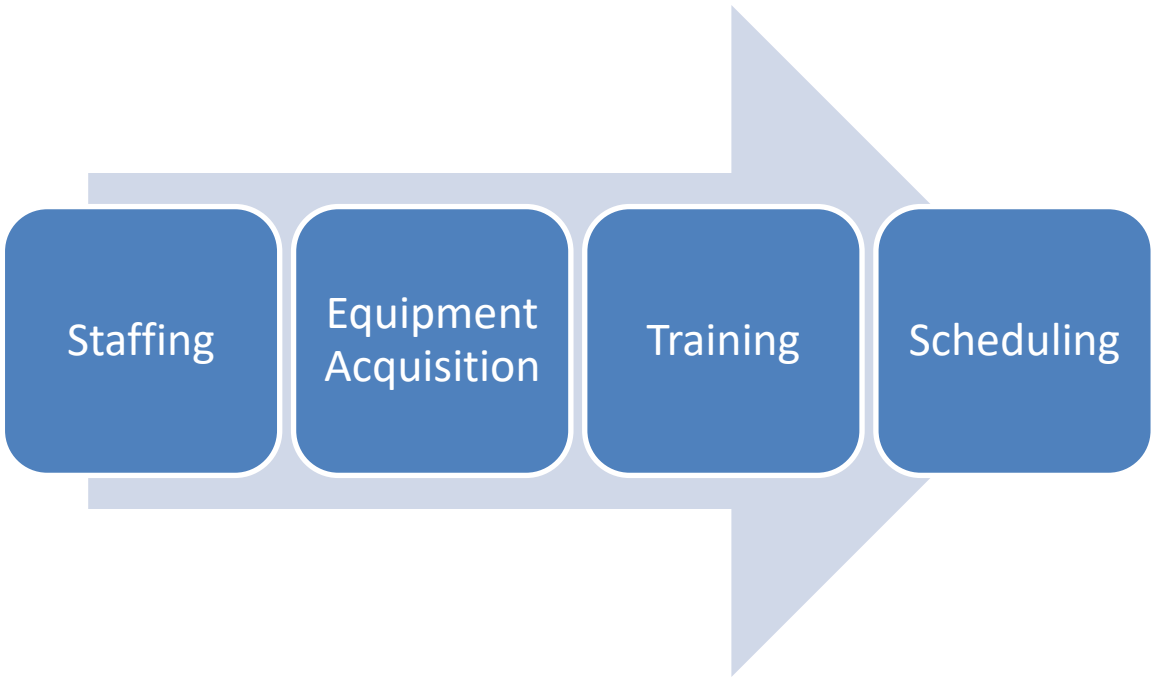
3.4.D Direct Connection Illicit Discharge Program (BMP C.3 – C.8)



Direct connections enter through direct piping connections to the storm sewer system, and since direct connections exist regardless of whether or not a stormwater event (e.g. rain or melting snow) is occurring, they are most easily detected during dry-weather periods. Inspection of stormwater outfalls during dry-weather conditions reveals whether non-stormwater flows exist. If non-stormwater flows are observed, they can be screened and tested to determine whether pollutants are present. If the presence of pollutants is indicated, the detective work of identifying the source of the discharge can begin. Once the source is identified, it can then be corrected. A direct connection illicit discharge program consists of three principal components: 1) outfall inspection, and 2) follow-up investigation and 3) removal.

3.4.D.1 Program Planning

Program Planning involves the office work, planning, and organization required to conduct outfall screening and follow-up investigative activities of the program. This includes the identification of the staffing and equipment needed to conduct the outfall screening and scheduling inspection activities. Program planning also identifies the regulatory authority to remove directly connected illicit discharges and the identification of the outfalls and receiving waters in the municipality (both discussed earlier in this chapter).



3.4.D.1.a STAFFING

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

3.4.D.1.b EQUIPMENT NEEDS

General field equipment and specialized outfall screening equipment are required for IDDE programs. The method of collecting and managing inspection screening data is driven by available technology. A complete list of recommend equipment and supplies is found on ***Stormwater Outfall Screening Equipment Checklist (*Appendix 5.2)**. Field Crews carry basic safety items, such as cell phones, surgical gloves, and first aid kits. Additional safety precautions are described following the Equipment Checklist,

3.4.D.1.c SCHEDULING

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

Pre-Screening:

Pre-screening is on-going, in coordination with the outfall inventory, refer to Chapter 3.4.D.2.a. High priority dry weather flow locations will be identified in 2016, in accordance with the new ILR40 permit. It is recommended that all outfalls be re-screened in 2022 and every 5 years thereafter.

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

Outfall Inspections:

Upon completion of the pre-screening efforts, review collected data to identify outfalls with observed dry weather flow or other indicators of an illicit discharge, refer to Chapter 3.4.D.2.b. Schedule outfall inspections so that all identified outfalls with potential illicit

discharges are investigated within the following 5-years, ensuring that outfalls with the greatest potential for the presence of an illicit discharge are investigated first. Annual inspection of all high priority outfalls, as identified in Chapter 1.4.A, is required.

3.4.D.2 Outfall Inspection (BMP C.3, C.7, C.8)

The identification of potential illicit discharge locations is primarily a two part process, pre-screening and follow-up inspections. Pre-screening is performed by a rapid inspection of all outfalls in a pre-determined area such as along a receiving water. Follow-up inspections are required for those pipes found to have dry weather flow. Once probable illicit discharges are found, identify the sources of illicit discharges and correct per the removal procedure of Chapter 3.4.D.4. Outfall inspection consists of the following tasks:

(1) Pre-Screening

(2) Outfall Inspection, and

(3) Outfall Assessment and Documentation.

3.4.D.2.a PRE-SCREENING

Pre-screening consists of a rapid inspection of outfalls, during dry weather flow conditions. During pre-screening basic information should be obtained for each outfall. Recommended information includes basic data about the structure (such as size, shape, material, condition), presence of dry weather flow determination and a photograph. The Outfall Inventory was previously described in Chapter 1.4.A

Measurable Goal

- Pre-screen outfalls and search for new outfalls, repeat every five years.

3.4.D.2.b OUTFALL INSPECTION

An outfall inspection is required for those outfalls identified during pre-screening inspections with dry weather flow or other indicators of a potential illicit discharge. The intent is to gather additional information to determine if an illicit discharge is present. Upon arriving at an outfall, the field crew should inspect the outfall by approaching the outfall on foot to a proximity that allows for visual observations to be made. Outfalls should be screened to determine which one of the three following conditions applies:

- The outfall is dry or damp with no observed flow,
- Flowing discharges are observed from the outfall, or
- The outfall is partially or completely submerged with no observed flow or is inaccessible.

The field crew should photograph the outfall and complete applicable sections of the ***Storm Water Outfall Inspection Data Form,*** **Appendix 5.3.** The need for on-site testing and obtaining grab samples for laboratory analysis is determined by using the flow chart as guidance. Testing results are used to identify potential sources. Instructions for Completing the Storm Water Outfall Inspection Data Form and an associated Outfall Inspection Procedure Flow Chart (used to identify applicable sections of the form that must be filled out) are included in **Appendix 5.3**. Initial testing results are NOT intended to document the event for future removal and/or enforcement actions. If the initial testing results identify a potential illicit discharge, proceed to the follow-up investigation procedures discussed in Chapter 3.4.D.3.

Locating an upstream sampling point may be required if any of the following conditions exist at an outfall:

- The outfall discharge is submerged or partially submerged due to backwater conditions,
- Site access and safety considerations prevent sample collection,
- Other special considerations.

Make reasonable efforts to location upstream sampling location(s) using the available storm sewer atlas and development plan information. Manholes, catch basins, or culvert crossings can be used for upstream sampling locations. If no dry weather flow is present (i.e. the submerged outfall is based solely on a backwater condition, follow the above Scenario 1 procedure. If dry weather flow is identified in an upstream manhole, follow the above Scenario 2 procedure. If the upstream manhole(s) are inaccessible, resolve the problem in the office with appropriate supervisory personnel.

Measurable Goal

- Inspect outfalls identified during pre-screening inspections with dry weather flow or other indicators of a potential illicit discharge over a 5-year period.
- Inspect all high priority outfalls, as identified in Chapter 1.4.A annually.

Submerged: More than ½ below water	Partially submerged: Bottom is below water	Fully submerged: Can't see outfall
Outfall fully submerged by debris	Fully submerged from downstream trees trapping debris	Partially submerged by leaf debris "back water"

Trickle Flow: Very narrow stream of water	Moderate Flow: Steady stream, but very shallow depth	Significant flow (Source is a fire hydrant discharge)

Figure11: Characterizing Submersion and Flow
Center for Watershed Protection

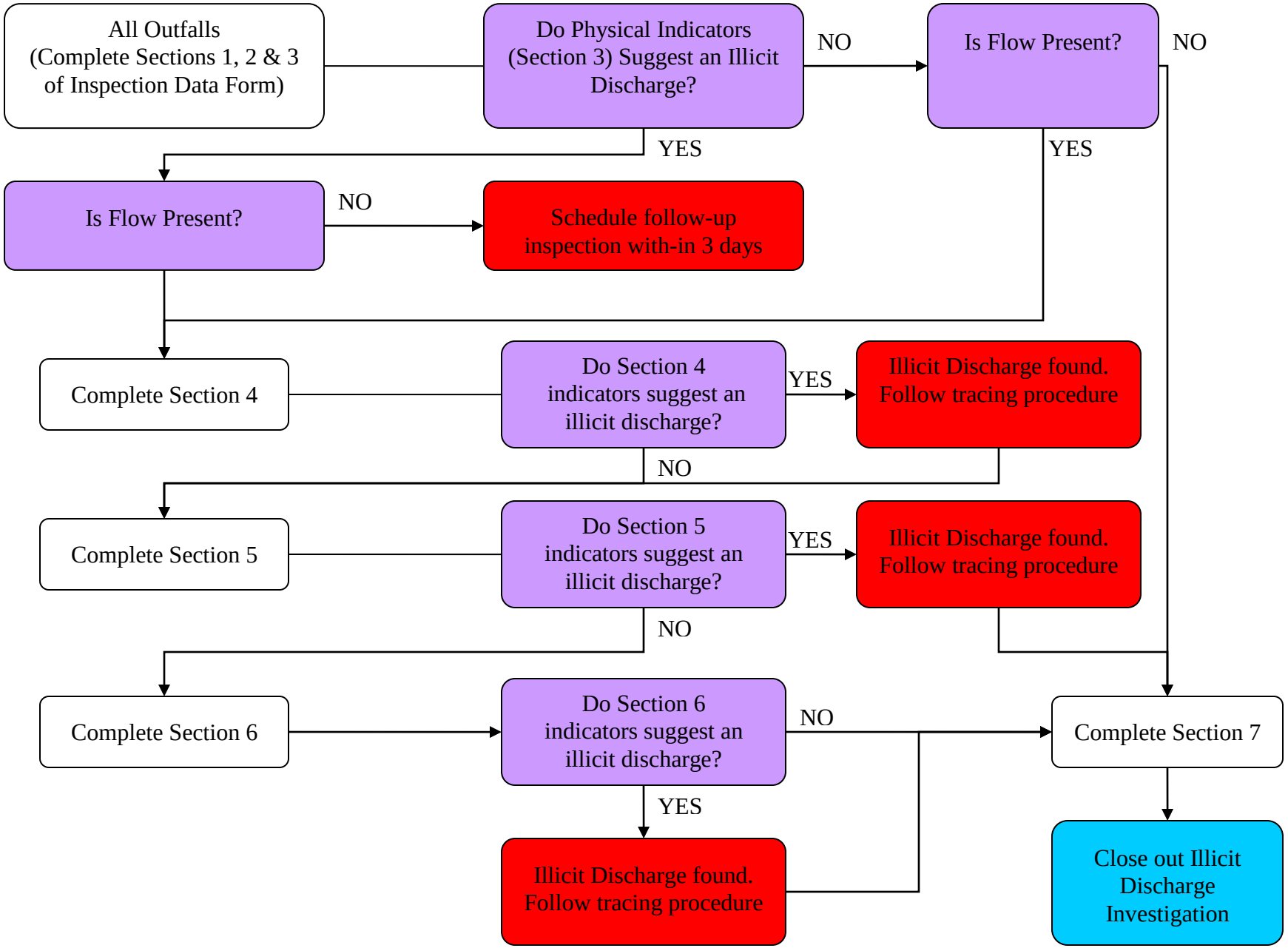
3.4.D.2.c OUTFALL ASSESSMENT AND DOCUMENTATION

Complete the ***Storm Water Outfall Inspection Data Form (*Appendix 5.3**) for all outfall screening and grab sampling activities. All completed forms must be dated, legible, and contain accurate documentation of each outfall inspection. *A separate data form must be completed for each outfall.* It is recommended that non-smearing pens be used to complete the forms and that all data be objective and factual. Once completed, these data forms are considered accountable documents and are maintained as part of the municipality's files. In addition to standard information, the data form is used to record other information that is noted at the time the outfall inspection is conducted. For example, observations of dead or dying plants, fish kills, algal blooms (excessive algae growth), construction activities, and other activities that might provide information regarding the potential for illicit connections or inappropriate discharges should be recorded on the form.

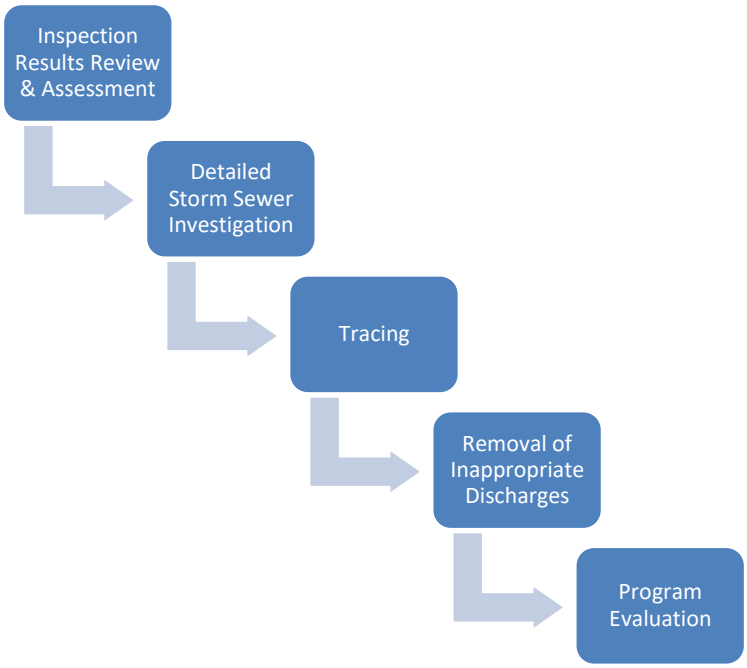
Measurable Goal

- Document all outfall inspections.

Figure 4: Outfall Inspection Procedure Flow Chart



3.4.D.3 Follow Up Investigation and Program Evaluation (BMP C.4)



Measurable Goal

- Continue investigation for outfalls identified through outfall inspection efforts to have a potential illicit discharge.

3.4.D.3.a Outfall Screening Results Review and Assessment

Follow up inspections are required for outfalls identified to have potential illicit discharges during the outfall inspection procedure. This is accomplished by reviewing the ***Stormwater Outfall Inspection Data Forms (Appendix 5.3)*** collected during outfall investigations to determine which outfalls require a follow up investigation, target sewer system areas (using available mapping and atlas information) for detailed investigation.

3.4.D.3.b Independent Verification

If the initial outfall assessment identifies potential illicit discharges (through either the on-site of off-site testing procedures), additional sampling is required. The results of the

inspection and testing should be discussed with the Stormwater Coordinator. Contract an independent laboratory to take and test an additional sample and verify preliminary finding. Use the established procedure to coordinate the independent laboratory sample and testing.

3.4.D.3.c SOURCE IDENTIFICATION

Follow up investigation is required for all outfalls with positive indicators for pollutant discharges during the pre-screening efforts.

Mapping and Evaluation (BMP C.1)

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

Storm Sewer Investigation

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

After confirming that dry-weather flow is present at the outfall, the field crew continues moving to the next upstream manhole or access point investigating for dry weather flow. In cases where more than one source of dry-weather discharge enters a manhole, the field crew records this information on the screening form and then tracks each source separately. All sources are tracked upstream, manhole-by-manhole, until the dry-weather discharge is no longer detected. Finally, the last manhole where dry-weather flow is present is identified and potential sources to that manhole are accessed. This data is important for source identification.

The field crew should also determine whether there has been a significant change in the flow rate between manholes. If the flow rate appears to have changed between two manholes in the system, the illicit connection likely occurs between the two manholes. Changes in the concentration of pollutant parameters could also aid in confirming the presence of an illicit connection between the two manholes.

Tracing

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

3.4.D.4 Removal of Illicit Discharges (BMP C.5, C.8)

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

Step 1. Have an outside laboratory service take a grab sample and test for the illicit discharge at the manhole located immediately downstream of the suspected discharge connection.

Step 2: Conduct an internal meeting with appropriate personnel, including Township Highway Commissioner and Township Engineer to discuss inspection and testing results and remedial procedures.

Step 3: The Township shall send a notification letter to the owner/operator of the property/site suspected of discharging a pollutant. The letter should request that the owner/operator describe the activities on the site and the possible sources of non-stormwater discharges including information regarding the use and storage of hazardous substances, chemical storage practices, materials handling and disposal practices, storage tanks, types of permits, and pollution prevention plans.

Step 4: Arrange a meeting for an inspection of the property with the owner/operator of the property where the pollution source is suspected. Most illicit connections and improper disposal can probably be detected during this step. Notify the site owner/operator of the problem and instruct them to take corrective measures.

Step 5: Conduct additional tests as necessary if the initial site inspection is not successful in identifying the source of the problem. The Township is responsible for determining the appropriate testing measure to pinpoint the source.

Step 6: If the owner/operator does not voluntarily initiate corrective action, the Township issues a notification of noncompliance. The notification includes a description of the required action(s) a time frame in which to assess the problem and take corrective action. Upon notification of noncompliance, the owner can be subject to any penalties stipulated in the WDO.

Step 7: Conduct follow-up inspections after stipulated time frame has elapsed to determine whether corrective actions have been implemented to: 1) remove the illicit connection or 2) eliminate the improper disposal practice.

Step 8: If corrective actions have been completed (i.e. and the illicit discharge has been eliminated) the Township sends a notification of compliance letter to the owner/operator of the property/site suspected of discharging a pollutant.

If corrective actions have not been completed an additional internal meeting with appropriate municipal personnel is held to determine appropriate steps to obtain compliance. Appropriate actions may include monetary or other penalties.

Measurable Goal

- Administer Removal Procedures for outfalls with illicit discharges.

3.5 Construction Site Runoff Control

Development is subject to the provisions of the Lake County Watershed Development Ordinance (WDO).

3.5.A Regulatory Program (BMP D.1)

The QLP has the primary responsibility for the Construction Site Runoff Control MCM. The Township is currently a non-Certified Community with respect to the provisions of the WDO. The SMC Chief Engineer is responsible for the review, permitting, inspection and enforcement of the provisions of the WDO. The Township assists SMC in achieving compliance with the WDO.

Measurable Goal

- Support QLP efforts
- Support SMC Enforcement of WDO

3.5.B Responsible Parties (BMP D.1)

3.5.B.1 Applicant

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

3.5.B.2 DECI – Designated Inspectors

As previously described in Chapter 3.1.D.1. the purpose of the DECI program is to facilitate positive communication between the Township and the permit holder by creating a single point of contact for soil erosion/sediment control issues with the idea that it is easier to prevent soil erosion and sediment control problems than it is to correct

them after they have occurred. Further, the program is intended to improve site conditions, minimize environmental impacts, and educate contractors/developers/inspectors about proper soil erosion/sediment control Best Management Practices.

The applicant, for sites that exceed the WDO thresholds per §601 are required to hire or employ a Designated Erosion Control Inspector (DECI).

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

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

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

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

The DECI reports to the Enforcement Officer (SMC's Chief Engineer). During the course of a project, the DECI must notify the EO within any if the development site is determined to be noncompliant with the soil erosion and sediment control plan. The Township Stormwater Coordinator should also be contacted within 24-hours. It is highly recommended that the Stormwater Coordinator remind the DECI to also file an Incidence of Noncompliance with IEPA. If the discharge from the construction site enters a receiving water within the MS4 jurisdictional boundaries, it is highly recommended that the MS4 also file an ION with IEPA.

3.5.B.3 Enforcement Officer

It is also both the right and the responsibility of the Enforcement Officer to ensure that all incidences of non-compliance received from a DECI are resolved. Furthermore it is

the Enforcement Officer's right and the responsibility to notify the SMC if a DECI listed by SMC is not adequately performing the DECI responsibilities. SMC may remove a DECI from the approved DECI list. However, a DECI may be removed from a development by the Enforcement Officer at their sole discretion.

Alternative 3.4.B.3 Municipal Contact – Stormwater Coordinator

Fremont Township has the responsibility to designate a contact with both the SMC and the IEPA. The Township has designated the Township Engineer to fulfill both roles. SMC refers to this person as their community contact. The community contact provides support and coordinates with SMC on development related activities within the community. The IEPA considers this person the Stormwater Coordinator. Chapter 2.2.A provides additional information regarding the role of the Stormwater Coordinator.

3.5.C Erosion and Sediment Control BMPs (BMP D.2)

As described in the QLP section above, the site plan is required to comply with minimum prescribed practice requirements set forth in the WDO. The WDO also allows for the Township to require additional measures, above and beyond minimum control measures, to prevent the discharge pollutants from construction sites.

Measurable Goal

- Support QLP efforts
- Support SMC Enforcement of WDO

3.5.D Construction Site Waste Control (BMP D.3)

As described in the QLP section, the WDO includes appropriate waste control provisions.

Measurable Goal

- Support QLP efforts
- Support SMC Enforcement of WDO

3.5.E Site Plan Review (BMP D.4, E.4)

Applicants are directed to the Lake County SMC for information pertaining to the permitting process. Developments that exceed the WDO minimum thresholds are provided directed to submit a Watershed Development Permit Application Form and supporting documentation to the Lake County Stormwater Management Commission for review and comment. The permit is issued once all applicable provisions of the WDO have been addressed. Each permit lists any additional conditions that are applicable to the development.

Measurable Goal

- Support QLP efforts

- Support SMC Enforcement of WDO

3.5.F Site Inspection Procedures (BMP D.6, E.5)

WDO provisions are described in the QLP section above. Representatives of the Township are authorized to enter upon any land or water to inspect development activity and to verify the existing conditions of a development site that is under permit review.

The Township may accompany SMC on-site inspections. Additionally, it is the community's responsibility to notify SMC of any violations observed within the community. Types of violations include development activity occurring without a permit from SMC or soil erosion/sediment control violations occurring on permitted construction sites.

Site Inspection Process:

- SMC attends the pre-construction meeting on applicable development sites. Complete ***Pre-Construction Meeting Form*** **(Appendix 5.4)**. It is also recommended that the inspector request to see the SMPP and IEPA NOI for applicable construction sites.
- The applicant notifies SMC when initial sediment and runoff controls measures have been installed.
- SMC inspects the initial sediment and runoff control measures and authorizes the start of general construction.
- SMC inspects the stormwater management system and authorizes additional site improvement activities.
- SMC performs site inspections at the recommended intervals listed above and completes the ***SE/SC Inspection Form*** **(Appendix 5.5).**
- For sites that exceed the WDO thresholds per §601 a DECI is required, refer to Chapter 3.5.B.2 for additional information regarding the program.
- SMC requires as-built documentation of the stormwater management system prior to final site stabilization. Tags of the seed mixes are kept by the developer for inspection and approval. Upon approval of the as-builts, the applicant shall permanently stabilize the site.

Measurable Goal
- Support QLP efforts
- Support SMC Enforcement of WDO

3.5.G Public Information Handling Procedures (BMP D.5)

The QLP has established a Citizen Inquiry Response System (CIRS) which processes both citizen and agency inquiries. Additionally, the Community frequently receives phone calls regarding a development, either during the review or construction phase.

Both site design and construction related phone calls are directed to the Enforcement Officer, or designee. Site design comments are handled on a case by case basis. Construction related calls are typically addressed by performing a site inspection.

Measurable Goal

- Support QLP CIRS efforts
- Support SMC Enforcement of WDO

3.5.H Performance Guarantees (BMP D.6)

Pre-construction meeting – No deposit required.

Performance Guarantee (surety) is required for public improvements (i.e. sewer, water, right-of-way work), stormwater management system and landscaping. The Engineers Opinion of Probable Construction Cost (EOPCC) is provided to Fremont Township for review/approval. The required surety amount shall be 110% of the approved EOPCC. In cases where the SMC requires a surety the Community will only hold a surety for the portions of the EOPCC that is not being held by SMC. Alternatively, the Community will provide SMC with a letter indicating that the Township will hold the surety and not reduce the surety amount until SMC approval has been obtained.

The Township will hold 10% of the surety for a minimum of 1-yr after site stabilization is complete, and as-built drawings are accepted, to ensure that the vegetation is established and no failures occur. For sites with native vegetation, this portion of the surety will be held for a minimum of 3-yr after site stabilization.

Measurable Goal

- Support SMC Enforcement of WDO

3.5.I Violation Notification Procedures (BMP D.6)

In general the compliance due date should be within 5-working days. However, if the inspector determines that the violation is or will result in significant environmental, health or safety hazards a 24-hour due date should be set. For time-critical violations, the developer should also be advised to complete an Incidence of Non-Compliance (ION) report with IEPA for all sites that were required to obtain a Notice of Intent (NOI) with IEPA. If the discharge from the construction site enters a receiving water within the MS4 jurisdictional boundaries, it is highly recommended that the MS4 also file an ION with IEPA. The **SE/SC Inspection Form** is found in **Appendix 5.5**. The violation procedure is included in **Appendix 5.6** along with a sample letter of violation.

Measurable Goal

- Support SMC Enforcement of WDO

3.6 Post Construction Runoff Control

Fremont Township complies with NDPES permit requirements by incorporating Ordinance and BMP standards to minimize the discharge of pollutants of development projects.
This chapter describes how the compliance with stormwater discharge permit requirements for long-term post-construction practices that protect water quality and control runoff flow is achieved.

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

3.6.A Regulatory Program (BMP E.2)

As described in the QLP section, the WDO includes numerous performance standards on Grading, Stormwater and Soil Erosion/Sediment Control that must be met for all parties undertaking construction. The Lake County Technical Reference Manual is a guidance tool that describes BMP and implementation procedures for enforcing the WDO.

Measurable Goal:

- Support QLP efforts
- Support SMC Enforcement of WDO

3.6.B Long Term Operation and Maintenance (BMP E.3)

As described in the QLP section, the WDO requires that maintenance plans be developed for all stormwater management systems designed to serve major

developments. The SMPP includes two long term maintenance plans. These sample maintenance plans are included in **Appendix 5.9**.

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

Measurable Goal:

- Support QLP efforts
- Support SMC Enforcement of WDO
- Allow for public submission of concerns related to post-construction stormwater runoff control. Follow-up with concerns as appropriate.

3.6.C Runoff Volume Reduction Hierarchy (BMP E.4)

Developments that exceed the thresholds identified in the WDO are required to quantify the RVR provided by the site design. The Community recommends that projects be designed to effectively capture 85% of the average annual rainfall events, as documented in Appendix O of the WDO

Measurable Goal
- Support QLP efforts
- Support SMC Enforcement of WDO

3.6.D Watershed Plans (BMP E.7)

SMC has collaborated on a number of watershed based plans throughout the County as described in Chapter 3.1.H and depicted on Figure 8. Fremont Township will adopt watershed plans that extend into its corporate limits and review recommended individual site-specific projects and programmatic actions. The MS4 encourages private property owners to implement the recommendations. Implementation of recommendations by the MS4 will be evaluated on a yearly basis as part of its fiscal planning/budgeting process keeping in mind that ONLY the implementation of individual site-specific projects or programmatic actions WITHOUT the use of 319 funding can be cited by an MS4 community toward meeting ILR40 permitting requirements.

Measurable Goals:

- Encourage private property owners to implement watershed plan recommendations
- Evaluate feasibility of implementing watershed plan recommendations as part of its fiscal planning/budgeting process.

3.6.E Site Inspections (BMP E.6)

The inspection program for its general facilities is discussed in detail in Chapter 3.7.A. The inspection procedure for site inspections during and post construction is described in Chapter 3.5.E. This section focuses on post-construction inspections of previously developed sites, streambanks / shorelines, streambeds, and detention / retention ponds.

3.6.E.1 Shorelines, Streambanks and Stream Bed Sediment Accumulation

As described previously in Chapter 3.1.H. SMC has collaborated on a number of watershed based plans throughout the County. The Mill Creek and Squaw Creek watershed plans included a stream and detention basin inventory, as depicted in Figure 13. The plans also include a list of site specific best management practices within the community based on an assessment of these inventories and other data.

Project categories typically include problem discharge locations, problem hydrologic impediments, stream buffers, logjam-debris removal, streambank stabilization and shoreline stabilization. The MS4 encourages private property owners to implement the recommendations.

Implementation of recommendations by the MS4 will be evaluated on a yearly basis as part of its fiscal planning/budgeting process, keeping in mind that ONLY the implementation of individual site-specific projects or programmatic actions WITHOUT the use of 319 funding can be cited by an MS4 community toward meeting ILR40 permitting requirements.

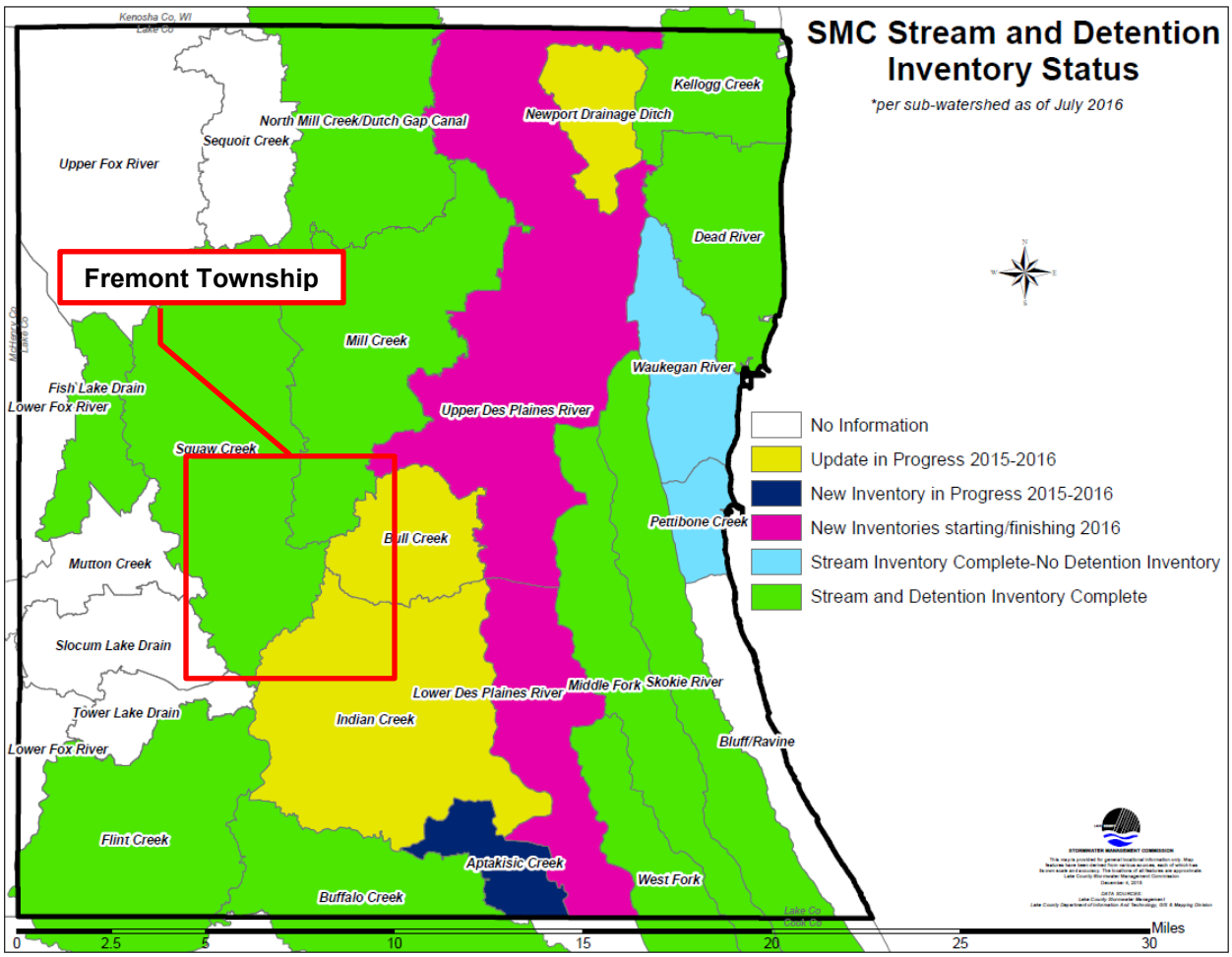


Figure 13: SMC Stream and Detention Basin Inventory Status

For those areas of the community not evaluated as part of a watershed plan, the community will inspect streambanks and lake shorelines as part of their periodic outfall pre-inventory and pre-screening process. Document observed erosion and/or sediment accumulation. Remedial actions might include notifying the property owner or including maintenance activities in the work program.

Measurable Goals:

- Encourage private property owners to recommended retrofits cited in adopted watershed plan(s).
- Evaluate feasibility of implementing retrofits cited in adopted watershed plan(s) as part of fiscal planning/budgeting process.
- Inspect streambanks and lake shorelines as part of their periodic outfall pre-inventory and pre-screening process and recommend remedial actions as appropriate.

3.6.E.2 Detention / Retention Pond

PREVIOUSLY INVENTORIED DETENTION BASINS

The MS4 encourages private property owners to implement the detention basin and discharge structure retrofits recommended in the Mill and Squaw Creek watershed plans. Implementation by the MS4, of recommendations, will be evaluated on a yearly basis as part of its fiscal planning/budgeting process, keeping in mind that ONLY the implementation of individual site-specific projects or programmatic actions WITHOUT the use of 319 funding can be cited by an MS4 community toward meeting ILR40 permitting requirements.

OTHER DETENTION BASINS

Portions of the community are located outside of watershed planning areas. Attempts to inspect approximately 20% of all unassessed properties with stormwater management facilities a year; resulting in a re-occurrence inspection interval of every 5-years. Observed erosion, seeding/re-seeding or slope stabilization needs are documented. A ranking system has been established to identify ponds that would most benefit from a retrofit or other enhancements.

1 Turf, obstructed or other deficiencies
2 Turf, unobstructed
3 Rock
4 Native, obstructed or other deficiencies
5 Native, unobstructed
6 Turf, recreational

Typical BMP for maintenance of these areas are similar to those for a construction site. SMC's streambank/shoreline stabilization manual is used as a starting point in choosing the appropriate BMP for remediation activities. Remedial actions might include notifying the property owner of recommended maintenance activity, deficiencies or additional enhancements or including maintenance activities in the Township work program. Recommendations will take into consideration potential impacts and effects due to climate change.

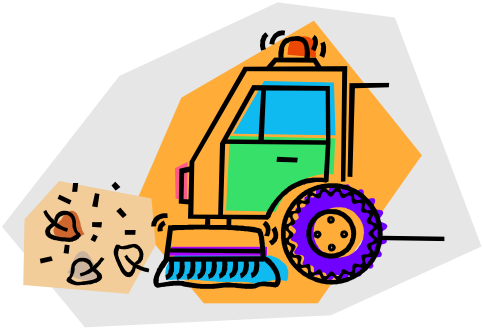
Measurable Goals:

- Encourage private property owners to implement detention basin and discharge structure retrofits cited in adopted watershed plan(s).
- Evaluate feasibility of detention basin and discharge structure retrofits cited in adopted watershed plan(s) as part of fiscal planning/budgeting process.
- Inspect approximately 20% of all unassessed stormwater management facilities and recommend remedial actions as appropriate.

3.7 Pollution Prevention and Good Housekeeping

Fremont Township is responsible for the care and upkeep of the general facilities, municipal roads, its general facilities and associated maintenance yards. Many maintenance activities are most regularly performed directly by staff; however from time to time contractors are employed to perform specific activities. This chapter describes how the compliance with permit requirements is achieved by incorporating pollution prevention and good housekeeping stormwater quality management into day-to-day operations. On-going education and training is provided to ensure that all of its employees have the knowledge and skills necessary to perform their functions effectively and efficiently.

3.7.A Inspection and Maintenance Program



This chapter described the Communities Good House Keeping Program by describing areas/items that require inspection and their recommended inspection frequency. It further details recommended maintenance activities and subsequent tracking procedures for each of the tasks.

Measurable Goal for all of 3.7.A

- Implement the SMPP.

3.7.A.1 Street Sweeping (BMP E.7, F.4)

Street sweeping operations are performed to reduce potential illicit discharges and to provide a clean environment. The curb lines of all streets are cleaned on a rotating basis. The rotation maybe changed or interrupted. Each street is typically swept/cleaned approximately 2 to 4 times per year. Sweeper waste is collected and disposed of in the spoil waste area. The intended frequency of street sweeping operations is as follows:

- As needed

3.7.A.2 Drainageways (BMP E.7, F.2)

Drainageways include any river, stream, creek, brook, branch, natural or artificial depression, ponded area, lakes, flowage, slough, ditch, conduit, culvert, gully, ravine, swale, wash, or natural or man-made drainageway, in or into which surface or groundwater flows, either perennially or intermittently. Primary drainageways are described in Chapter 1.4. Minor drainageways include roadside and sideyard swales, overland flow paths, pond outlets, etc.

3.7.A.2.a Driveway Culverts

Maintenance and replacement of driveway culverts is the property owner's responsibility. A minimum 12" diameter culvert is required per Code. Permits are required for culvert replacement; a soil erosion and sediment control plan may be required as part of the permit. The Engineering Department inspects the culvert when it is set to grade and prior to backfilling. The Public Works may rod/clean culverts on an as needed basis.

3.7.A.2.b Catch Basins (BMP C.7)

Catch basin locations are identified on the **Storm Sewer Atlas**. The goal is to annually clean approximately 20% of all catch basins, to a minimum sump depth of 2 feet. If catch basin debris is at the invert elevation of the downstream pipe (i.e. has completely filled the sump area), then the downstream storm sewer system is also cleaned. Likewise, if a water main break or other heavy flow occurs that flushes potential illicit discharges into the storm sewer system, the receiving storm sewer lines are inspected and then cleaned as necessary. Spoil waste obtained from catch basin cleaning is disposed of in the spoil waste area. Locations of cleaned catch basins are tracked.

Catch basins found to have structural deficiencies are noted. Necessary remedial actions are completed or incorporated into a capital project.

3.7.A.2.c Other Inlet and Grate Cleaning

Cleaning of these areas occurs on an as-needed basis (e.g. complaints, incidences, standing water, etc). Spoil waste that is obtained from inlet and grate cleaning or vacuuming is disposed of at is disposed of in the spoil waste area. Any waste jetted out is picked up with a clapper bar if possible.

3.7.A.2.d SWALES AND OVERLAND FLOW PATHS

Document observed or reported erosion or sediment accumulation. Areas of significant concern are incorporated into a maintenance program.

Privately Owned Drainage Swales (side/rear yard): Document observed or reported erosion or sediment accumulation in privately owned swales. Notify the property owner on an as needed basis for appropriate remediation.

3.7.A.3 Landscape Maintenance

Maintain general facilities, municipal roads, associated maintenance yards, and other public areas. Municipal staff is responsible for Litter and Debris. A landscape contractor is selected annually to be responsible for the remainder of the landscape maintenance program under the supervision of the Public Works Department. Landscape contractors are required to meet ILR40 training requirements and ensure that they adhere to the SMPP.

3.7.A.3.a LITTER AND DEBRIS (BMP F.4)

Litter and debris can accumulate on Township property and roadway right-of-ways and should be removed. Each Public Works Division is responsible for the cleanup of their respective facilities. Clean-up at park and recreation areas is the responsibility of the Park and Recreation District. Other properties and right-of-ways (including municipal, Township, County and State right-of-ways within the MS4 limits) are cleaned by Public Works personnel or volunteer groups on an as-needed basis.

3.7.A.3.b PRIVATE RESIDENCE YARD WASTE (BMP E.7, F.4)

Yard waste and leaves from private residences are collected through contract. Yard waste is collected weekly throughout the growing season. Leaf collection typically starts in October and runs for approximately six weeks.

3.7.A.3.c FERTILIZERS

The annual landscape contractor is required to be a licensed applicator for fertilizers. Contractor specifications incorporate low impact products. The use of pesticides and fertilizers shall be managed in a way that minimizes the volume of storm water runoff and pollutants.

3.7.A.4 Snow Removal and Ice Control (BMP F.3)

During snow removal and ice control activities, salt, de-icing chemicals, abrasives and snow melt may pollute stormwater runoff. To address these potential pollutants, the following procedures for the “winter season” (November 1 through May 1) are implemented.

Participate in watershed groups, as identified by the QLP, organized to implement control measures which will reduce chloride concentrations in receiving waters.

3.7.A.4.a ROADWAY ICE CONTROL

Use the minimal amount of salt, de-icing chemicals and additives necessary for effective control. Prior to November 1, preparation work to obtain seasonal readiness is completed. These tasks include: inspecting and re-conditioning of spreaders and spinners, install these items onto snow removal vehicles, performing test operations, calibrating distribution rates per National Salt Institution Application Guidelines, and conducting better driver training. The completion of these preparatory tasks helps to ensure that only the necessary level of salt is applied.

Consider the additional use of Calcium Chloride if the ambient temperature is below 20-degrees Fahrenheit, to improve the efficiency of snow melting efforts. Incorporate pre-wetting and alternative deicing methods if appropriate.

3.7.A.4.b SALT DELIVERY AND STORAGE

Steps are taken to ensure that the delivery, storage and distribution of salt does not pollute stormwater runoff. The floor of the enclosed salt storage building, and adjacent receiving/unloading area is constructed of impervious material. Push back the limits of the salt pile away from the door opening to minimize potential illicit runoff.

3.7.A.4.c SNOW PLOWING

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

3.7.A.5 Vehicle and Equipment Operations (BMP F.4)

Vehicle and equipment fueling procedures and practices are designed to minimize or eliminate the discharge of pollutants to the stormwater management system, including receiving waters.

3.7.A.5.a VEHICLE WASHING

Vehicle washing, wheel wash water, and other wash waters must be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge.

3.7.A.5.b VEHICLE MAINTENANCE

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

Waste Oil

Used motor oil, transmission fluids, gear lubes, brake fluids and other vehicle fluids (except antifreeze) are collected and stored. Typically, the waste oil tank is emptied and the contents removed for recycling.

Antifreeze

Store used antifreeze. When container is full, contact a special waste hauler for collection and disposal.

Batteries

Store used batteries are stored in an enclosed covered container. Typically, the batteries are collected bi-monthly from a local vendor.

Tires

Used tires are disposed of quarterly by a local vendor.

Other

Private certified companies perform all air-conditioning related work; therefore, the disposal of Freon is not handled directly by the Community. Cleaning fluids, and solvents are contained within an enclosed tank and maintained by a private licensed special waste company.

3.7.A.6 Animal Nuisance Control (BMP F.4)

Upon receiving notification, collect “road kill” from right-of-way areas. The carcasses are disposed of in the Public Works Complex garbage dumpsters.

3.7.A.7 Waste Management (BMP F.4)

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

3.7.A.7.a Spoil Stock Pile

Asphalt and concrete maintenance by-products and excess earth excavation materials are temporarily stored in the stock pile. Attempts are made to recycle asphalt and concrete products prior to storage in the spoil stock pile. Licensed waste haulers are contracted to remove and dispose the contents of the spoil stock pile at a licensed landfill. Surface runoff from this area is largely contained.

3.7.A.7.b Contaminated Soil Management

Collect or manage contaminated soil/sediment generated during an emergency response or identified during construction activities for treatment or disposal. Attempts are made to avoid stockpiling of the contaminated soil. If temporary stock piling is necessary, place the stockpile on an impermeable liner. Additionally, BMP (presented in the SMC's Technical Reference Manual or the Illinois Urban Manual, 2014) are used to protect the downslope of the stockpiled area for erosion downstream. Locate the construction access on the upstream side of the temporary stock pile.

3.7.A.7.c Hazardous Waste

Store all hazardous wastes in sealed containers constructed of compatible material and labeled. The containers are located in non-flammable storage cabinets or on a containment pallet. These items include paint, aerosol cans, gasoline, solvents and other hazardous wastes. Do not overfill containers. Paint brushes and equipment used for water and oil-based paints are cleaned within the designated cleaning area. Contain associated waste and other cleaning fluids within an enclosed tank, the tank is maintained by a private licensed special waste company.

3.7.A.7.d SANITARY WASTE

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

3.7.A.8 Water Conservation & Irrigation

Water conservation practices minimize water use and help to avoid erosion and/or the transport of pollutants into the stormwater management system. During periods of dry weather, a sprinkling/irrigation schedule is enforced. Maintenance activities (performed by the staff or its contractors) preserve water by utilizing vacuum recovery as opposed to water based cleaning when possible. Additionally, the water main replacement program decreases the possibility for water main leaks. In the event that a water main leak occurs, valve off the leaking section as soon as possible and then repair.

3.7.A.9 Green Infrastructure (BMP F.3)

Fremont Township will identity operations and maintenance of green infrastructure projects as they are implemented.

3.7.A.10 Special Events (BMP F.4)

Ensure that entities in charge of special events (such as parades, fairs) prohibit the dumping, depositing, dropping, throwing, discarding or leaving of litter and all other illicit discharges from entering the stormwater management system. The Public Works Department will oversee clean-up activities to promote compliance with the SMPP.

3.7.B Spill Response Plan (BMP F.6, C.9)

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

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

3.7.B.1 Spill Prevention

Ensure all hazardous substances are properly labeled. Store all hazardous wastes in sealed containers constructed of compatible material and labeled. Locate items, such as paint, aerosol cans, gasoline, solvents and other hazardous wastes, in non-flammable storage cabinets or on a containment pallet. Do not overfill containers. Provide secondary containers when storing hazardous substances in bulk quantities (>55gl). Dispense and/or use hazardous substances in a way that prevents release.

3.7.B.2 Non-Hazardous Spills/Dumping

Upon observing or receiving notification of a potential illicit discharge, the Illicit Discharge Incident Tracking Form, found in **Appendix 5.7** is used to log and investigate the incident. Appropriate procedures found within this chapter are implemented in the event an illicit discharge has been confirmed.

Non-hazardous spills typically consistent of an illicit discharge of household material(s) into the street or stormwater management system. Upon notification or observance of a non-hazardous illicit discharge, implement the following procedure:

- Sand bag the receiving inlet to prevent additional discharge into the storm sewer system, as necessary. It may be necessary to sand bag the next downstream inlet.
- Check structures (immediate and downstream). If possible, materials are vacuumed out. The structure(s) are then jetted to dilute and flush the remaining unrecoverable illicit discharge.
- Clean up may consist of applying “Oil Dry” or sand and then sweeping up the remnant material.
- After containment and cleanup activities have been performed, fill out the ***Spill Response Notice*** **(Appendix 5.8**) and distributes to adjoining residences/businesses. In residential areas, the hanger should be provided to residences on both sides of the spill and on both sides of the street.
- Document the location, type of spill and action taken on the ***Indirect Illicit Discharge Tracking Form*** **(Appendix 5.7)**. .
- If a person is observed causing an illicit discharge, the Township is notified and appropriate citations issued.

3.7.B.3 Hazardous Spills

Upon notification or observance of a hazardous illicit discharge, Public Works follows the following procedure:

- Call 911, explain the incident. The Fire Department responds;
- Public Works provides emergency traffic control, as necessary;
- The Fire Department evaluates the situation and applies “No Flash” or “Oil Dry” as necessary;
- The Fire Department’s existing emergency response procedure, for hazardous spill containment clean-up activities, is followed;
- Document the location, type of spill and action taken on the Illicit Discharge Incident Tracking Form (**Appendix 5.7**); and,

If the Fuel Tank leaks, immediately call 911. Shut pump off, if pump won't shut off, shut Shop 2 electric off. Contain spill, put booms around storm sewer.

3.7.C Employee Training (BMP F.1)

The QLP provides training materials and opportunities. Promote education and training employees (or contractors retained to manage Village infrastructure) to ensure that they have the knowledge and skills necessary to perform their functions effectively and efficiently. Employees are encouraged to attend all relevant training sessions offered by the QLP and other entities on topics related to the goals/objectives of the SMPP. Key educational topics include the following:

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

Measurable Goal(s):

- Attend QLP offered training.
- Support QLP efforts by providing program information to staff.

3.7.C.1 Training Approach

Employees are encouraged to attend all relevant training sessions offered by the QLP and other entities on topics related to the goals/objectives of the SMMP. Make available training materials tailored to specific functional groups. The materials focus on

storm water pollution prevention measures and practices involved in routine activities carried out by the various functional groups.

3.7.C.2 Training Schedule and Frequency

Digital and hard copies of the training materials will be kept and shared with applicable new employees as part of their job introduction. Employees are encouraged to share information with other employees via email or other formats. Information may include:

- updates and news which might enhance pollution control activities,
- feedback from field implementation of best management practices, or
- new product information.

3.7.C.2.a IDDE TRAINING

Personnel conducting the IDDE portion of the SMPP shall thoroughly read and understand the objectives of the IDDE subchapters of this manual prior to performing any outfall inspections or monitoring efforts.

4 Program and Performance Monitoring, Evaluation and Reporting

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

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

- reviews its activities,
- inspects its facilities,
- oversees, guides, and trains its personnel, and
- evaluates the allocation of resources available to implement stormwater quality efforts.

4.1 Monitoring Program

There are extensive monitoring efforts already underway across the County including efforts by the LCHD to monitor numerous lakes, the Des Plaines River Watershed Workgroup and the Fox River Study Group. Refer to Figure 14.

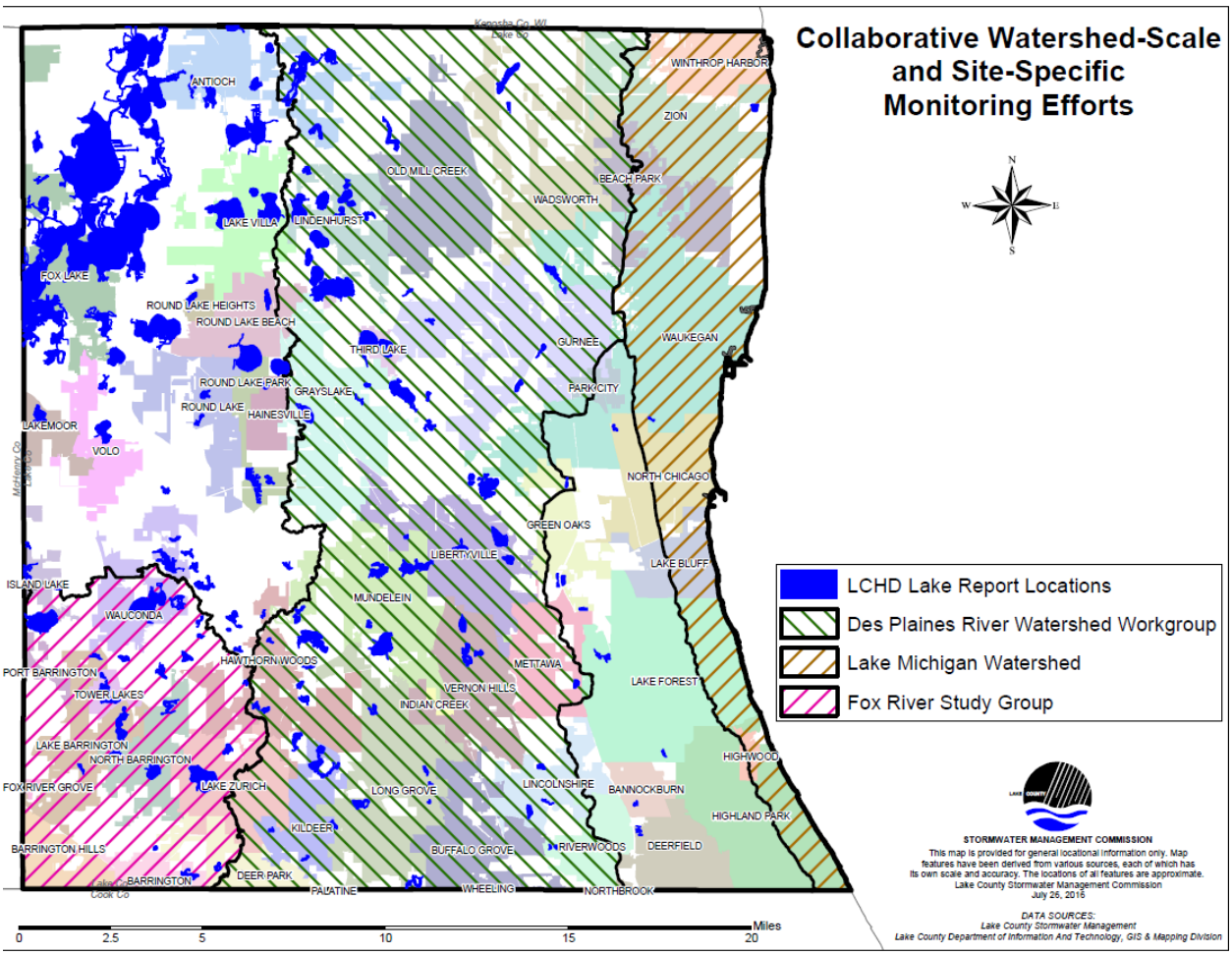


Figure 14: Countywide Monitoring Efforts

4.1.A Fox River Study Group

In accordance with ILR 40 V.A.2.b.x, the Fox River Study Group (FRSG), previously described in Chapter 2.4, satisfies the monitoring requirement for the portion of the community located within the Lower Fox River Watershed.

By agreement between the Illinois EPA and the FRSG, the Fox River Implementation Plan (FRIP) will take the place of a traditional TMDL for dissolved oxygen and nuisance algae in the Fox River. No written agreement has been implemented between the Illinois EPA and the FRSG regarding the FRIP, but the Illinois EPA has worked closely with the FRSG in developing the FRIP since 2001. Because the Illinois EPA's authority to implement and enforce the Clean Water Act comes from the federal government, the FRIP will need to be approved by the U.S. EPA before it officially replaces the TMDL process. The need for a TMDL will be revisited by IEPA after implementation of the FRIP, by evaluating whether the listed reaches are still impaired

The ISWS developed a calibrated QUAL2K water quality model application for the Fox River (Bartosova, 2013). This model was used to simulate future Fox River water quality in response to management actions considered in the FRIP. In 2016, the FRSG will develop a strategy for future data collection and prepare written plan(s) that may potentially include additional water quality monitoring and discussion with IEPA and IDNR of biological data to assess actual condition of aquatic community and potentially identify gaps in existing biological data.

Fremont Township is committed to participating in the FRSG and supporting its efforts.

4.1.B Des Plaines River Watershed Workgroup

In accordance with ILR 40 V.A.2.b.x, participation in the Des Plaines River Watershed Workgroup (DRWW), previously described in Chapter 2.4, satisfies the monitoring requirement for the portion of the community located within the Des Plaines River Watershed.

POTWs and communities within the Des Plaines River watershed in Lake County have initiated efforts to form a workgroup: a voluntary, dues paying, membership organization that would monitor water quality and strategize to improve water quality based on scientific data, making decisions at the local level. Membership would consist of POTWs, municipal separate storm sewer permittees (MS4s), environmental groups, consultants, concerned citizens. The Workgroup, the Des Plaines River Watershed Workgroup (DRWW), would meet quarterly, be governed by a set of bylaws and an elected executive board, and provide many benefits to the general membership including:

- Water quality improvements
- Local decision making
- Cost savings
- NPDES permit compliance: shared monitoring effort, education and outreach materials
- Continuing education credits to maintain professional certifications

Fremont Township is committed to participating in the DRWW and supporting its efforts.

4.1.C Lake County Health Department Lakes Management Unit

In accordance with ILR 40 V.A.2.b.ii and ILR 40 V.A.2.b.v, the monitoring efforts performed by the LCHD satisfies the monitoring requirement for the portions of the watershed tributary to an assessed Lake. Due to the length of monitoring efforts performed by the county, trends in water quality impairments and improvements can be best gauged by reviewing current and historic lakes reports.

The Lakes Management Unit has been collecting water quality data on Lake County lakes since the late 1960s. Since 2000, 176 different lakes each year have been studied and data collected on temperature, dissolved oxygen, phosphorus, nitrogen, solids, pH,

alkalinity, chloride, conductivity, water clarity, the plant community and shoreline characteristics. The LMU collects baseline water quality information from at least 12-15 different lakes in the county each year. These lakes must be at least 6 acres in size. Water quality information is obtained through the collection of water samples once per month from May through September, usually at the deepest areas of the lakes.

ANALYSIS

This water is analyzed for nutrients, solids, temperature, dissolved oxygen and various other parameters. A plant survey to analyze the aquatic plant community for different species and their relative occurrence is also conducted once per month from May through September. Additionally, once per summer the shoreline of each lake is characterized for shoreline type, severity of erosion and shoreline plant species (including invasives).

SUMMARY REPORTS

Summary reports are written and presented to the management entity of the lake and other concerned citizens during the following spring. These reports include the analysis of data collected, a list of threats occurring in or around the lake, and recommendations on how to reduce or eliminate these problems. Lake summary reports can be found https://www.lakecountyil.gov/2400/Lake-Reports.

4.1.C.1 Inland Beaches

From May to September, bacteria concentrations are monitored bimonthly at inland beaches and recreational areas by Lake County's Lake Management Unit (LMU). The water samples are tested for E coli bacteria, which are found in the intestines of almost all warm-blooded animals. Note that not all strains of E coli are the same, and certain strains can make humans sick if ingested in high enough concentrations. If water samples come back high for E coli (235 E coli/100 ml), the management body for the bathing beach is notified and a sign is posted indicating the beach closure. Additionally, since rain events tend to lead to elevated bacteria levels in the water column, the LMU advises that persons avoid swimming for 48 hours after a large rain event.

The IEPA uses the number and duration of swim bans to assess whether or not the beaches support designated uses for primary contact recreation. Within Illinois, Lake Michigan Beaches are found to be "not supporting" of primary contact use when, on average over a three-year period: (1) one or more beach closures occurred per year lasting less than a 2 week; or (2) less than one beach closure occurred per year, but the average closure duration was one week or greater

4.1.D Community Monitoring

A portion of the Community is located outside of existing monitoring efforts. The Township has selected a total of 7 locations to perform supplement water quality monitoring in accordance with ILR 40 V.A.2.b.vii. Monitoring locations were selected to

coincide with high priority outfalls which also require annual inspection per ILR40.B.3.h; refer to **Figure 16 Additional Community Monitoring Locations**.

Grab samples at these locations shall be collected once annually 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.

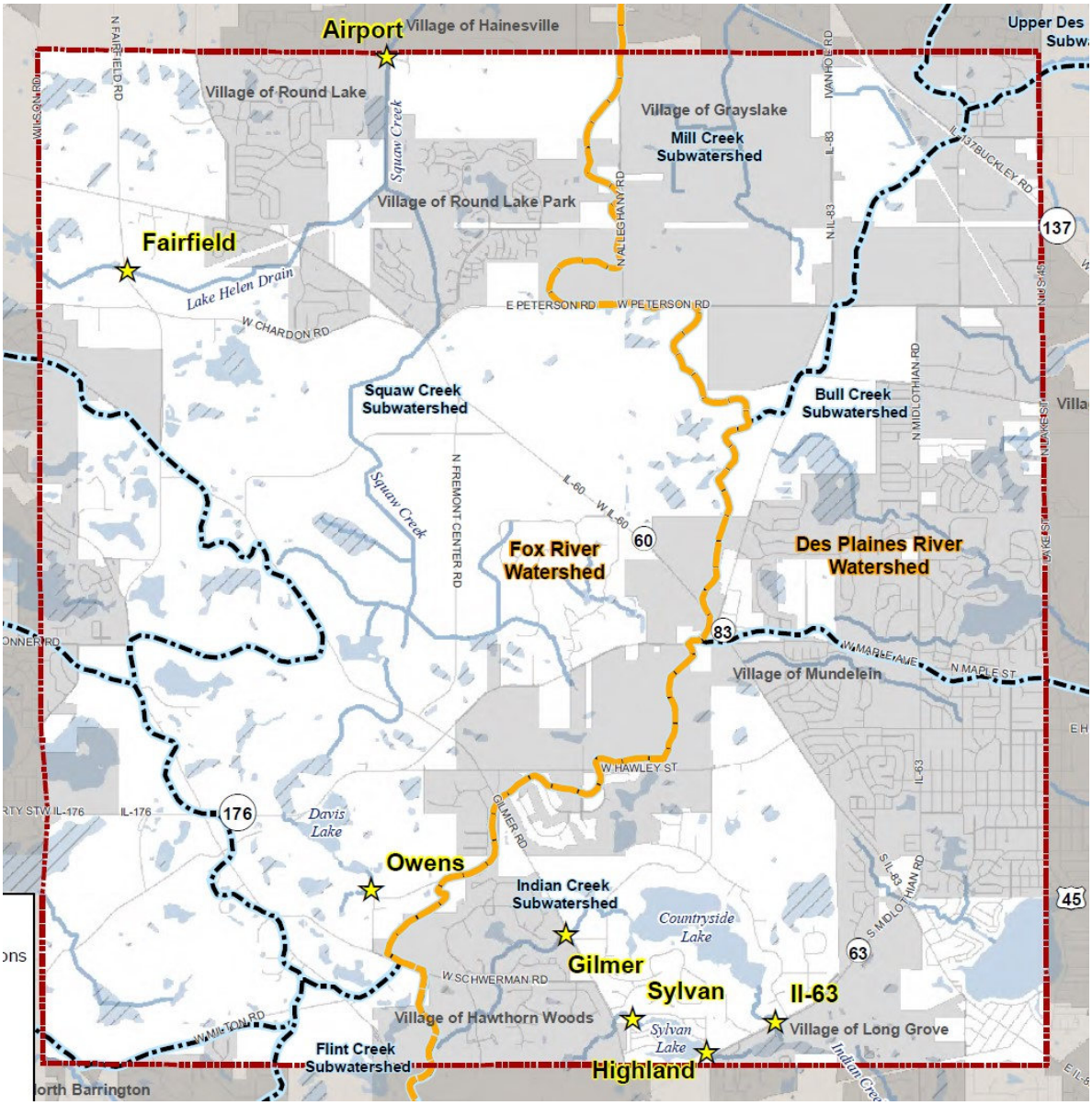


Figure 16: Additional Community Monitoring Locations

4.2 Program Evaluation (BMP C.6)

At the end of each year the BMPs implemented by the MS4 should be evaluated in order to determine the effectiveness of the program. Include a description of observed areas of program effectiveness, at the end of Part B **Stormwater Management Program Assessment** within each **Annual Report** submitted to IEPA. Program areas which do not appear to be improving should also be identified and described within this portion of the Annual Report. This information will be used to provide insight into how the program may need to evolve. The following are some indicators that the BMPs are appropriate.

- A reduced number of outfalls having positive indicators for potential pollutants.
- An improvement, or no change, in the annual monitoring results.
- Improved community awareness of water quality and other NPDES program aspects.
- Increased number of hits on website information related to the NPDES program.
- Increased quantities of Household Hazardous Wastes or Electronic collected by SWALCO.
- Reduced number of septic system failures.
- Increased stakeholder involvement.
- Reduced number of SE/SC violations.
- Increase in Streambank and Shoreline stabilization projects, or a decrease in the extent of projects necessary.
- Improved detention pond quality (including conversion of dry bottom or turf basins to naturalized basins; removal of excess sediment accumulation and a general increase in maintenance activity on detention ponds throughout the MS4).
- Reduced use of chloride and phosphorus by the MS4.
- Improved awareness of water quality and other NPDES program aspects by both Township staff and its contractors.

4.2.A Monitoring Program Evaluation

The results of the monitoring are used to further gage the effects of the SMPP on the physical/habitat-related aspects of the receiving waters and the effectiveness of BMPs. Possible causes of any documented degradation will be investigated and any appropriate corrective actions will be incorporated into future Stormwater Management Program Plan (SMPP).

- As part of the QLP section of the Annual Report, SMC provides a detailed discussion of the State of Lake County Waters including a summary of TMDLs, an assessment of the regional water quality monitoring and watershed group efforts and an estimate of the effectiveness of the regional efforts.
- The Township is responsible for providing a discussion of any additional local monitoring efforts within the MS4 portion of the **Annual Report Part C Annual Monitoring and Data Collection.**

4.2.B IDDE Program Evaluation

Experience gained from the USEPA NPDES program indicates a lower chance of observing polluted dry-weather flows in residential and newer development areas, while older and industrial land use areas having a higher incidence of observed dry-weather flows. Review the results of the screening program to examine whether any trends can be identified that relate the incidence of dry-weather flow observations to the age or land use of a developed area. If so, these conclusions may guide future outfall screening activities.
Indirect or subtle discharges such as flash dumping are difficult to trace to their sources and can only be remedied through public education and reporting. Therefore, it is expected that to some degree they will continue although at a reduced magnitude and frequency. Although the outfall screening program will be successful in identifying and eliminating most pollutants in dry-weather discharges, the continued existence of dry-weather flows and associated pollutants will require an ongoing commitment to continue the outfall screening program.

The first phase of the program was to complete the MS4 wide pre-screening effort, investigate those outfalls exhibiting dry-weather flow and then eliminate identified illicit direct connections. The ILR40 permit, issued in 2016 requires that all high-priority outfalls be evaluated annually. It is logical to assume that completion of the Phase 1 efforts and several years of annual screening, the majority of the dry-weather pollution sources will be eliminated. However, new sources may appear in the future as a result of mistaken cross connections from redevelopment, new-development or remodeling. These efforts will determine the effectiveness of the program on a long-term basis and show ongoing improvement through a reduced number of outfalls having positive indicators of potential pollutants. Include a description of the screening and dry-weather flow investigation, in **Annual Report Part C IDDE Monitoring and Data Collection** submitted to IEPA annually.

4.2.C SMPP Document Evaluation

Evaluation of the SMPP. The following types of questions/answers are discussed periodically between the QLP, Stormwater Coordinator, Managers and field staff. Suggested improvements are noted and incorporated into a revised SMPP document, approximately every 5-years.

- Are proper stormwater management practices integrated into planning, designing and construction of both public and private projects?

- Are efforts to incorporate stormwater practices into maintenance activities effective and efficient?

- Is the training program sufficient?

- Is the SMPP sufficient with respect to both the BMPs and measurable goals described for each of the six MCM?

- Are the procedures for implementing the SMPP adequate?

- Are there any TMDL Reports within the community and if yes, is there an action plan for compliance?

- Were there any issues of non-compliance and if yes, determine the plan for achieving compliance with a timeline of actions?

5 Appendices

5.1 List of Acronyms

Acronyms

BMP	Best Management Practices
CMAP	Chicago Metropolitan Agency for Planning
CWA	Clean Water Act
CWP	Center for Watershed Protection
DECI	Designated Erosion Control Inspector
EO	Enforcement Officer
EOPCC	Engineers Opinion of Probable Construction Cost
HHW	Hazardous Household Waste
ID	Identification
IDDE	Illicit Discharge Detection and Elimination
IDOT	Illinois Department of Transportation
IEPA	Illinois Environmental Protection Agency
ION	Incidence of Non-compliance (with IEPA)
IUM	Illinois Urban Manual
MAC	Municipal Advisory Committee
MS4	Municipal Separate Storm Sewer Systems
MWRD	Metropolitan Water Reclamation District
NIPC	Northeastern Illinois Planning Commission
NOI	Notice of Intent
NOT	Notice of Termination (with IEPA)
NPDES	National Pollutant Discharge Elimination System
PPE	Personal Protection Equipment
QLP	Qualifying Local Program
SE/SC	Soil Erosion and Sediment Control
SMC	Stormwater Management Commission
SWALCO	Solid Waste Agency of Lake County
SWANCC	Solid Waste Agency of Northern Cook County
SWMP	Storm Water Management Program
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
WDO	Watershed Development Ordinance
WDP	Watershed Development Permit

5.2 Stormwater Outfall Screening Equipment Checklist

STORM WATER OUTFALL SCREENING EQUIPMENT CHECKLIST		
Field Analysis		pH Testing Strips
		Chlorine Testing Strips
		Copper Test Strip
		Ammonia Test Strip
		Phenols Test Kit (Minimum of 15 Tests)
		Detergents Test Kit (Minimum of 15 Tests)
		Color Chart
		Thermometer
		Wash Bottle with Tap Water
Sampling		Extended Sampler
		250-ml and 500-ml glass sample containers with labels
		Cooler with ice or ice packs
Other		Outfall Screening Data Form (Minimum of 10)
		Outfall Sampling Report (Minimum of 10)
		Clipboard and Pens
		Resident Form Letters (Minimum of 10)
		Training Manual
		Storm Sewer Atlas
		Digital Camera
		Flashlight
		Manhole Cover Hook
		Tape Measure
		Folding Rule
		Brush Clearing Tool
		Plastic Trash Bags
		Paper Towels
Safety (PPE Equipment)		Traffic Cones/Flags/Light Sticks
		Traffic Safety Vest
		First Aid Kit
		Steel-Toe Boots
		Work Gloves
		Safety Glasses/Goggles
		Rubber Boots
		Disposable Gloves (Latex)
		ID Badge
Personal (supplied by employee if desired)		Insect Repellant
		Sunscreen

5.2 Storm Water Outfall Screening Equipment Checklist

Safety is the primary consideration while inspecting upstream sampling locations. In general, the rule "*if in doubt,* ***don't****"* is followed. Latex gloves are worn while collecting and handling samples. A first aid kit is included in each vehicle to treat minor injuries. Obtain medical help for major injuries as soon as possible. Report all injuries, minor and major to appropriate persons.

Access to Private Property

In some cases, it may be necessary for Township Highway personnel to enter or cross private property to investigate discovered illicit discharges. A form letter should be prepared that includes a short description of the project, the purpose of the access to the property, and the name of a project contact person with a telephone number. Attempt to contact each home, or business, owner for permission. Township Highway personnel shall have identification indicating that they are municipal employees. If the owner is not present, a letter should be left at the premises to facilitate return inspection. If permission to access property is denied, a public official should then contact the owner at a later date. All access by municipal personnel onto private property shall conform to the Watershed Development Ordinance.

Avoid confrontational situations with citizens and attempt to answer questions concisely and without being alarmist. Township Highway personnel should be coached on appropriate responses to questions from citizens. If a field crew feels uncomfortable or threatened, they should remove themselves from the situation and report to the incident to their supervisor.

Traffic

All traffic control measures are to be in accordance with the requirements of the *Manual on Uniform Traffic Control Devices* and other internal Policies and Procedures as set forth by the Highway Department.

In general, the following additional policies are applicable. Public Works personnel generally work on streets only during the hours of 9 a.m. to 3 p.m. except in emergency situations. All field crews are required to wear Personal Protection Equipment (PPE) in accordance with Standard Operating Procedures set forth by the Highway Department.

Confined Space Entry

Confined space entry for this program would include climbing into or inserting one's head into a pipe, manhole, or catch basin. In general, do not cross the vertical plane defining an outfall pipe or the horizontal plane defining a manhole, unless properly prepared for confined space entry. **IN NO CASE SHALL FIELD CREW MEMBERS WHO ARE UNTRAINED AND/OR UNEQUIPPED FOR CONFINED SPACE ENTRY ATTEMPT TO ENTER CONFINED SPACES.** Confined space entry shall be conducted only by trained personnel with appropriate rescue and monitoring equipment.

Other Hazards

Table 5: Other Outfall Inspection Hazards

Hazard	Prevention
Access	Avoid steep slopes, dense brush and deep water. Report unsafe locations and move on to next location.
Stuck	Avoid wading where bottom sediments are easily disturbed or depths are unknown.
Strong Gas/Solvent Odor	Do not select manhole for sampling
Bodily Harm From Manhole Covers	Use manhole hook and watch for pinch points
Slip	Proper Foot Gear and Use of Rope If Warranted
Falls	Use extended sample collection device; don't cross horizontal or vertical plane at end of outfall
Heat and Dehydration	Adequate Water Intake; Avoid Excessive Exertion on Hot Days
Sunburn	Sunscreen and Appropriate Clothing
Poisonous Plants/Animals	Identify and Avoid
Vicious Dogs	Avoid; Use Animal Repellent if necessary
Water Bodies	Flotation Devices
Ticks	Check Entire Body at End of Each Day
Mosquitoes	Apply Repellent

5.3 Stormwater Outfall Inspection Data Form

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): ☐ Industrial ☐ Residential ☐ Commercial	☐ Open Space ☐ Institutional Other: _____ Known Industries: _____	

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
Storm Sewer (Closed Pipe)	☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Clay / draintile ☐ Other: _____	☐ Circular ☐ Elliptical ☐ Box ☐ Other: ____	☐ Single ☐ Double ☐ Triple ☐ Other:_____	Diameter/Dimensions: _____	In Water: ☐ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
Open drainage (swale/ditch)	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other:	☐ Trapezoid ☐ Parabolic ☐ Other:		Depth: Top Width: Bottom Width:	

Section 3: Physical Indicators

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐Corrosion	
Deposits/Stains	☐	☐ Oily ☐Flow Line ☐ Paint ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe algea/growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Do physical indictors suggest an illicit discharge is present (Y/N):			

Flow Present?	☐ Yes ☐ No	**If No, Skip to Section 7 and Close Illicit Discharge Investigation**
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial	

Section 4: Physical Indicators (Flowing Outfalls Only)

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Sulfide ☐ Petroleum/gas ☐ Laundry ☐ Other:	☐ 1–Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color (color chart)	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange/Red ☐ Multi-Color ☐ Other:	☐ 1–Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1–Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage ☐ Suds and Foam ☐ Petroleum (oil sheen) ☐ Grease ☐ Other:	☐ 1–Few/slight; origin not obvious	☐ 2 – Some; indications of origin	☐ 3 - Some; origin clear
Do physical indictors (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)

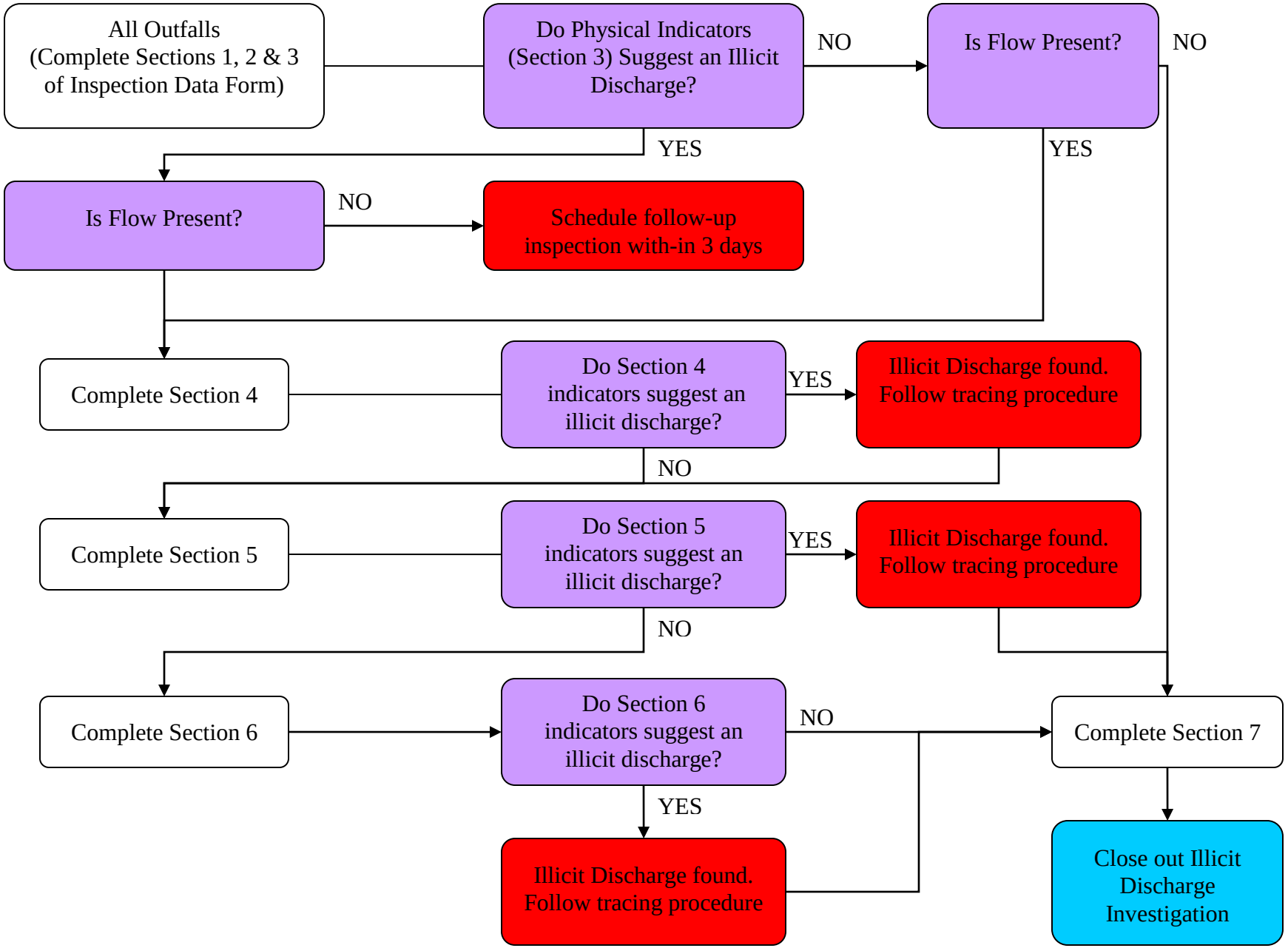
1. Sample for the lab?	☐ Yes	☐ No
2. If yes, collected from:	☐ Flow	☐ Pool

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 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 algea/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.

Likelyhood: 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.

- 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.

5.4 Pre-Construction Meeting Form

Fremont Township
Pre-Construction Meeting Form

PROJECT:_____ DATE:_____

CONTRACTOR: _____ Phone: _____

Project Manager:_____ FAX: _____

Site Superintendent:_____ Phone:_____

Cell/Pager:_____

ENGINEER: _____ Phone:_____

Project Manager: _____ FAX:_____

Field Representative:_____ Cell/Pager:_____

SESC Inspector (if applicable): _____

Phone:_____ Fax:_____ Cell/Pager:_____

1. Contract Dates

   a. Start _____

   b. Duration of Contract _____

   c. Substantial Completion _____

   d. Final Completion _____

2. Utilities

   a. Water _____
   b. Sewer _____
   c. Electric _____
   d. Cable _____
   e. Telephone _____
   f. Gas _____
   **Contact JULIE 1-800-892-0123

3. Permits (circle applicable permits)

a. Water
b. Sewer (IEPA)
c. Building/Site Development
d. MWRD
e. USACE Wetland Permit
f. IEPA / NPDES (Erosion Control)
g. IDOT
h. Easements

4. Contractors Insurance (Certificate of Insurance) - Name Fremont Township and Township Consultant, as additionally insured.

5. Performance Guarantee Requirements: _____

6. Reference Points/Surveying/Staking

   a. Who provides: _____

7. Construction Schedule / Sequencing on plans? ___ Yes ___ No

8. List of Subcontractors/Suppliers

_____

_____

_____

_____

9. Special Structures needing / Shop Drawings ___ Yes ___ No

10. As-builts required at completion of project ___ Yes ___ No

11. Operation and Maintenance of Existing Facilities

Utilities
Driveways
Construction entrance and silt fence etc.

12. Stormwater Management Facility Long Term Maintenance Plan required? ___ Yes ___ No

13. Traffic Control

   a. Traffic Control Subcontractor: _____

14. Soil Erosion / Sediment Control

   a. Floodplain/Floodway On/Adj. to Site (Y/N)
   b. Wetlands/Waters On/Adj to Site (Y/N)

c. Initial SE/SC Inspection at Pre-Con (Y/N)
d. Township to receive weekly NPDES Inspection Reports (Y/N)
f. Key Discussion Items/Areas of Focus

☐ Communication Chain	☐ Construction Entrance	☐ Detention/Sediment Basin
☐ Dewatering	☐ Ditch Checks/Silt Dikes	☐ Dust / Mud Control
☐ General Phasing	☐ Inlet Protection	☐ Inspection Log
☐ Overland / Offsite Drainage	☐ Perforated Riser	☐ Perimeter SE/SC BMPs
☐ Restrictor Plate/Structure	☐ Silt Fence (ASSHTO 288-00)	☐ Soil Stockpile Stabilization
☐ Stormwater Management System	☐ Stabilization Measures	☐ SWPPP on Site & Updated
☐ Stormwater System	☐ Vegetative Cover/Type	☐ Wetlands/Waters Protection

15. Temporary Facilities and Controls

a. Relocations (Utilities, roadway, etc.): _____
b. Job Trailer location, phone numbers, address: _____
_____

16. Testing (by Whom?)

a. Materials _____
b. Water main Installation _____
c. Sewer Installation _____
d. Pavement construction _____

17. Progress Meetings

Weekly/Bi-weekly beginning _____

18. Easement Requirements

a. Existing/Proposed
b. Construction Easements
c. Drainage Easements
d. Restoration/Staging of Materials

19. Inspections

a. Special inspections _____
b. By consultant and/or Township _____
c. Date of next inspection _____

20. Working Hours

a. Contractor construction
Mon-Fri: 7:00AM-6:00PM
Saturday 7:00AM – Noon
Sunday and Holidays – no work.
Demolition can only take place Mon – Fri.

b. Township Office Hours
Mon-Fri 7:00AM-3:30PM

Additional Notes:

5.5 Soil Erosion and Sediment Control Inspection Form

NPDES Site Observation Report for ILR10

GHA GEWALT HAMILTON ASSOCIATES, INC.

General Information		
GHA Project Name and Number:	**Today's Date:**	**Last Visit:**
Preparer's Name & Title:	**Client:**	
Stage of Construction	**Current Weather:**	
Reason for Visit:	**NPDES Permit No. ILR10**	
Construction phases(s) at time of visit:	**On-site Contact Name & Title:**	
Site Observations – Describe Location and Recommend Corrective Measures on Next Page		

No.	BMP/Activity	Implemented & Maintained
1	Are discharge points and receiving waters free of sediment deposits and other pollutants?	☐ Yes ☐ Action Item ☐ N/A
2	Have BMPs specified in the SWPPP been installed and maintained?	☐ Yes ☐ Action Item ☐ N/A
3	Has the SWPPP been updated to reflect the current conditions on site?	☐ Yes ☐ Action Item ☐ N/A
4	Are outlets protected/stabilized?	☐ Yes ☐ Action Item ☐ N/A
5	Have stormwater management systems been constructed, stabilized, and verified to be functioning appropriately?	☐ Yes ☐ Action Item ☐ N/A
6	Are Special Management Areas (e.g., creeks, wetlands, buffers, etc.) adequately protected?	☐ Yes ☐ Action Item ☐ N/A
7	Are storm drain inlets adequately protected?	☐ Yes ☐ Action Item ☐ N/A
8	Have all idle, disturbed areas been stabilized within 7 days of cessation of construction activities in that area (or more restrictive time period per local ordinance requirement)?	☐ Yes ☐ Action Item ☐ N/A
9	Are erodible stockpiles (e.g., topsoil) properly located and adequately protected?	☐ Yes ☐ Action Item ☐ N/A
10	Are washout facilities (e.g., concrete washouts, etc.) available and maintained?	☐ Yes ☐ Action Item ☐ N/A
11	Is waste, including building materials and construction debris, collected and placed in approved receptacles?	☐ Yes ☐ Action Item ☐ N/A
12	Are non-stormwater discharges (e.g., dewatering) properly controlled?	☐ Yes ☐ Action Item ☐ N/A
13	Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or any other potential pollutants?	☐ Yes ☐ Action Item ☐ N/A
14	Are portable toilets, material storage areas, and materials that are potential stormwater contaminants managed appropriately?	☐ Yes ☐ Action Item ☐ N/A
15	Are stabilized entrances installed and are adjacent roads clear of sediment?	☐ Yes ☐ Action Item ☐ N/A
16	Other, based on site conditions:	☐ Yes ☐ Action Item ☐ N/A

NPDES Site Observation Report for ILR10

No.	Location and Recommended Corrective Measure	Completed/Initial*
		☐
		☐
		☐
		☐
		☐
		☐

General Notes and Comments:

Certification Statement:

(To be signed by a responsible corporate officer of the property owner or a duly authorized representative of the property owner in accordance with NPDES Permit ILR10 Part VI.G)

"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: _____ Date: _____

Name and Title: _____

5.6 Sample Notice of Violation Letter

Date:

1ST NOTICE OF VIOLATION

Applicant Name
Company
Address
City State Zip

Subject: Project Name
Permit No._____
1st Notice of Violation

Dear Permittee:

You are hereby notified of the following violation(s) to your Site Development Permit:

☐ Failure to notify Fremont Township prior to construction.

☐ Failure to display Permit placard visible from street.

☐ Failure to install/maintain a non-erosive outlet from the structure to the watercourse.
Location(s) _____

☐ Failure to install/maintain soil erosion and sediment control features prior to hydrologically disturbing upstream areas.
Location(s) _____

☐ Failure to install/maintain temporary or permanent seeding.
Location(s) _____

☐ Failure to install/maintain sod.
Location(s) _____

☐ Failure to install/maintain erosion control blanket.
Location(s) _____

☐ Failure to install/maintain silt fence.
Location(s) _____

☐ Failure to install/maintain sediment traps.
Location(s) _____

☐ Failure to install/maintain sediment basins.
Location(s) _____

☐ Failure to install/maintain storm inlet protection.
Location(s) _____

☐ Failure to route dewatering services through an effective sediment control measure.
Location(s) _____

☐ Failure to install/maintain stabilized construction entrance. Failure to clean right of way/pavement.
Location(s) _____

☐ Failure to install/maintain runoff diversion controls.

Location(s) _____

☐ Failure to prevent erosion from stockpile, or the placement of stockpile in a flood-prone area, wetland or waters of the U.S.

Location(s) _____

☐ Failure to maintain dust control.

Location(s) _____

☐ Failure to follow permitted construction sequencing.

Location(s) _____

☐ Failure to submit a copy of the NPDES ILR10 Notice of Intent to the Township.

You must take immediate action and cure all deficiencies identified above within five (5) working days, or Fremont Township may issue a Stop Work Order or invoke penalties and legal actions as outlined in the Township's Municipal Code. Once all deficiencies have been cured, please call our office to schedule a re-inspection. If you have any questions, please contact the Fremont Township Highway Department at (847) 223-2848.

Sincerely,

Bill Grinnell
Highway Commissioner

cc:

Summary of Violation Notification Procedure

1st Notice: Township will furnish a Violation Notification to applicant and/or representative via fax and Certified Mail outlining necessary corrective measures to be completed and re-inspected within 5-working days of said notification. After which time, if violations are still not corrected, a stop work order will be issued for the site (i.e. all work to stop except for activities related to correcting violations).

2nd Notice: Township issues a Conditional Stop Work Order for the site (allowing only remediation activities) via fax and Certified Mail granting an additional 5-working day deadline to complete remedial work to cure said violation(s). Fines continue to accrue.

3rd and Final Notice: If corrective measures have not been completed within the period allowed by 2nd Notice, the Township shall meet with the applicant/developer to discuss the Township's additional punative actions and the plan and schedule within which the necessary remedial measures will be completed. Fines continue to accrue and the Conditional Stop Work Order remains in effect.

NOTE: Building and/or Occupancy Permits and surety reduction requests will be withheld until all violations are resolved and levied fines are paid.

5.7 Indirect Illicit Discharge Tracking and Summary Forms

Illicit Discharge Incident Tracking Form

Incident ID:

Responder Information	
Call taken by:	Call date:
Call time:	Precipitation (inches) in past 24-48 hrs:
Reporter Information	
Incident time:	Incident date:
Caller contact information (*optional*):	

Incident Location *(complete one or more below)*

Latitude and longitude:			
Stream address or outfall #:			
Closest street address:			
Nearby landmark:			
Primary Location Description	**Secondary Location Description:**		
☐ Stream corridor (*In or adjacent to stream)*	☐ Outfall	☐ In-stream flow	☐ Along banks
☐ Upland area *(Land not adjacent to stream)*	☐ Near storm drain	☐ Near other water source (storm water pond, wetland, etc.):	
Narrative description of location:			

Upland Problem Indicator Description

☐ Dumping	☐ Oil/solvents/chemicals	☐ Sewage
☐ Wash water, suds, etc.	☐ Other: _____	

Stream Corridor Problem Indicator Description

Odor	☐ None	☐ Sewage	☐ Rancid/Sour	☐ Petroleum (gas)
	☐ Sulfide (rotten eggs); natural gas	☐ Other: Describe in "Narrative" section		
Appearance	☐ "Normal"	☐ Oil sheen	☐ Cloudy	☐ Suds
	☐ Other: Describe in "Narrative" section			
Floatables	☐ None:	☐ Sewage (toilet paper, etc)	☐ Algae	☐ Dead fish
	☐ Other: Describe in "Narrative" section			
Narrative description of problem indicators:				
Suspected Violator (name, personal or vehicle description, license plate #, etc.):				

IDDE Summary Form

Call Date	Call Time:	Incident Date:	Incident Location:	Upland Indicator	Stream Indicator

5.8 Spill Response Notice

Stormwater Pollution Found in Your Area!

This is not a citation.

This is to inform you that our staff found the following pollutants in the storm sewer system in your area. This storm sewer system leads directly to

_____

- ❑ Motor oil
- ❑ Oil filters
- ❑ Antifreeze/ transmission fluid
- ❑ Paint
- ❑ Solvent/degreaser
- ❑ Cooking grease
- ❑ Detergent
- ❑ Home improvement waste (concrete, mortar)
- ❑ Pet waste
- ❑ Yard waste (leaves, grass, mulch)
- ❑ Excessive dirt and gravel
- ❑ Trash
- ❑ Construction debris
- ❑ Pesticides and fertilizers
- ❑ Other

_____

For more information or to report an illegal discharge of pollutants, please call:

Fremont Township Highway Department

(847) 223-2848

WHEN IT RAINS IT DRAINS

www.epa.gov/npdes/stormwater

EPA 833-F-03-002
April 2003

Stormwater runoff is precipitation from rain or snowmelt that flows over the ground. As it flows, it can pick up debris, chemicals, dirt, and other pollutants and deposit them into a storm sewer system or waterbody.

Anything that enters a storm sewer system is discharged *untreated* into the waterbodies we use for swimming, fishing, and providing drinking water.

Remember: Only Rain Down the Drain

To keep the stormwater leaving your home or workplace clean, follow these simple guidelines:

- Use pesticides and fertilizers sparingly.
- Repair auto leaks.
- Dispose of household hazardous waste, used auto fluids (antifreeze, oil, etc.), and batteries at designated collection or recycling locations.
- Clean up after your pet.
- Use a commercial car wash or wash your car on a lawn or other unpaved surface.
- Sweep up yard debris rather than hosing down areas. Compost or recycle yard waste when possible.
- Clean paint brushes in a sink, not outdoors. Properly dispose of excess paints through a household hazardous waste collection program.
- Sweep up and properly dispose of construction debris like concrete and mortar.

5.9 Sample Maintenance Plans

STORMWATER MANAGEMENT SYSTEM
MAINTENANCE PLAN FOR NEW FACILITIES

Subject: INSERT DEVELOPMENT NAME HERE

SUCH PROPERTY BEING THE REAL PROPERTY NOW DULY PLATTED AS INSERT DEVELOPMENT NAME HERE, AS SUCH PLAT IS NOW RECORDED AS DOCUMENT NO. INSERT DOCUMENT NUMBER, IN THE OFFICE OF THE RECORDER OF DEEDS OF THE COUNTY OF XXXX, STATE OF ILLINOIS, HEREBY MAKES THE FOLLOWING DECLARATIONS OF MAINTENANCE RESPONSIBILITIES.

Responsibilities

Adequate provisions for maintenance of the stormwater system are an essential aspect of long-term drainage performance. Responsibility for the overall maintenance shall rest with the insert responsible party name here.

Purpose and Objective:

Detention and water quality treatment facilities, storm sewers, swales and native vegetation/buffer areas define a development's stormwater management system. When land is altered to build homes and other developments, the natural system of trees and plants is replaced with impervious surfaces like sidewalks, streets, decks, roofs, driveways, or lawns over highly compacted soils. As a result more rain water / storm water flows off the land at a faster rate and less rain water is absorbed into the soil. This can lead to streambank erosion, downstream flooding and increased concentrations of pollutants. The storm water management system was designed to help slow the rate of runoff from the development and improve the quality of the storm water leaving the site.

Interpretation as to Requirements Under This Maintenance Plan:

The requirement for this Maintenance Plan is generated by the Lake County Watershed Development Ordinance. Therefore, the interpretation of the maintenance requirements set forth in this Maintenance Plan shall be interpreted on the basis of the intent and requirements of said Ordinance.

Inspection Frequency:

Inspection experience will determine the required cleaning frequencies for the components of the stormwater management system. At a minimum, the attached checklist items should be inspected annually. Detention ponds (including the outlet control structure and restrictors) should be inspected on a monthly basis during wet weather conditions from March to November.

Maintenance Considerations:

Whenever possible, maintenance activities should be performed during the inspection. These activities should be supplemented by repair / replacement as required. A Registered Professional Engineer (PE) shall be hired for design resolution of specific items as indicated on the checklist below.

Cost Considerations:

Frequent maintenance program work execution will lead to less frequent and less costly long-term maintenance and repair. The attached checklist items may need to be amended based on experience recorded over the initial period of occupancy of the subdivision.

Record Keeping:

Separate and distinct records shall be maintained by the responsible party for all tasks performed associated with this plan. The records shall include the dates of maintenance visits, who performed the inspection, and a description of the work performed.

_____, the owner's agent, has caused these presents to be signed and acknowledged, this _____ day of _____, 2_____.

By: _____

Post-Construction Stormwater Management System Inspection Checklist

The following checklist describes the suggested routine inspection items and recommended measures to be taken to ensure that the Stormwater Management System functions as designed. When hiring a PE is the recommended measure, the PE shall inspect, evaluate and recommend corrective actions. The General section outlines items that should be taken into consideration during inspection and maintenance activities. While performing an overall inspection of your system, please check for the following items.

General -

- Litter and debris shall be controlled.
- 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 adequate size and shape.
- Roads and parking lots shall be swept or vacuumed on a periodic basis.
- Access path to storm water management facilities should be free from obstructions (woodpiles, sheds, vegetation).
- Fences, gates and posts shall be maintained.
- Signs shall be maintained.

Dams and berms

____ Settlement. If settlement observed, hire a PE.
____ Breaks or failures. If failure observed, notify the Township immediately and hire a PE.
____ Erosion. Repair as needed.
____ Signs of leakage, seepage or wet spots. If observed, hire a PE.
____ Unwanted growth or vegetation. Remove as needed.

Shorelines

____ Erosion or rip-rap failures. Repair as needed
____ Undermining. Stabilize and repair as needed.

Outlet and inlet structure

____ Obstructions blocking outlet pipe, restrictor, channel or spillway. Remove obstructions immediately.
____ Separation of joints. Repair as needed.
____ Cracks, breaks, or deterioration of concrete. Repair as needed
____ Scour and erosion at outlet. If observed, repair (consider additional or alternative stabilization methods).
____ Condition of trash racks. Remove any collected debris.
____ Outlet channel conditions downstream. Stabilize soil or remove obstructions as needed.

Storage Volume

____ Facilities shall be inspected to ensure that the constructed volume for detention is maintained. No sediment, topsoil, or other dumping into the facility shall be allowed. If a detention facility includes specific locations designed to accumulate sediment these locations should be dredged every 5-yrs or when 50% of the volume has been lost.

____ Wet ponds lose 0.5 - 1.0% of their volume annually. Dredging is required when accumulated volume loss reaches 15%, or approximately every 15-20 years.

Storm Sewers

____ System is free draining into collection channels or catch basins. If concerned, clean or repair.

____ Catch basins. Remove sediment when more than 50% of basin sump is filled.

____ Siltation in Culvert. Culverts shall be checked for siltation deposit, clean out as necessary.

Bridges

____ Any scouring around wing walls. Stabilize and repair as needed. If concerned, hire a PE.

____ Any undermining of footings. Stabilize and repair as needed. If concerned, hire a PE.

Swales –

____ All ditches or pipes connecting ponds in series should be checked for debris that may block flow.

____ Repair and replace permanent check-dams as necessary.

____ Verify systems (both drainage ditches and sideyard swales) are maintaining originally constructed design slope and cross-sectional area. If fill or sediment contributes to elevation changes in swale, re-grading and re-shaping shall be performed. Licensed surveyors shall be hired to lay-out and check grades. No landscaping, earthen fill, gardens, or other obstructions (including sheds and other structures) shall be allowed in the swales that would impede design drainage flow patterns.

Vegetated Areas –

____ Need for planting, reseeding or sodding of native areas. 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.

____ Need for planting, reseeding or sodding of turf areas. Supplement alternative native vegetation if a significant portion has not established (75% of the surface area). Reseed with alternative grass species if original grass cover has not successfully established.

____ Invasive vegetation (refer to the Native Plant Guide for Streams and Stormwater Facilities in Northeastern Illinois, or hire an environmental or landscape specialist). Remove as necessary.

Wetland Buffers –

____ Inspect for evidence of erosion or concentrated flows through or around the buffer. All eroded areas should be repaired, seeded and mulched. A shallow stone trench should be installed as a level spreader to distribute flows evenly in any area showing concentrated flows.

____ All existing undergrowth, forest floor duff layer, and leaf litter must remain undisturbed except in designated paths or permitted encroachment areas.

____ No tree cutting is allowed except for normal maintenance of dead, diseased and damaged trees or; the culling of invasive, noxious or non-native species that are to be replaced by more desirable and native vegetation.

____ A buffer must maintain a dense, complete and vigorous cover of "non-lawn" vegetation which should not be mowed no more than once a year. Vegetation may include grass and other herbaceous species as well as shrubs and trees.

____ Use or maintenance activities within the buffer shall be conducted so as to prevent damage to vegetation and exposure of soil.

STORMWATER MANAGEMENT SYSTEM
ANNUAL MAINTENANCE PLAN FOR EXISTING FACILITIES

Purpose and Objective:

Detention and water quality treatment facilities, storm sewers, swales and native vegetation/buffer areas define a development's stormwater management system. When land is altered to build homes and other developments, the natural system of trees and plants is replaced with impervious surfaces like sidewalks, streets, decks, roofs, driveways, or lawns over highly compacted soils. As a result more rain water / storm water flows off the land at a faster rate and less rain water is absorbed into the soil. This can lead to streambank erosion, downstream flooding and increased concentrations of pollutants. The existing storm water management system was designed to help slow the rate of runoff from the development and maintain the quality of the storm water leaving the site.

Inspection Frequency:

Inspection experience will determine the required cleaning frequencies for the components of the stormwater management system. At a minimum, the attached checklist items should be inspected annually. Detention ponds (including the outlet control structure and restrictors) should be inspected on a monthly basis during wet weather conditions from March to November.

Maintenance Considerations:

Whenever possible, maintenance activities should be performed during the inspection. These activities should be supplemented by repair / replacement as required. A Registered Professional Engineer (PE) shall be hired for design resolution of specific items as indicated on the checklist below.

Cost Considerations:

Frequent maintenance program work execution will lead to less frequent and less costly long-term maintenance and repair. The attached checklist items may need to be amended based on inspection experience.

Record Keeping:

Separate and distinct records should be maintained by the responsible party for all tasks performed associated with this plan. The records shall include the dates of maintenance visits, who performed the inspection, and a description of the work performed.

Post-Construction Stormwater Management System Inspection Checklist

The following checklist describes the suggested routine inspection items and recommended measures to be taken to ensure that the Stormwater Management System functions as designed. When hiring a PE is the recommended measure, the PE shall inspect, evaluate and recommend corrective actions. The General section outlines items that should be taken into consideration during inspection and maintenance activities. While performing an overall inspection of your system, please check for the following items.

General -

- Litter and debris shall be controlled.
- 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 adequate size and shape.
- Roads and parking lots shall be swept or vacuumed on a periodic basis.
- Access path to storm water management facilities should be free from obstructions (woodpiles, sheds, vegetation).
- Fences, gates and posts shall be maintained.
- Signs shall be maintained.

Storage Facilities (Detention, Retention and Water Quality Treatment Facilities)

Dams and berms

____ Settlement. If settlement observed, hire a PE.
____ Breaks or failures. If failure observed, notify the Township immediately and hire a PE.
____ Erosion. Repair as needed.
____ Signs of leakage, seepage or wet spots. If observed, hire a PE.
____ Unwanted growth or vegetation. Remove as needed.

Shorelines

____ Erosion or rip-rap failures. Repair as needed
____ Undermining. Stabilize and repair as needed.

Outlet and inlet structure

____ Obstructions blocking outlet pipe, restrictor, channel or spillway. Remove obstructions immediately.
____ Separation of joints. Repair as needed.
____ Cracks, breaks, or deterioration of concrete. Repair as needed
____ Scour and erosion at outlet. If observed, repair (consider additional or alternative stabilization methods).
____ Condition of trash racks. Remove any collected debris.

____ Outlet channel conditions downstream. Stabilize soil or remove obstructions as needed.

Storage Volume

____ Facilities shall be inspected to ensure that the constructed volume for detention is maintained. No sediment, topsoil, or other dumping into the facility shall be allowed. If a detention facility includes specific locations designed to accumulate sediment these locations should be dredged every 5-yrs or when 50% of the volume has been lost.

____ Wet ponds lose 0.5 - 1.0% of their volume annually. Dredging is required when accumulated volume loss reaches 15%, or approximately every 15-20 years.

Storm Sewers

____ System is free draining into collection channels or catch basins. If concerned, clean or repair.

____ Catch basins. Remove sediment when more than 50% of basin sump is filled.

____ Siltation in Culvert. Culverts shall be checked for siltation deposit, clean out as necessary.

Bridges

____ Any scouring around wing walls. Stabilize and repair as needed. If concerned, hire a PE.

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Swales –

____ All ditches or pipes connecting ponds in series should be checked for debris that may block flow.

____ Repair and replace permanent check-dams as necessary.

____ Verify systems (both drainage ditches and sideyard swales) are maintaining originally constructed design slope and cross-sectional area. If fill or sediment contributes to elevation changes in swale, re-grading and re-shaping shall be performed. Licensed surveyors shall be hired to lay-out and check grades. No landscaping, earthen fill, gardens, or other obstructions (including sheds and other structures) shall be allowed in the swales that would impede design drainage flow patterns.

Vegetated Areas –

____ Need for planting, reseeding or sodding of native areas. 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.

____ Need for planting, reseeding or sodding of turf areas. Supplement alternative native vegetation if a significant portion has not established (75% of the surface area).

Reseed with alternative grass species if original grass cover has not successfully established.

____ Invasive vegetation (refer to the Native Plant Guide for Streams and Stormwater Facilities in Northeastern Illinois, or hire an environmental or landscape specialist, or hire an environmental or landscape specialist). Remove as necessary.

Wetland Buffers –

____ Inspect for evidence of erosion or concentrated flows through or around the buffer. All eroded areas should be repaired, seeded and mulched. A shallow stone trench should be installed as a level spreader to distribute flows evenly in any area showing concentrated flows.

____ All existing undergrowth, forest floor duff layer, and leaf litter must remain undisturbed except in designated paths or permitted encroachment areas.

____ No tree cutting is allowed except for normal maintenance of dead, diseased and damaged trees or; the culling of invasive, noxious or non-native species that are to be replaced by more desirable and native vegetation.

____ A buffer must maintain a dense, complete and vigorous cover of "non-lawn" vegetation which should not be mowed no more than once a year. Vegetation may include grass and other herbaceous species as well as shrubs and trees.

____ Use or maintenance activities within the buffer shall be conducted so as to prevent damage to vegetation and exposure of soil.

5.10 Yearly Tracking Forms

Fremont Township MS4 Monthly Tracking Form for _____

1. SWALCO/Recycling Events: dates, location, and amount collected:

   _____

   _____

2. Catch basins cleaned*: _____ Amount of material removed :_____
3. Catch basins repaired*: _____
4. Triple basin maintenance: _____ Amount of material removed:_____
5. Street Sweeping: Miles: _____ Amount of material removed: _____
6. Maintenance yard material removal (type and amount): _____
7. Vehicle maintenance – Amount of material removed:
   a. Oil: _____
   b. Antifreeze: _____
   c. Other Fluids: _____
   d. Tires: _____
   e. Batteries: _____
8. Ice removal equipment maintenance and calibration:
   a. Vehicle Description: _____ Date maintenance performed: _____
   b. Vehicle Description: _____ Date maintenance performed: _____
9. Quantities of salt, brine, beet juice and sand used:
   a. Salt: _____
   b. Brine: _____
   c. Beet Juice: _____
   d. Sand: _____
10. Employee training: (employee name, date, location and subject matter)
    a. _____
    b. _____
11. Distribution of paper materials: (title of document, date and number distributed)
    a. _____
    b. _____

    Newsletter, handouts at meetings, flyers, handouts at offices.
12. Workshops/watershed planning and stakeholder meetings: (date, location, subject matter and who attended)
    a. _____
    b. _____
13. Illicit discharge complaints (phone, email, walk in, mail):
    a. _____
    b. _____
14. Linear Feet of Streambank Inspected: _____ Date: _____

*use ID # from outfall inventory

5.11 Pool Dewatering Fact Sheet

Environmental Guidelines for Draining Your Swimming Pool

Your swimming pool is filled with chlorinated water. Chlorinated water discharged directly to surface waters (wetlands, lakes, streams, and rivers), roadways or storm sewers has an adverse impact on local water quality. High concentrations of chlorine, as are present in swimming pools, are toxic to wildlife and fish. Appropriate preparations should be made prior to draining down a pool during pool winterizing. It is recommended that one of the following measures be used:

- **De-chlorinate the water in the pool prior to draining. This can be done through mechanical or chemical means. These types of products are readily available at local stores.**

Or,

- **Drain the pool over a period of several days across your lawn using the following additional guidelines:**

1) Allow pool water to sit at least 2 days while receiving a reasonable amount of sunlight, and without further addition of chlorine or bromine. It is recommended that the chlorine level be tested after 2 days to ensure that safe levels are met (below 0.1 mg/l).

2) Pool discharge should be directed across your lawn, not down your driveway or into nearby storm sewer inlets. Our storm sewer system leads directly to wetlands, streams, lakes or rivers.

These recommendations are based on guidance from the Illinois Environmental Protection Agency. Visit www.epa.state.il.us/water for additional information.

You may also contact Fremont Township at (847) 223-2846

Please do your part to help promote cleaner wetlands, streams, lakes and rivers.

Thank you.

5.12 General Permit 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

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

SAK:16020801bah/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

PLEASE PRINT ON RECYCLED PAPER

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

CONTENTS OF GENERAL PERMIT ILR40

PART I. COVERAGE UNDER GENERAL PERMIT ILR40 ..... Page 2

PART II. NOTICE OF INTENT (NOI) REQUIREMENTS ..... Page 3

PART III. SPECIAL CONDITIONS ..... Page 4

PART IV. STORM WATER MANAGEMENT PROGRAMS ..... Page 6

PART V. MONITORING, RECORDKEEPING, AND REPORTING ..... Page 12

PART VI. DEFINITIONS AND ACRONYMS ..... Page 14

ATTACHMENT H. STANDARD CONDITIONS ..... Page 16

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;

2. The name, address, and telephone number of the operator(s) filing the NOI for permit coverage and the name, address, telephone number, and email address of the person(s) responsible for implementation and compliance with the MS4 Permit; and

3. The name and segment identification of the receiving water(s), whether any segments(s) is or are listed as impaired on the most recently approved list pursuant to Section 303(d) of the Clean Water Act or any currently applicable Total Maximum Daily Load (TMDL) or alternate water quality study, and the pollutants for which the segment(s) is or are impaired. The most recent 303(d) list may be found at http://www.epa.state.il.us/water/water-quality/index.html. Information regarding TMDLs may be found at http://www.epa.state.il.us/water/tmdl/.

4. The following shall be provided as an attachment to the NOI:

   a. A description of the best management practices (BMPs) to be implemented and the measurable goals for each of the storm water minimum control measures in paragraph IV. B. of this permit designed to reduce the discharge of pollutants to the maximum extent practicable;

   b. The month and year in which you implemented any BMPs of the six minimum control measures, and the month and year in which you will start and fully implement any new minimum control measures or indicate the frequency of the action;

   c. For existing permittees, provide adequate information or justification on any BMPs from previous NOIs that could not be implemented; and

   d. Identification of a local qualifying program, or any partners of the program if any.

5. For existing permittees, certification that states the permittee has implemented necessary BMPs of the six minimum control measures.

C. All required information for the NOI shall be submitted electronically and in writing to the following addresses:

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

epa.ms4noipermit@illinois.gov

D. Shared Responsibilities

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

PART III. SPECIAL CONDITIONS

A. The Permittee's discharges, alone or in combination with other sources, shall not cause or contribute to a violation of any applicable water quality standard outlined in 35 Ill. Adm. Code 302.

B. If there is evidence indicating that the storm water discharges authorized by this permit cause, or have the reasonable potential to cause or contribute to a violation of water quality standards, you may be required to obtain an individual permit or an alternative general permit or the permit may be modified to include different limitations and/or requirements.

C. If a TMDL allocation or watershed management plan is approved for any water body into which you discharge, you must review your storm water management program to determine whether the TMDL or watershed management plan includes requirements for control of storm water discharges. If you are not meeting the TMDL allocations, you must modify your storm water management program to implement the TMDL or watershed management plan within eighteen months of notification by the Agency of the TMDL or watershed management plan approval. Where a TMDL or watershed management plan is approved, the permittee must:

1. Determine whether the approved TMDL is for a pollutant likely to be found in storm water discharges from your MS4.

2. Determine whether the TMDL includes a pollutant waste load allocation (WLA) or other performance requirements specifically for storm water discharge from your MS4.

3. Determine whether the TMDL addresses a flow regime likely to occur during periods of storm water discharge.

4. After the determinations above have been made and if it is found that your MS4 must implement specific WLA provisions of the TMDL, assess whether the WLAs are being met through implementation of existing storm water control measures or if additional control measures are necessary.

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.

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;

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:

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 measureable 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.

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 to1 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.

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

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 measureable 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;

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.

v. Site-specific monitoring. High-value resources such as swimming beaches, shellfish beds, or high-priority habitats could warrant specific monitoring to assess the status of use support. Similarly, known high-priority pollutant sources or impaired water bodies with contaminated aquatic sediments, an eroding stream channel threatening property, or a stream reach with a degraded fish population could be monitored to assess impacts of storm water discharges and/or to identify improvements that result from the implementation of BMPs.

vi. Assessing physical/habitat characteristics such as stream bank erosion caused by storm water discharges.

vii. Outfall/Discharge monitoring.

viii. Sewershed-focused monitoring. Monitor for pollutants in storm water produced in different areas of the MS4. For example, identify which pollutants are present in storm water from industrial areas, commercial areas, and residential areas.

ix. BMP performance monitoring. Monitoring of individual BMP performance to provide a direct measure of the pollutant reduction efficiency of these key components of a MS4 program.

x. Collaborative watershed-scale monitoring. The permittee may choose to work collaboratively with other permittees and/or a watershed group to design and implement a watershed or sub-watershed-scale monitoring program that assesses the water quality of the water bodies and the sources of pollutants. Such programs must include elements which assess the impacts of the permittee's storm water discharges and/or the effectiveness of the BMPs being implemented.

c. If ambient water quality monitoring under 2b above is performed, the monitoring of storm water discharges and ambient monitoring intended to gauge storm water impacts shall be performed within 48 hours of a precipitation event greater than or equal to one quarter inch in a 24-hour period. At a minimum, analysis of storm water discharges or ambient water quality shall include the following parameters: total suspended solids, total nitrogen, total phosphorous, fecal coliform, chlorides, and oil and grease. In addition, monitoring shall be performed for any other pollutants associated with storm water runoff for which the receiving water is considered impaired pursuant to the most recently approved list under Section 303(d) of the Clean Water Act.

B. Recordkeeping

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

C. Reporting

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

1. An assessment of the appropriateness and effectiveness of the permittee's identified BMPs and progress towards achieving the statutory goal of reducing the discharge of pollutants to the maximum extent practicable (MEP), and the permittee's identified measurable goals for each of the minimum control measures;

2. The status of compliance with permit conditions, including a description of each incidence of non-compliance with the permit, and the permittee's plan for achieving compliance with a timeline of actions taken or to be taken;

3. Results of information collected and analyzed, including monitoring data, if any, during the reporting period;

4. A summary of the storm water activities the permittee plans to undertake during the next reporting cycle, including an implementation schedule;

5. A change in any identified BMPs or measurable goals that apply to the program elements;

6. Notice that the permittee is relying on another government entity to satisfy some of the permit obligations (if applicable);

7. Provide an updated summary of any BMP or adaptive management strategy constructed or implemented pursuant to any approved TMDL or alternate water quality management study. Use the results of your monitoring program to assess whether the WLA or other performance requirements for storm water discharges from your MS4 are being met; and

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

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

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

epa.ms4annualinsp@illinois.gov

PART VI. DEFINITIONS AND ACRONYMS

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

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

BMP is an acronym for "Best Management Practices."

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Permitting Authority means the Illinois EPA.

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

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

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

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

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

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

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

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

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

"You" and "Your" as used in this permit is intended to refer to the permittee, the operator, or the discharger as the context indicates and that party's responsibilities (e.g., the city, the country, 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)

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