

Stormwater Management Program Plan



Independence Grove Forest Preserve - Libertyville, IL

Photo by: Sharon Doty

VILLAGE OF ROUND LAKE HEIGHTS

LAKE COUNTY, ILLINOIS

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1 Overview of the Stormwater Management Program Plan



Des Plaines River – Lake County, IL Photo by Dave Piasecki

1.1 Introduction

This Stormwater Management Program Plan (SMPP) was developed by the Village of Round Lake Heights (VRLH) based off a 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. There are many different types of MS4s including municipalities, park districts, drainage districts, township highway departments, counties and county and state transportation departments (LCDOT and IDOT). 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.

The SMPP describes the procedures and practices that can be implemented by VRLH 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:



The SMPP addresses the primary program elements for all VRLH activities, including the manner in which the Village:

- 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
- monitors and evaluates the program.

1.2 History

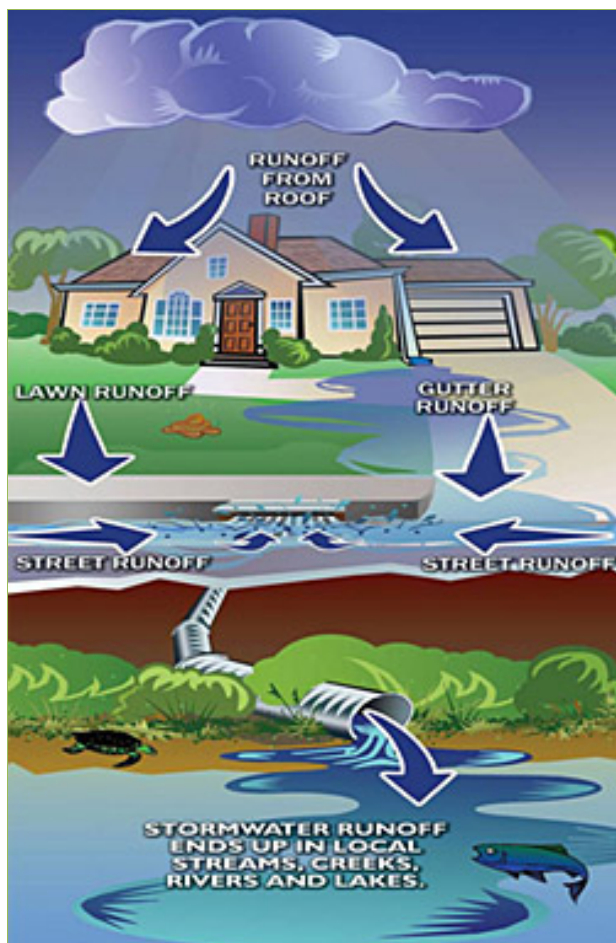


In 1948 the Federal Water Pollution Control Act was enacted to encourage water pollution control at the state and local levels. Between 1949 and 1969 the Cuyahoga River in Ohio caught fire ten times.

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.

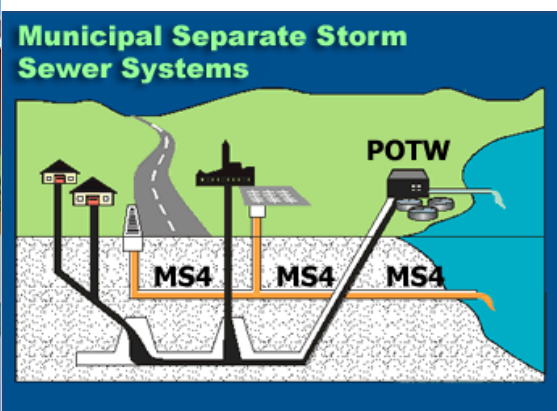


The Act was further refined in 1977, to extend deadlines and better define types of pollutants. It became commonly referred to as the Clean Water Act.



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, as depicted on **Figure 1**.

Figure 1: MS4 as point source



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 NPDES 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.

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.

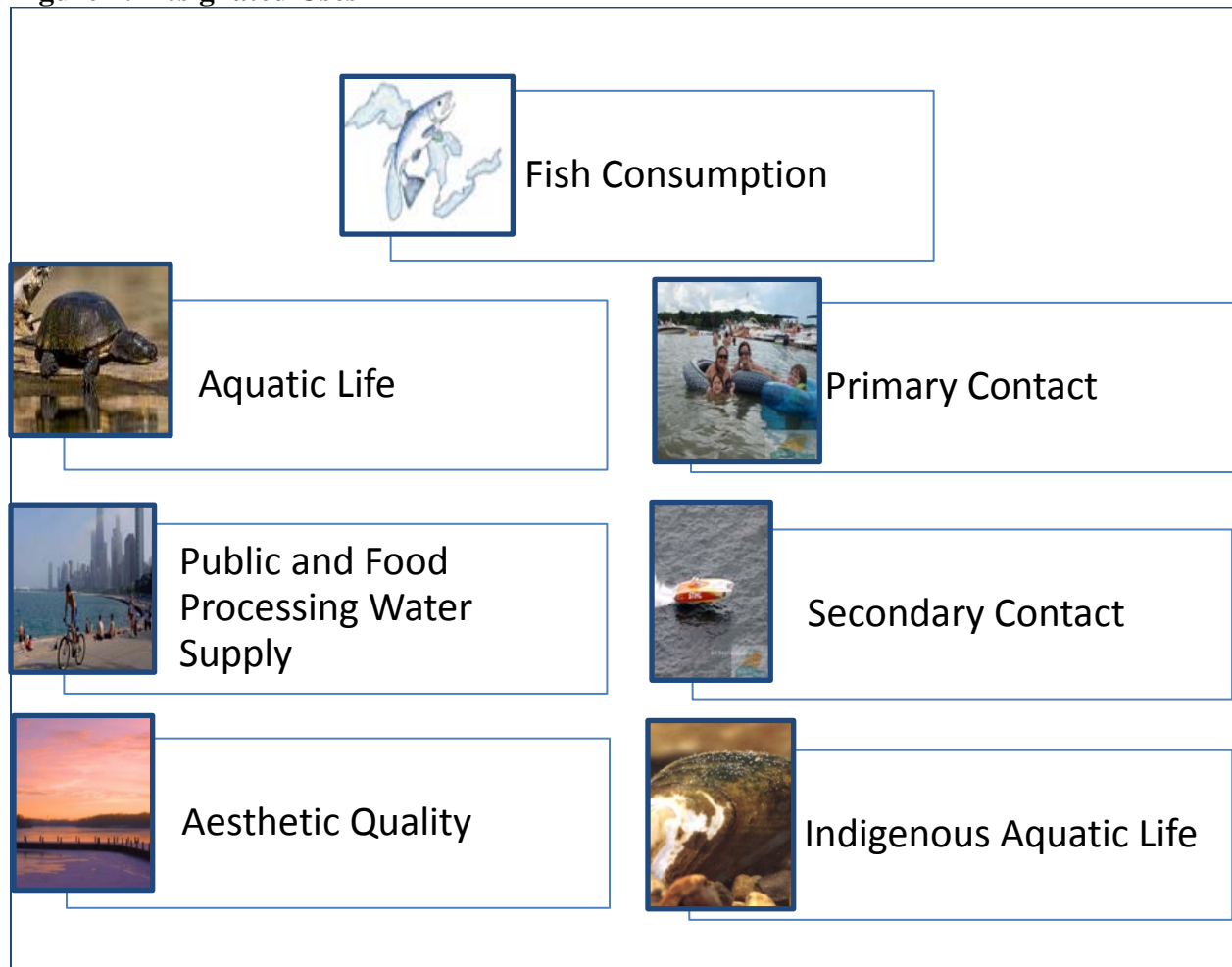
1.3 Water Quality Standards

The 1987 Water Quality Act also established new requirements and funding, through the Clean Water Act Section 319, for states to develop 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) develop 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

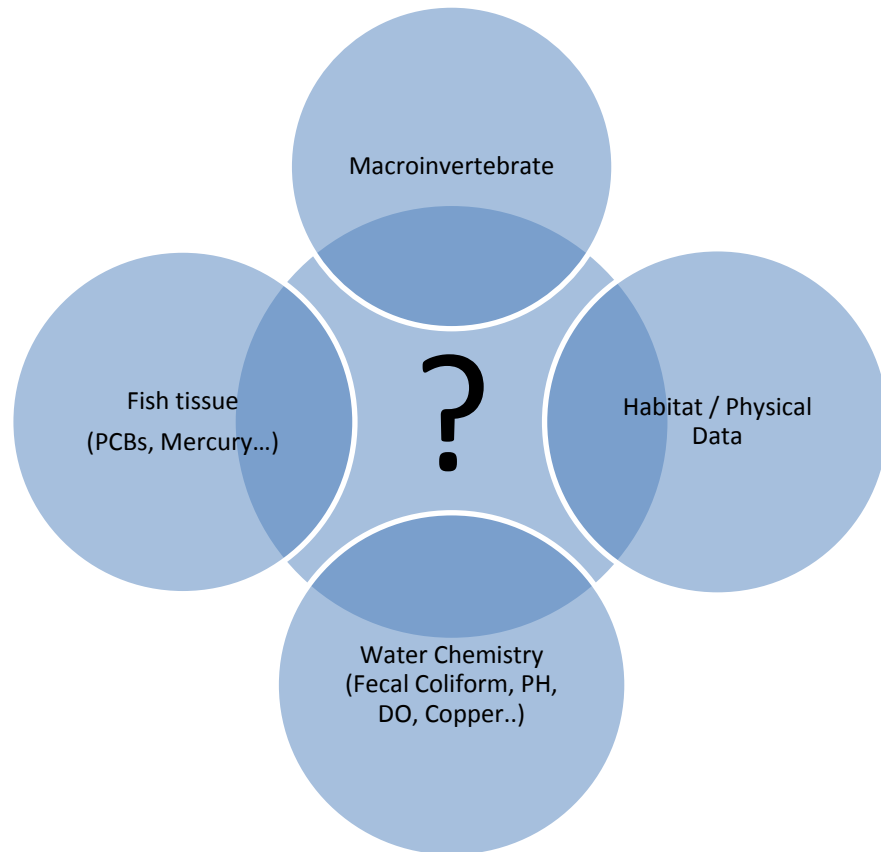
One of IEPA's first steps in achieving compliance with the Act was to identify all uses its waters should support. IEPA identified 7 designated uses, as depicted on **Figure 2**. Then each navigable water was evaluated to identify the designated uses it should support.

Figure 2: 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.

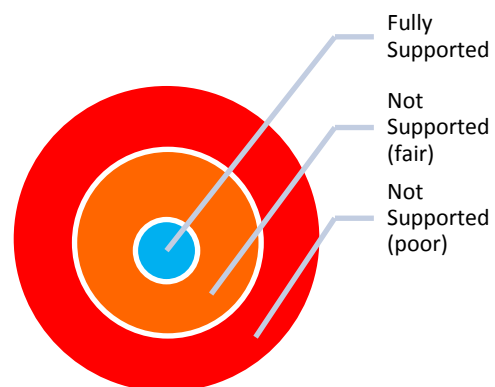


1.3.C Monitoring

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.

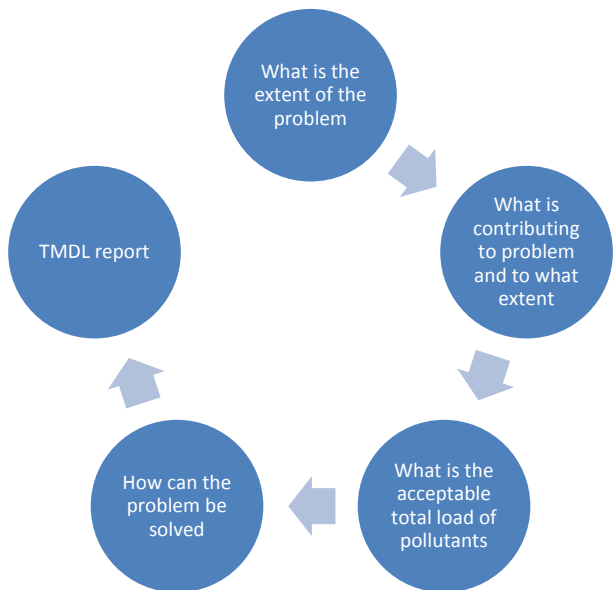
- Conduct Monitoring per Designated Use
- Determine if Water Quality Criteria are met
- Include Non-Supporting Waters on Impaired Waters report
- Rank non-supporting waters based on severity of problem.

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



All storm water runoff from the Village discharges into the Illinois River, a tributary to the Mississippi River. The VRLH is entirely located within the Squaw Creek sub-watershed within the Fox River Watershed. The Round Lake Drain Tributary is the only receiving stream located within the Village. The Fairfield Marsh and Indian Hill pond (an on-stream body of water) are also considered part of the receiving water system. Topographic characteristics of the Village are typical of those in northeastern Illinois. Floodplains tend to be broad and flat with relatively small channels.

Figure 3: Mississippi River Watershed

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.



1.4.A 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, Mutton Creek, Slocum Lake Drain, Tower Lake Drain and Flint Creek. The northern area around the Chain O'Lakes is substantially developed around the many lakes while the middle of the watershed is experiencing an increase in suburbanization. The same can be said for the southern area of the watershed, which includes existing and new development with estate and rural estate development.

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

SMC has completed watershed management plans for the Fish Lake Drain, Flint, Mutton, Sequoit, Slocum and Squaw sub-watersheds. In 2007, the Flint Creek Watershed Partnership completed a new plan that meets the EPA's criteria for watershed-based plans under section 319 of the Clean Water Act. SMC is currently completing a similar upgrade for the Fish Lake Drain watershed.

1.4.B Identifying Outfalls

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 waters of the United States "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 water 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.

The outfalls from Fairfield Marsh into Eagle Creek and from Arrowhead pond into the Round Lake Drain are the only 2 outlets into the receiving stream system. Dry weather flow investigations (discussed in Chapter 3.3) are limited to the discharge points into the Fairfield Marsh and Arrowhead pond, refer to **Figure 5**.

1.5 Status of Waters

None of the lakes or receiving streams within the Village have been assessed by IEPA. However, both Long Lake and Round Lake which are located downstream of the Village are designated as impaired waters. Additional information about these waters can be obtained from <http://www.epa.state.il.us/water/tmdl/303d-list.html>.

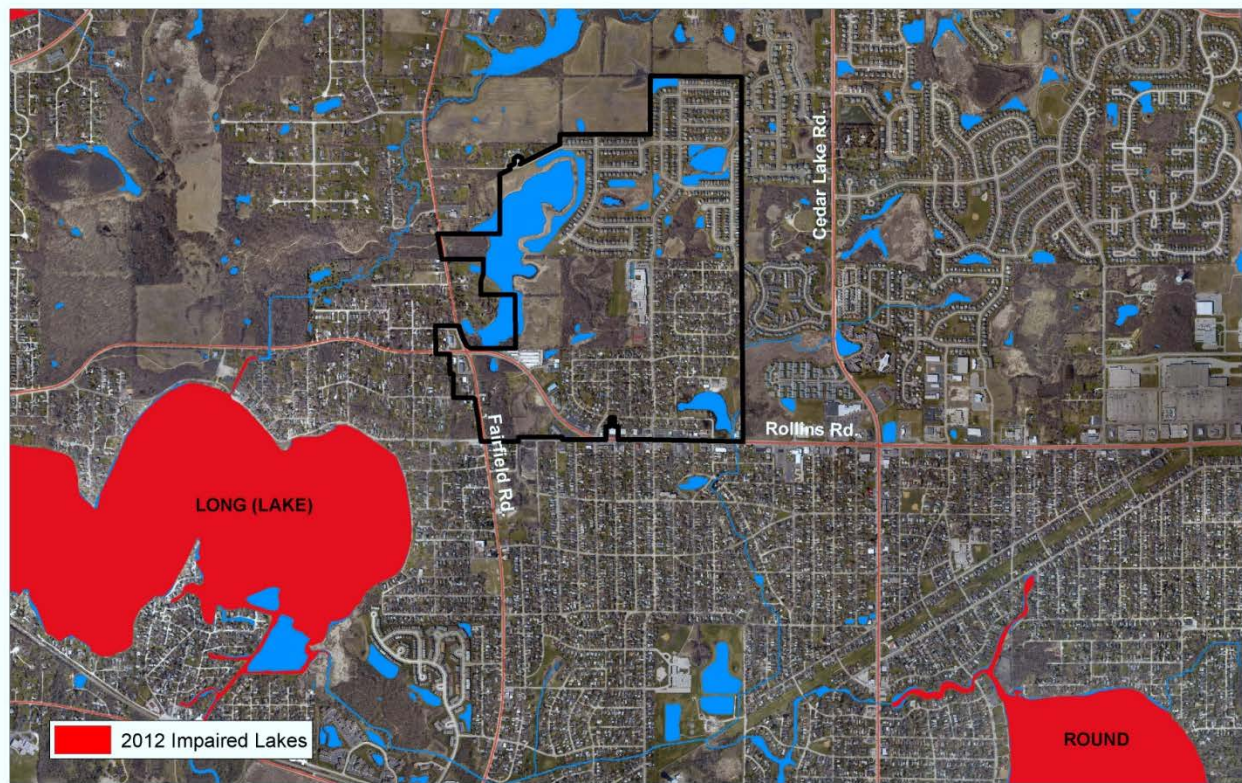


Figure 6: Impaired Waters (per draft 2012 303(d) report)

1.6 Organization of this SMPP

The SMPP identifies best management practices to be implemented in six different categories. These categories are:

- Public Education and Outreach,
- Public Participation/Involvement,
- Construction Site Runoff Control,
- Post-Construction Runoff Control,
- Illicit Discharge Detection and Elimination, and
- Pollution Prevention/Good Housekeeping.

Chapter 1: Overview of the Stormwater Management Program Plan - discusses the format of the SMPP document and the regulations associated with NPDES II through county, state and federal agencies.

Chapter 2: Program Management - discusses the logistics of the Plan. This includes the organization, implementation and responsible parties necessary to achieve overall compliance with the SMPP and Permit. It also identifies how the Village coordinates with other county and state agencies and discusses the legal authority that the MS4s have to implement the Plan components.

Chapter 3: The Program - addresses stormwater pollutant control measures implemented by the Village per the six minimum control categories established by the USEPA:

- Public Education and Outreach,
- Public Participation/Involvement,
- Construction Site Runoff Control,
- Post-Construction Runoff Control,
- Illicit Discharge Detection and Elimination, and
- Pollution Prevention/Good Housekeeping.

Chapter 4: Monitoring, Program Evaluation and Reporting - describes the monitoring, evaluation and reporting procedures associated with the program. The SMPP is a guide created to protect the VRLH receiving waters from pollution and resultant degradation. This Chapter assists in identifying best management practices and processes that may require improvement and refinement as the document becomes an effective tool.

Chapter 5: Appendices – including forms, references, exhibits and bibliography.

2 Program Management

This Chapter describes the organizational structure of VRLH, 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 5.11** 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 the Village's website.

2.1.A Stormwater Coordinator

The Mayor 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 SMC, the IEPA, 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 Village effectively implements the SMPP;
- ensures, or assists the Enforcement Officer in ensuring, that the Village complies with all minimum Watershed Development Ordinance (WDO) provisions;
- ensures that the Municipal Facilities comply with all minimum ILR40 permit requirements;
- is aware when a Municipal Project is required to be authorized under the ILR10 permit. In these cases the Stormwater Coordinator should ensure that the NOI is received by IEPA at least 30 days prior to the start of construction;
- 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;
- understands the role illicit discharges play in the overall NPDES II program.

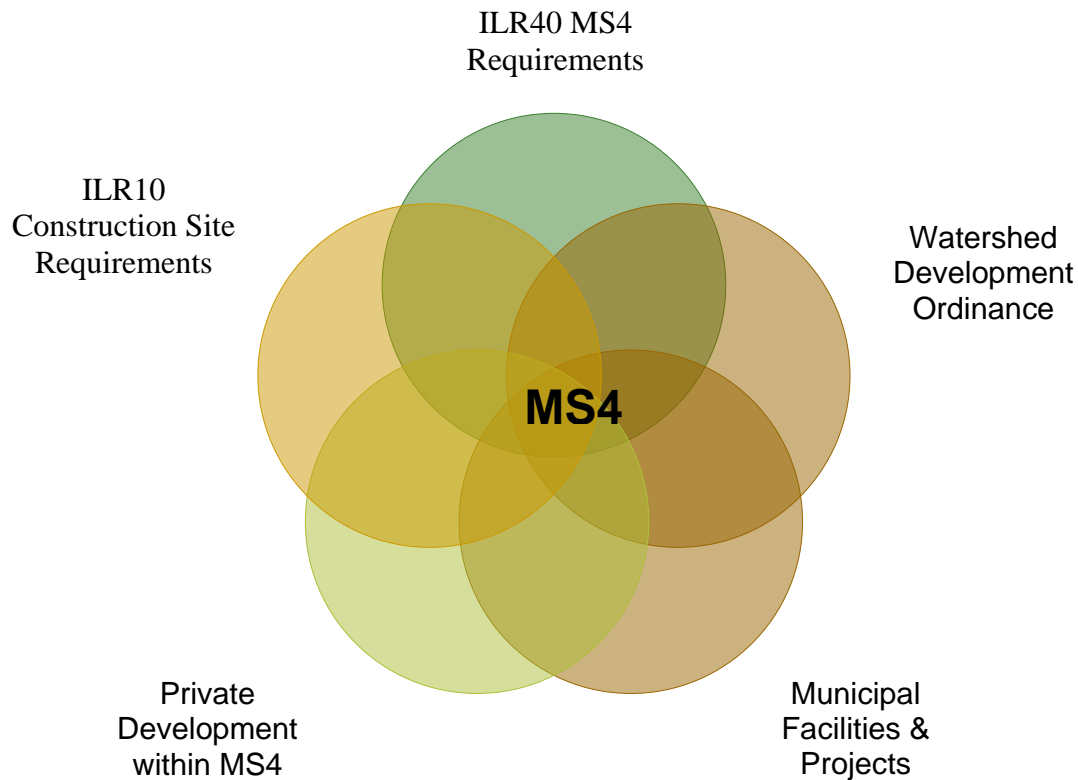


Figure 7: Roles of MS4
provided by Gewalt Hamilton & Associates

2.1.B Engineering Department

The Village of VRLH contracts engineering services. Contracted engineering personnel support the Stormwater Coordinator in obtaining compliance with both the NDPES and WDO programs.

The contracted Village Engineer is also the Enforcement Officer with respect to the administration and enforcement of the Lake County Watershed Development Ordinance (WDO). The design and construction of all public projects shall comply with the WDO. As the Enforcement Officer, the Village Engineer 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 3.4-3.5 for additional information on this process.

2.1.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 3.3 Illicit Discharge Detection and Elimination and Chapter 3.6 Pollution Prevention and Good Housekeeping.

2.2 Coordination with Lake County Stormwater Management Commission

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 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.

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

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. SMC has been providing services under four of the six minimum control categories since it began implementing a comprehensive, countywide stormwater program in 1991.

SMC sponsors informative workshops and roundtable discussions. It formed the Municipal Advisory Committee (MAC) to receive input on how SMC can best assist local governments during the permit application process and implementation period. Through these discussions, it was decided that each municipality (or MS4) submit its own "Notice of Intent" (NOI) to be covered under IEPA's statewide general permit. However, using the countywide approach, municipalities may take credit for the programs and ordinances developed by SMC as well as tailor specific local BMP programs for compliance with the Phase II rules.

SMC countywide services qualify for credit under the six Minimum Control Measures in addition to provide overall program assistance.

General Program Assistance: SMC developed the Stormwater Management Program Plan template for revision/adoption by the MS4s. This template is intended to be reviewed, revised and accepted by MS4s within the county and describes a program intended to be in compliance with the ILR40 permit requirements. SMC has developed model Notice of Intent applications, specific BMP Measurable Goals and program

development tasks. SMC serves as a clearinghouse for all support information and acts as a liaison to IEPA and USEPA. SMC provides a draft model of the Annual Performance Report and specific BMP Measurable Goals for the subsequent years.

1. **Public Education and Outreach:** SMC provides, through its Public Information Coordinator, various training workshops, NPDES presentations to local boards, homeowners workshops, brochures, training manuals, teacher/student education, videos, etc.,
2. **Public Participation and Involvement:** SMC coordinates and participates in public meetings and committees, including the Municipal Advisory Committee (MAC), SMC Board of Commissioners, Technical Advisory Committee (TAC), citizen watershed planning committees, Watershed Management Boards, and volunteer support.
3. **Illicit Discharge Detection and Elimination:** Provides countywide drainage system overview and receiving waters map, provides model Illicit Discharge Ordinance Language.
4. **Construction Site Runoff Control:** SMC adopted the countywide Watershed Development Ordinance in 1992, which establishes the minimum stormwater management requirements for development in Lake County. The WDO, which is enforced by SMC as well as by certified communities in the county, establishes standards for construction site runoff control.
5. **Post-Construction Runoff Control:** The Watershed Development Ordinance also establishes standards for post-construction runoff control.
6. **Pollution Prevention and Good House Keeping:** Provides training and education material to community public works departments.

The Village seeks to work closely with Lake County Stormwater Management Commission (SMC). Coordination 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 Village's Stormwater Coordinator is the lead contact for participation in the MAC forums. The Village's Enforcement Officer is responsible for enforcement of the WDO and is designated by the Village to the SMC.

2.3 Coordination of Contractors

The VRLH may hire contracted services. The Village also has a responsibility to hire contractors who are knowledgeable of the applicable requirements of the ILR40 and ILR10 permits. The Village shall provide appropriate training, or require documentation that appropriate training has been attended, for all contractors responsible for municipal green infrastructures.

2.4 Coordination with the Public

Coordination with the Public occurs on several levels. The Public Education and Outreach Program of this SMPP is discussed in Chapter 3.1. The Public Participation and Involvement Program of this SMPP is discussed in Chapter 3.2. The Public has the opportunity to comment on proposed preliminary and final plans through the Plan Commission and Municipal Board process established in the Municipal Code.

2.5 Coordination with the IEPA

The Village is required to complete annual reports that describe 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 Village's website and submitted to the IEPA by the first day of June each year. Annual reporting to IEPA should consist of "implemented" for all tasks completed in accordance with this SMPP. Additional information should be provided for areas of enhancement or tasks not completed.

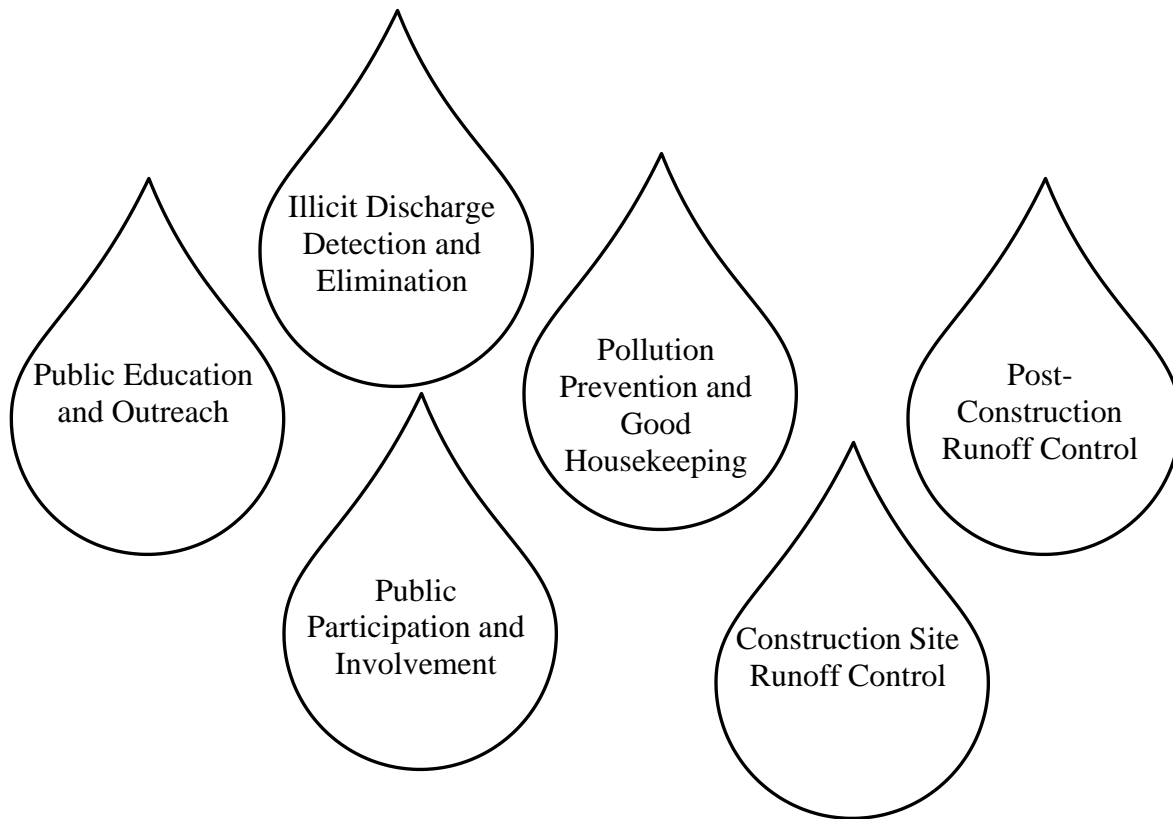
Records regarding the completion and progress of the SMPP commitments must be kept by the community. The task sheets, described in Chapter 2.1, should be updated throughout the year. The completed tracking sheets should be located in a binder with necessary supporting documentation.

2.6 Coordination with the Development Community

The VRLH 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. The Village should understand 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.

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 3.4.B for additional information on qualified personnel.

3 The Program



This Stormwater Management Program Plan includes six components, each of which is necessary in an effort to reduce/eliminate stormwater pollution in receiving water bodies. Chapter 3.1 describes the efforts to educate the public about stormwater pollution and stormwater pollution prevention. The manner in which Village incorporates public participation and involvement into the SMPP is SMPP explained in Chapter 3.2. Chapter 3.3 describes the approach to detecting and eliminating stormwater illicit discharges. Construction and post construction runoff control is addressed in Chapters 3.4 and 3.5. Lastly, Chapter 3.6 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 Public Education and Outreach



The VRLH conducts public education programs that inform the community of potential impacts to receiving waters and the contributions the public can make to reduce pollutants in stormwater runoff. The Village targets public schools, public libraries, developers, contractors, homeowners, business owners, boaters, and the remaining general public as part of this Public Education and Outreach Program.

The VRLH, in cooperation with the QLP, 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.
- Include relevant water quality/stormwater information in the Village 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 Village personnel.

3.1.A Distribution of Paper Materials

The VRLF actively pursues the acquisition of educational sheets prepared by 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. The Village lists a contact telephone number on all outreach publications to encourage residences to contact the Village with environmental concerns.

Types of materials distributed include:

- The “Guidelines for Draining Swimming Pools” door hanger,
- The “Protect Our Water” door hanger,
- Informational sheets/pamphlets regarding storm water best management practices,
- Informational sheets/pamphlets regarding water quality best management practices,
- Informational sheets/pamphlets regarding construction site activities (soil erosion and sediment control best management practices),
- 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 regarding green infrastructure strategies such as green roofs, rain gardens, rain barrels, bioswales, permeable piping, dry wells and permeable pavement.
- Informational sheets/pamphlets published by SWALCO regarding proper hazardous waste use and disposal.

Publications are provided in the following manner:

- At take-a-away racks located at the Village Hall.
- The municipal newsletter, a quarterly publication, 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.

3.1.B Web Site



The VRLH web site includes stormwater quality specific elements. The web-site gives information regarding water quality, solid waste and hazardous material, green infrastructure, illicit discharges, stormwater and general environmental health; refer to Chapter 3.1.A for a more detailed description of the type of information to be posted. The web-site is updated by VRLH staff and tracked for hits. A significant amount of information is made available through links to other educational and informational sites.

This SMPP and the NOI must be posted on the Village’s website. Each year’s annual report is also posted on the website and submitted to the IEPA by the first day of June each year.

3.1.C Technical Workshops



Periodically, the QLP hosts workshops for the general public that focus on specific stormwater topics. These workshops typically discuss stormwater topics currently of interest within the County. They 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. The VRLH publicizes these events.

3.1.D Storm Drain Stenciling & Markers



The VRLH supports the efforts of private entities to stencil or apply stickers to inlets, and their purchase of factory stamped inlet grates. These efforts apply messages at storm drain inlets with the intent of assisting in educating the public about stormwater runoff pollution. The VRLH will provide the “Guide to Storm Drain Marking” (by SMC) to Home Owners Associations or other organizations that express interest.

3.1.E Household Hazardous Wastes -- Solid Waste Agency of Lake County



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. The VRLH supports the initiatives of the Solid Waste Agency of Lake County to employ a range of tools to improve resident participation. These include:

- 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

SWALCO provides solid waste management programs to Lake County (in both incorporated and unincorporated areas). Their 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 administers its own public information and education efforts include the “Earth Flag” and “Earth Flag Every Day” programs in the schools, promoting SWALCO events, and publishing various resources. Additional information can be obtained from their website <http://www.swalco.org>.

The VRLH coordinates with SWALCO to participate in at least two collections per year in the Round Lake Area (including the Villages of Round Lake Heights of Round Lake and Round Lake Beach). These collections encourage the proper disposal of hazardous materials. Typically there is a spring through summer clean-up event that facilitates proper disposal of electronic devices and a fall event for disposal of paint and solvents. At a minimum, the Village encourages participation in the event by publicizing these special collections in local newspapers and on its web-site. The VRLH maintains a log of event dates and quantities collected.

3.1.F Vehicle Fluid Maintenance



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 of these fluids 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 Village employs a range of tools to improve septic system maintenance. These include:

- Outreach materials distributed at auto parts store and service stations
- Community oil recycling centers
- Directories of used oil collection stations
- Free or discounted oil disposal containers
- Pollution hotlines
- Fines and other enforcement actions

3.1.G Car Washing

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:

- Media campaigns
- Brochures promoting nozzles with shut off valves
- Storm drain plug and wet vac provisions for charity car wash events
- Water bill inserts promoting environmentally safe car washing products
- Discounted tickets for use at commercial car washes

3.1.H Pool Dewatering



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**.

Outreach efforts may include providing information in the fall newsletter, and providing a fact sheet at the tack-a-way racks.

3.2 Public Participation and Involvement

The public participation and involvement program allows input from citizens during the development and implementation of the SMPP. The SMPP should be evaluated during each NOI permit cycle. Major highlights and deficiencies should be noted annually and the plan revised accordingly on a minimum 5-yr basis, or as necessary.

3.2.A Public Review Process

Comments on the SMPP are continually accepted through the web-site, phone calls or other media. Comments are evaluated for inclusion and incorporated into the next revision of the SMPP as appropriate. Present each year's annual report to the Board during an open meeting.

3.2.B Complaints, Suggestions and Requests



Calls are screened, logged and routed to the appropriate department for action. The VRLH maintains a website which enables and encourages public contact on these issues.

3.2.C Watershed Planning and Stakeholders Meetings

The VRLH participates (and encourage the participation of local stakeholders) in QLP or other sponsored watershed planning events. The Village adopts appropriate Watershed Plans per the direction and in coordination with the QLP.

3.2.D Illicit Discharge/Illegal Dumping Hotline



The VRLH maintains, operates and publicizes a call in phone number where parties can contact the Village environmental concerns. Primary advertisement venues include the website and all related municipal publications. Telephone calls received from residents, other internal Departments or other agencies are logged on the **Indirect Illicit Discharge Tracking Form (Appendix 5.9)**. This tracking form should be reviewed with the Stormwater Coordinator annually to determine if trends can be seen and if there is additional outreach effort needed.

3.2.E SMC Municipal Advisory Committee (MAC)

The VRLH participates in MAC meetings and events hosted by the QLP.

3.2.F Adopt-A-Highway



The VRLH, in cooperative partnership with the IDOT, supports Adopt-A-Highway Programs for state roadways within the municipal limits. The objective of the program is to improve and promote the image of the entire community by reducing potential illicit discharges. Participation meets the Program Policy and Safety Guidelines established by IDOT in a separate document.

3.3 Illicit Discharge Detection and Elimination¹



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

¹ Section 3.3 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).

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.

3.3.A Regulatory Authority

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

3.3.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 the VRLH 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 3.4 and 3.5.

3.3.A.2 *Municipal Code*

The VRLH Municipal Code can be used to further support the activities required by the SMPP.

3.3.B Understanding Illicit Discharges

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

3.3.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.

3.3.B.2 USEPA 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:

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

3.3.B.3 Physical Pollutant Indicators

The following discussions of pollutant indicators can be used in matching detected indicators with potential sources.

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.	

<p>Green Water – ranging from blue green to bright green color and may impart odor. Conditions typically occur from May to October.</p>	<p>Human causes may be over-fertilizing lawns, boat discharges, septic systems, agriculture operations, or discharging poorly treated wastewater.</p>	
<p>Orange/Red -</p>	<p>Human causes may include meat packing facilities or dyes.</p>	
<p>Green Flecks – resembling floating blue-green paint chips or grass clippings. These <i>Blooms</i> and are potentially toxic.</p>	<p>Human cause is excessive nutrients. Fertilizers used on lawns can contaminate surface and ground water.</p>	
<p>Green Hair-Like Strands - bright or dark green, resembling cotton candy and often in floating mats.</p>	<p>Human causes are excessive nutrients from fertilizers or failed on-shore septic systems.</p>	
<p>Multi-Color Water – various or uniform color, other than brown, green or gray. For rainbow sheen see floatables.</p>	<p>Human causes include oil or hazardous waste spill, paint and paint equipment rinsed into storm drains or into failing septic systems.</p>	

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



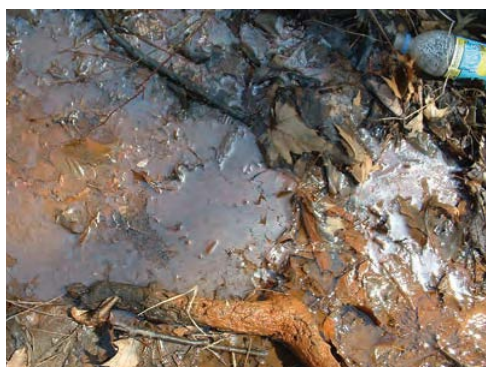
Turbidity Severity 3

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. Petroleum sheen 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



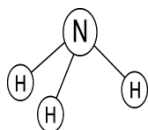
Synthetic oil forms a swirling pattern

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

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

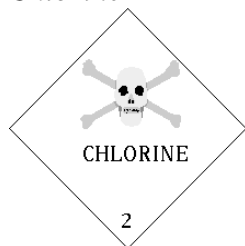
3.3.B.3.a CHEMICAL POLLUTANT INDICATORS

Ammonia



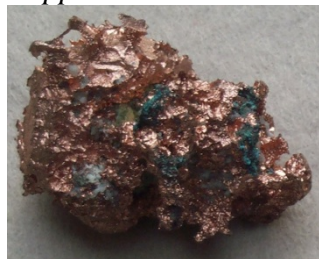
Ammonia is a good indicator of sewage, since its concentration is much higher there than in groundwater or tap water. High ammonia concentrations (>50 mg/l) may also indicate liquid wastes from some industrial sites. Ammonia is relatively simple and safe to analyze. Some challenges include the potential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

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.

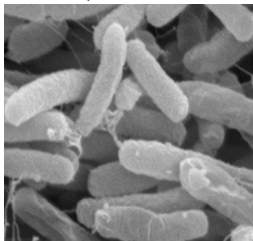
In each of these industries, wastes containing copper would normally be discharged to a treatment facility. Sludge from the waste treatment facility, whether on-site (including lagooning) or publicly operated treatment facilities, would contain copper. If the sludge (or the treatment process) is not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

Detergents



Most illicit discharges have elevated concentration of detergents. Sewage and washwater 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



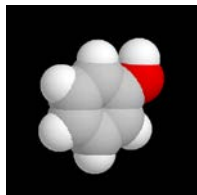
Each of these bacteria is found at very high concentrations in sewage compared to other flow types, and is a good indicator of sewage or seepage discharges, unless pet or wildlife sources exist in the sub-watershed. Overall, bacteria are good supplemental indicators and can be used to find “problem” streams or outfalls that exceed public health standards. A Fecal Coliform count greater than 400 per 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.

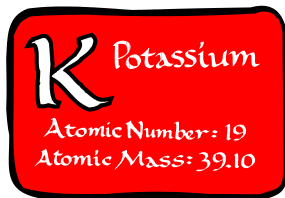
pH



Potential ID Range: <6.5 and > 8.5

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.

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 <1 indicate waste water or wash water discharge respectively. A potassium value of >20-mg/l is a good indicator for industrial discharges.

Surfactants

Surfactant products where the surfactants are the primary components



Products where surfactant is a secondary component in the material or the production.



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 $> 0.25\text{-mg/L}$ within residential areas indicates that either a sewage or washwater is present in the stormwater; a value of $> 5\text{-mg/L}$ 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).

3.3.C Indirect Connection Program



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 5.9** 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.

3.3.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.

3.3.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 3.6.B.

3.3.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 Storm Drain Stenciling, Household Hazardous Wastes, Vehicle Fluid Maintenance and Pool Dewatering programs are designed to minimize dumping; these programs are described in Chapter 3. The procedure for handling a dumping incident is described in Chapter 3.6.B.1.

3.3.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 3.1.J

whereas observed/documentated routine washing activities should be addressed through the Removal of Illicit Discharges Procedure in Chapter 3.3.D.4.

3.3.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 3.1.

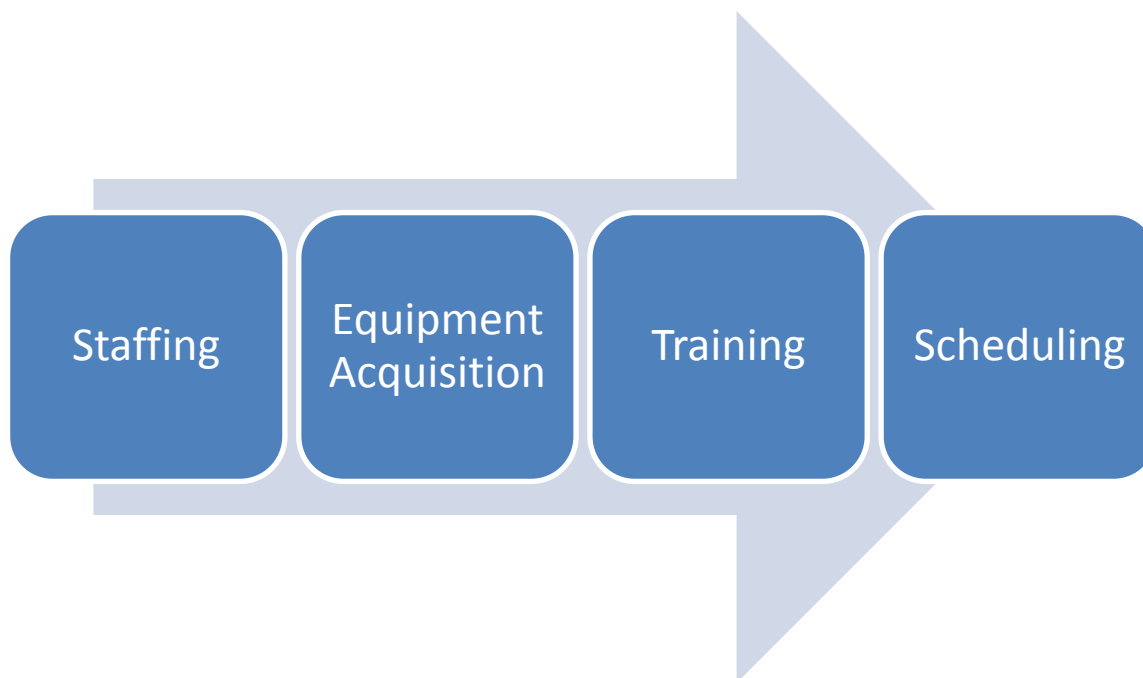
3.3.D Direct Connection Illicit Discharge Program



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) program planning, 2) outfall inspections, 3) follow-up investigation 4) removal.

3.3.D.1 Program Planning

Program Planning involves the office work, planning, and organization required to conduct outfall inspection 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).



3.3.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, one field personnel is required for the outfall screening and a two-member crew is required for follow-up portions of the program. Based on the number of identified outfalls and program goals, it is anticipated that a field personnel will be required to perform inspections at least several days per year.

3.3.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 and additional safety precautions are found on *Stormwater Outfall Screening Equipment Checklist (Appendix 5.2)*.



3.3.D.1.c TRAINING

Applicable Public Works personnel shall thoroughly read and understand the objectives of the IDDE subchapters of this manual. Applicable field personnel shall have completed a standard training session. It is recommended that applicable Public Works personnel accompany a Public Works supervisor on at least two outfall inspections to learn the use of the *Stormwater Outfall Inspection Data Form (Appendix 5.3)* and the use of sampling equipment and test kits. As a

training exercise, new Public Works personnel should independently conduct outfall screening activities until two outfall screening data forms are accurate and consistent with the Public Works supervisor investigator's forms.

3.3.D.1.d 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 should be completed for all outfalls by 2014. It is recommended that all outfalls be re-screened 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. Schedule outfall inspections so that all identified outfalls with potential illicit discharges are investigated within the following 5-years.

3.3.D.2 *Outfall Inspection*



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 3.3.D.4. Outfall inspection consists of the following tasks:

- Pre-Screening
- Outfall Inspection,
- Outfall Assessment and Documentation, and
- Daily closeout.

3.3.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. It is recommended that a Trimble GPS device (or similar unit) be used to collect the data.

3.3.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 also 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 3.3.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,
- The outfall is from a facility providing water quality treatment (for example, detention basin outlet), or

- Other special considerations.

 <p>Submerged: More than ½ below water</p>	 <p>Partially submerged: Bottom is below water</p>	 <p>Fully submerged: Can't see outfall</p>
 <p>Outfall fully submerged by debris</p>	 <p>Fully submerged from downstream trees trapping debris</p>	 <p>Partially submerged by leaf debris "back water"</p>
 <p>Trickle Flow: Very narrow stream of water</p>	 <p>Moderate Flow: Steady stream, but very shallow depth</p>	 <p>Significant flow (Source is a fire hydrant discharge)</p>

Figure 11: Characterizing Submersion and Flow
Center for Watershed Protection

3.3.D.2.c OUTFALL ASSESSMENT AND DOCUMENTATION

Complete the *Stormwater 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 Village'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.

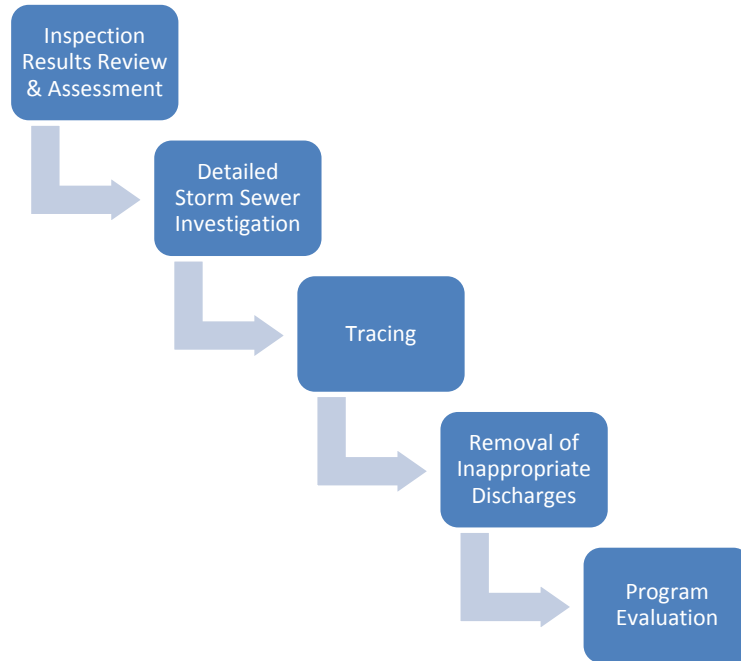
3.3.D.2.d DAILY CLOSEOUT



Properly dispose of test waste items. Before leaving any field inspection site, the area is checked to ensure that all equipment has been cleaned, collected, and stored. Do not leave any trash or litter at the site.

In the office, copies of completed data forms are filed. In addition, the outfall screening scheduling and completion form are be updated and the next screening day's activities be planned. Any problems locating outfalls are discussed with appropriate supervisory personnel so that alternate sampling locations can be identified.

3.3.D.3 *Follow Up Investigation and Program Evaluation*



3.3.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.



3.3.D.3.b INDEPENDENT VERIFICATION

If the initial outfall assessment identifies potential illicit discharges (through either the on-site or off-site testing procedures), additional sampling is required. The results of the inspection and testing should be discussed with the Stormwater Coordinator. 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.

3.3.D.3.c SOURCE IDENTIFICATION

Mapping and Evaluation

The VRLH does not currently have a storm sewer atlas. For each outfall to be investigated staff familiar with the area should be consulted; land use and property information can be determined by using the County's website.

Storm Sewer Investigation



After conducting the mapping evaluation, a manhole-by-manhole inspection is conducted to pinpoint the location of the inappropriate discharge, in the storm sewer system. The outfall is revisited as soon as it is practicable after the preliminary inspections. .

After confirming that dry-weather flow is present at the outfall, the inspector 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 and then track 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 assessed. This data is important for source identification.

Identify any changes 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 Mayor prior to testing. Potential testing methods include fluorometric dye testing, smoke testing, and/or remote video inspections. Once identified, clearly log the contributing source.



3.3.D.4 Removal of Illicit Discharges

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

- Step 1. Have an outside laboratory service take a grab sample and test for the illicit discharge at the manhole located immediately downstream of the suspected discharge connection.
- Step 2: Conduct an internal meeting with appropriate personnel to discuss inspection and testing results and remedial procedures.
- Step 3: The VRLH 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.
- Step 6: If the owner/operator does not voluntarily initiate corrective action, the VRLH 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.

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 VRLH 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, hold an additional internal meeting with appropriate municipal personnel, which may include the Village attorney, to determine appropriate steps to obtain compliance. Appropriate actions may include monetary or other penalties.

3.4 Construction Site Runoff Control



The goal of the Lake County Watershed Development Ordinance (WDO) is to ensure that new development does not increase existing stormwater problems or create new ones. The WDO establishes countywide standards for runoff maintenance, detention sites, soil erosion and sediment control, water quality, wetlands and floodplains. These provisions are only applicable for regulated development activities as defined by the WDO. Regulated developments are required to meet the soil erosion and sediment control standards of the WDO. The Village follows their **Violation Notification Procedure (Appendix 5.6)** to ensure compliance with the approved plan. 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. The VRLH has adopted the Lake County Watershed Development Ordinance (WDO) and is currently a Certified Community for the review, permitting, inspection and enforcement of the provisions of the WDO. The community designates an Enforcement Officer; this person is responsible for the administration and enforcement of the WDO. The Village has created an Inspection and Violation Notification Procedure to ensure compliance with the WDO.

3.4.A Regulatory Program

Developments that exceed the WDO minimum thresholds are provided with a Lake County Watershed Development Ordinance (WDO) application form. Applicants submit the completed form and supporting documentation to the VRLH for review and comment; the VRLH uses engineering consulting services. Upon approval from the Village Engineer that the applicable provisions of the WDO have been addressed, a permit is issued. Each permit lists any additional conditions that are applicable to the development.

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

- Grading, soil erosion and sediment control plan. The plan must:
 - Prevent discharge of sediment from the site through the implementation of soil erosion control practices, primarily, and sediment control secondarily, and
 - Protect receiving waters, natural areas and adjacent properties from damage which may result from the proposed grading.
- Waste control;
- Runoff Volume Reduction Hierarchy and Water Quality;
- Established inspection duties for the applicant and procedures for inspections;
- Record keeping and reporting procedures;
- Security deposits to ensure faithful performance;
- Enforcement measures to achieve compliance; and
- One year warranty period, for applicable developments.

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

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

3.4.B Responsible Parties

3.4.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).

3.4.B.2 *DECI – Designated Inspectors*

The purpose of the DECI program is to facilitate positive communication between the VRLH 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 Art. IV, Section B.1.j.2., is 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. However, SMC administers the DECI program. 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 VRLH 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 (ION) 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.

3.4.B.3 Enforcement Officer

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

It is also both the right and the responsibility of the 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.

3.4.C Minimum Construction Site Practices

A site plan is required to comply with minimum prescribed practice requirements set forth in the WDO. The WDO also allows for the Village to require additional measures, above and beyond minimum control measures, to prevent the discharge pollutants from construction sites. Design and implementation guidance is available in the Lake County Technical Reference Manual (TRM) and other reference materials identified in Appendix 5.17 of the SMPP.

Some minimum control measures include the following:

- Construction site sequencing and phasing,
- Preservation of existing vegetation and natural resources (through the runoff volume reduction hierarchy provisions),
- Stormwater conveyance systems (including concentrated flows, diversions, etc.),
- Stockpile management,
- Soil erosion control measures (including blanket and seeding),
- Stabilized construction entrances/exits and haul routes,
- Sediment Control (including silt fence, inlet/outlet protection, ditch checks, sediment traps, sediment basins etc.),

- Wind and Dust control measures,
- Non-stormwater management (including dewatering practices, waste management practices, spill prevention and control practices etc.),
- Construction Buffers, and
- Construction Details.

3.4.D Site Plan Review

The VRLH is a certified community for the enforcement of the Stormwater Provisions of the WDO. The Village provides applicants with a variety of documents necessary to obtain municipal permits.

The contracted Village Engineer performs a review of the proposed site plan and provides comments to the applicant on any plan deficiencies and/or recommended plan enhancements. The plan review also assists in identifying other approvals that the applicant may be required to obtain. After the Engineer concurs that the applicable provisions of the WDO have been addressed a permit is issued. The permit lists any additional conditions that are applicable for the development. The VRLH attendance of the pre-construction meeting shall be made a condition of the permit for all major developments. The applicant is required to post the permit at the construction site.

3.4.E Site Inspection Procedures

Representatives of the VRLH 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 Village may inspect site development at any stage in the construction process. For major developments, the Village shall conduct site inspections, at a minimum, at the end of the construction stages 1 and 7 listed below. Construction plans approved by the Enforcement Officer shall be maintained at the site during progress of the work. Recommended inspection intervals are listed below:

1. Upon completion of installation of sediment and runoff control measures (including perimeter controls and diversions), prior to proceeding with any other earth disturbance or grading,
2. After stripping and clearing,
3. After rough grading,
4. After final grading,
5. After seeding and landscaping deadlines,
6. After every seven (7) calendar days or storm event with greater than 0.5-inches of rainfall,
7. After final stabilization and landscaping, prior to removal of sediment controls.

Site Inspection Process:

- The VRLH attends the pre-construction meeting on applicable development sites. During the fill out the ***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 the Village when initial sediment and runoff controls measures have been installed.
- The Village inspects the initial sediment and runoff control measures and authorizes the start of general construction.
- The Village inspects the stormwater management system and authorizes additional site improvement activities.
- The Village 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 Art. IV, Section B.1.j.2. a DECI is required, refer to Chapter 3.4.B.2 for additional information regarding the program.
- The Village 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.

3.4.F Complaints

The Village 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 Village's 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.

3.4.G Performance Guarantees

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 the Village for their review/approval. The required surety amount shall be 110% of Village approved EOPCC. In cases where the SMC requires a surety the Village will only hold a surety for the portions of the EOPCC that is not being held by SMC. Alternatively, the Village will provide SMC with a letter indicating that RLH will hold the surety and not reduce the surety amount until SMC approval has been obtained.

3.4.H Violation Notification Procedures

The procedures are discussed in the **Violation Notification Procedure (Appendix 5.6)**. For time-critical violations, the developer should also be advised to complete a Notice of Incidence report with IEPA for all sites that were required to obtain an 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.

3.4.I 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,
- SMC's
 - soil erosion and sediment checklist,
 - soil erosion and sediment control notes,
 - typical construction sequencing,
- Chicago Metropolitan Agency for Planning (previously Northeastern Illinois Planning Commission) Course Manuals,
- IDOT manuals,
- Center for Watershed Protection documents, and
- IEPA and USEPA publications.

3.4.J Construction Site Waste Control

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

3.5 Post Construction Runoff Control



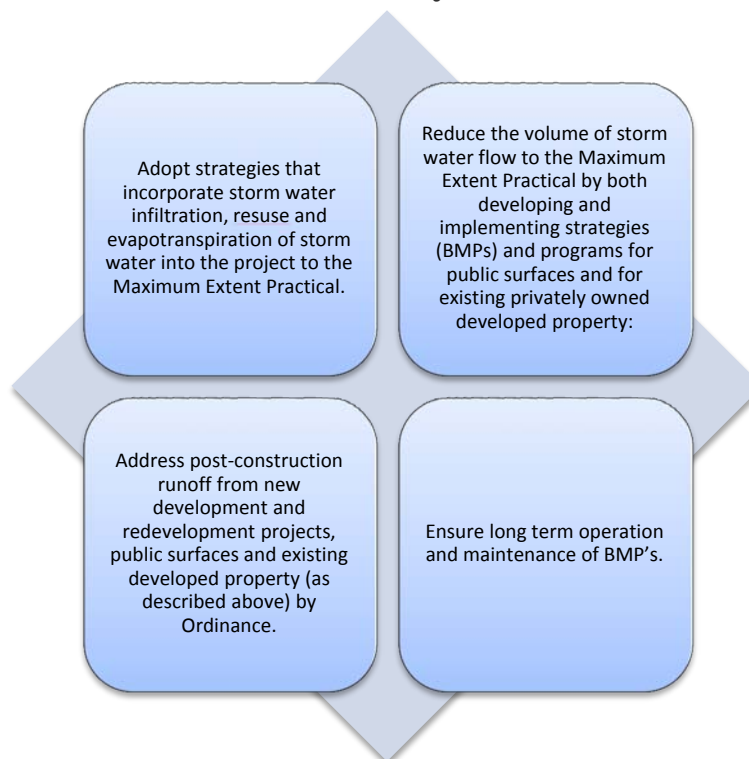
The VRLH complies with NDPES permit requirements by incorporating Ordinance and BMP standards to minimize the discharge of pollutants of development projects.

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.

3.5.A Runoff Volume Reduction Hierarchy



The WDO includes performance standards which require that the site plan include a combination of structural and/or non-structural BMPs that will reduce the discharge of pollutants, 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 July 2012 WDO was written to specifically address the following ILR40 permit requirements.

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

3.5.B Green Infrastructure

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

3.5.C Long Term Operation and Maintenance

The SMPP includes two long term maintenance plans. These sample maintenance plans are included in **Appendix 5.10**.

- 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.

3.5.D Site Inspections

The inspection program for its general facilities is discussed in detail in Chapter 3.6.A. The inspection procedure for site inspections related to construction activities is discussed in detail in Chapter 3.4.E. This section focuses on post-construction inspections of previously developed sites, streambanks / shorelines, streambeds, and detention / retention ponds.

3.5.D.1 Previously Developed Sites PW maintains everything --

The Village attempts to inspect approximately 10% of all existing properties with stormwater management facilities a year.

- Previously accepted developments are inspected with respect to the approved maintenance plan. A letter indicating the maintenance activity highlights, deficiencies or additional enhancements to the plan should be provided to the responsible party.

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

3.5.D.2 Detention Pond Inspections

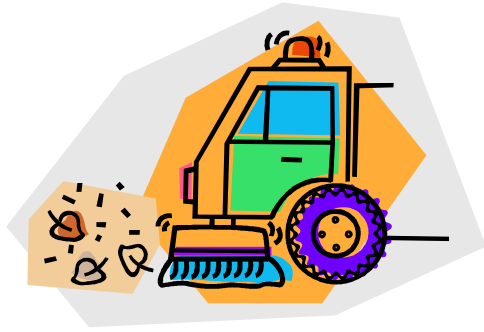
Inspect detention basin shorelines in the spring and/or fall pending weather conditions (with a goal of inspecting all ponds once every 5 years). Observed erosion, seeding/re-seeding or slope stabilization needs are documented using **Appendix 5.7**. Typical BMP for maintenance of these areas are similar 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 or including maintenance activities in the Village's work program.

3.6 Pollution Prevention and Good Housekeeping



The VRLH 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.

3.6.A Inspection and Maintenance Program



The following chapters describe 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.

3.6.A.1 *Street Sweeping*

Street sweeping operations are performed, as needed, to reduce potential illicit discharges and to provide a clean environment.

3.6.A.2 *Landscape Maintenance*



The Village maintains care and upkeep of its general facilities, municipal roads, associated maintenance yards, and other public areas. The Public Works Department annually selects and contracts with a landscape contractor. The landscape contractor is responsible for the remainder of the landscape maintenance program under the supervision of the Public Works Department. The Village is responsible for ensuring that their landscape contractors are provided with training and/or other information to ensure that they adhere to this SMPP.

3.6.A.2.a LITTER AND DEBRIS

Litter and debris can accumulate on Village property and roadway right-of-ways and should be removed. Public Works Department is responsible for the clean-up of their facilities. Clean-up at park and recreation areas is the responsibility of the Round Lake Area Park and Recreation District. Other Village 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.

3.6.A.3 *Snow Removal and Ice Control*



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

3.6.A.3.a ROADWAY ICE CONTROL

Use the minimal amount of salt, de-icing chemicals and additives necessary for effective control.

3.6.A.3.b SALT DELIVERY AND STORAGE

Steps are taken to ensure that the delivery, storage and distribution of salt does not pollute stormwater runoff.

3.6.A.4 *Waste Management*



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

3.6.A.5 *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. Maintenance activities (performed by the staff or its contractors) preserve water by utilizing vacuum recovery as opposed to water based cleaning when possible.

3.6.B Spill Response Plan



Spill prevention and control procedures are implemented wherever non-hazardous chemicals and/or hazardous substances are stored or used. These procedures and practices are implemented to prevent and control spills in a manner that minimizes or prevents discharge to the storm water management system and receiving waters. Spill response equipment storage areas shall be kept clean, well-organized and equipped with appropriate supplies.

3.6.B.1 *Non-Hazardous Spills/Dumping*

Non-hazardous spills typically consist of illicit discharges of household materials into the street or storm water management system. Upon notification or observance of a non-hazardous illicit discharge implement the following procedure:

- Cover and protect spills from stormwater run-on and rainfall, until they are removed.
- 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. Contaminated water used for cleaning and decontamination shall not be allowed to enter the stormwater management system.
- Dry clean-up methods are used whenever possible (such as applying “Oil Dry” or sand and then sweeping up the remnant material).
- Maintain perimeter controls, containment structures, covers and liners to ensure proper function.
- 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.
- 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,
- After containment and cleanup activities have been performed, the on-site personnel fills out the ***Spill Response Notice*** (**Appendix 5.8**) and distributes to adjoining residences. The hanger is provided to residences on both sides of the spill and on both sides of the street. If a person is observed causing an illicit discharge, Building Department is notified and appropriate citations issued by the Police Department.
- Personnel document the location, type of spill and action taken on the **Work Order Form**.

3.6.B.2 *Hazardous Spills*

Upon notification or observance of a hazardous illicit discharge implement the following procedure:

- Call Supervisor. Call 911, explain the incident.
- The Fire Department’s existing emergency response procedure for hazardous spill containment clean-up activities is followed.
- Village provides emergency traffic control, as necessary;
- Documents the location, type of spill and action taken on a **Work Order Form**; and,
- The on-site personnel provide the **Work Order Form** to the supervisor.

3.6.C Employee Training

The Village's practice is to provide education and training its employees to ensure that they have the knowledge and skills necessary to perform their functions effectively and efficiently. The purpose of the Employee Stormwater Training Program is to teach appropriate employees about the following:



- Stormwater characteristics and water quality issues;
- The roles and responsibilities of the various Departments, and individuals within these Departments, regarding implementation of the to consistently achieve Permit compliance;
- Activities and practices that are, or could be sources, of stormwater pollution and non-stormwater discharges;
- On 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.

3.6.C.1 Training Approach

The Village encourages employees to attend all relevant training sessions offered by the QLP and other entities on topics related to the goals/objectives of the SMPP.

4 Program and Performance Monitoring, Evaluation and Reporting



The SMPP represents an organized approach to achieving compliance with the storm water expectations of the NPDES Phase II program for both private and public activities within the Village of Mundelein. Land development, redevelopment and transportation improvement projects within the Village were required to comply with the provisions of the WDO prior to the Village's acceptance of the SMPP. Additionally, the Village had numerous written and unwritten procedures for various tasks. This SMPP documents and organizes existing Village 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 Village will monitor and evaluate the proposed storm water pollution prevention plan based on the above stated objective.

4.1 Program Monitoring and Research

As of April 2009, the IEPA requires annual monitoring of receiving waters at points upstream and downstream of MS4 discharges. The results of the monitoring are used to gauge the effects of the MS4 stormwater discharges on the physical/habitat-related aspects of the receiving waters and the effectiveness of BMPs. The only receiving water that enters and exits the Village is the Round Lake Drain tributary; this stream flows through the Village for a total of 500'. Sampling at 2 locations along this stream segment will not provide sufficient data to evaluate the Village's program.

The Village has selected a total of 2 locations to perform annual water quality monitoring; refer to **Figure 8 Annual Monitoring Locations**. Monitoring locations were selected at points where the Village discharges into adjacent receiving stream. At these locations, annually observe the physical characteristics of the sampling point observed and collect a grab sample. Test grab samples for the monitoring parameters identified on the *Stormwater Outfall Inspection Data Form* (Appendix 5.3).

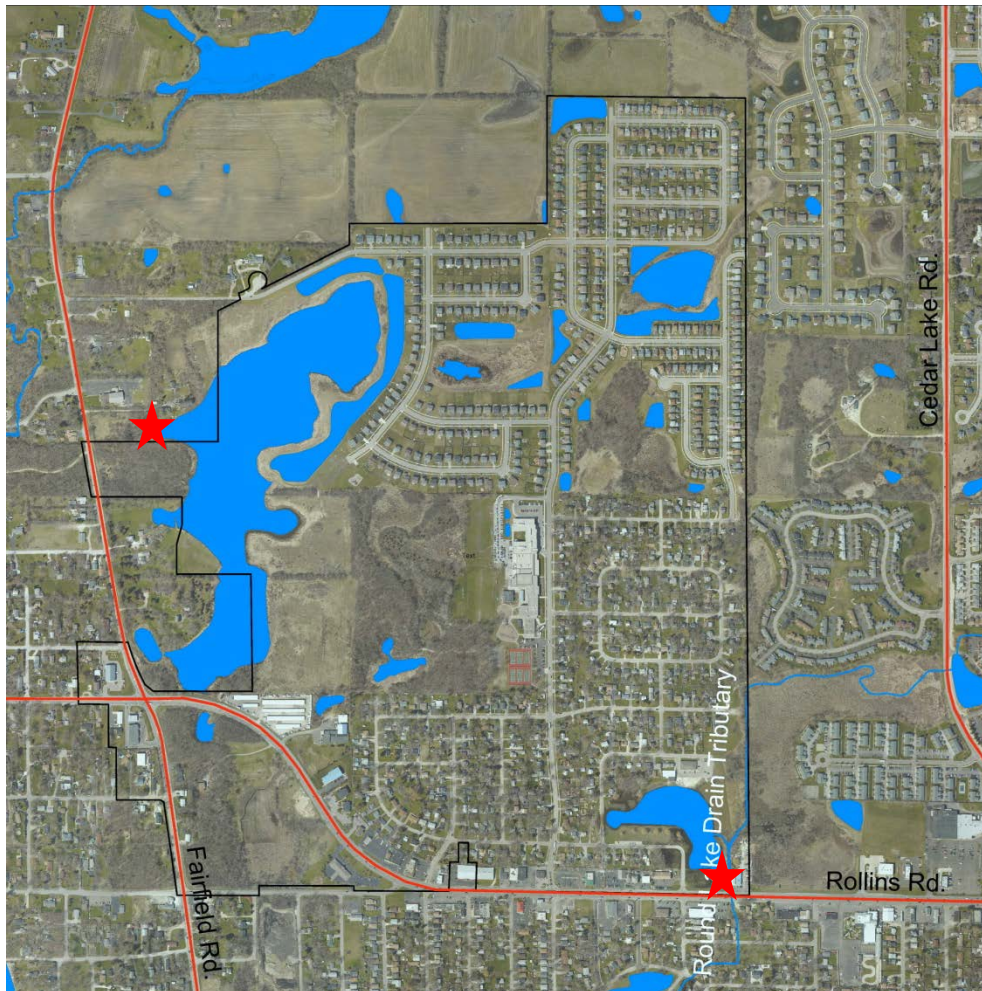


Figure 8 Annual Monitoring Locations

4.2 Program Evaluation

Responsible managers are the primary mechanism for evaluating the program and ensuring that the field staff has adequate knowledge and management. The management support staff includes the Public Works and Engineering Department Director, Deputy Direction and Village Engineer. Management support tasks include observing and evaluating design, construction and field personnel as they implement the requirements of the SMPP on both municipal and private projects, and maintenance personnel as they conduct their assigned activities.

The Stormwater Coordinator will monitor annual monitoring results to determine if there are any noticeable decreases in physical parameters or increase in assessed water quality parameters between upstream and downstream sampling locations. Possible causes of any documented degradation will be investigated and any appropriate corrective actions will be incorporated into the Storm Water Management Program. Include a description of the annual monitoring results, in Part C Annual Monitoring and Data Collection within each Annual Report submitted to IEPA.

At the end of each year the BMPs implemented by the Village should be evaluated in order to determine the effectiveness of the program. The following are some indicators that the SMPP is appropriate.

- 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.
- Increased stakeholder involvement.
- Reduced number of soil erosion and sediment control violations.
- 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 Village staff and its contractors.

Describe 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 section of the Annual Report. The Village will continue to seek innovative stormwater practices and technologies. Information and guidance obtained through the MAC meetings and other sources will be incorporated into this SMPP as practical. This information will be used to provide insight into how the program may need to evolve.

4.2.A IDDE Program Evaluation

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. 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. Examine the screening results to determine whether any such obvious conclusions can be made. If so, these conclusions may guide future outfall screening activities.

The annual inspection screening will determine the effectiveness of the program on a long-term basis and show ongoing improvement through a reduced number of outfalls having positive indicators of potential pollutants. It is logical to assume that after several years of annual screening, the majority of the dry-weather pollution sources will be eliminated. It is likely that new sources may appear in the future as a result of mistaken cross connections from redevelopment, new-development or remodeling. Indirect or subtle discharges such as flash dumping are difficult to trace to their sources and can only be remedied through public education and reporting. Therefore, continued existence of dry-weather flows and associated pollutants will require an ongoing commitment by the Village to continue the outfall screening program.

4.2.B Overall Program Evaluation

It is recommended that the VRLH review progress of the SMPP implementation in the October-November time frame. Areas of deficiency can be identified so that all annual commitments can be met by the end of February.

During the preparation of the Annual Report the VLRH should identify both areas of deficiency and commitments that are challenging to achieve, due to funding, staffing or other reasons. Identify other key issues and recommendations for improvement of the Village's program. The next year's annual commitments can be adjusted in the Annual Report if future issues are expected based on the annual review of the program.

The following types of questions/answers are discussed annually between the Stormwater Coordinator, Managers and field staff. Recommendations, concerns and comments are documented for inclusion in the next revision of the SMPP.

- Is the Village properly integrating storm water management practices into planning, designing and constructing both Village and private projects?
- Are the Village's efforts to incorporate storm water practices into maintenance activities effective and efficient?
- Is the Village's training program sufficient?
- Is the SMPP sufficient?
- Is the Village able to implement the tasks identified in the SMPP, and
- Are the procedures for implementing the SMPP adequate?

5 Appendices

5.1 List of Acronyms

BMP	Best Management Practices
CWA	Clean Water Act
DECI	Designated Erosion Control Inspector
EO	Enforcement Officer (Lake County WDO)
HHW	Household Hazardous 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
LCDOT	Lake County Division of Transportation
LOC	Letter of Credit (surety)
MAC	Municipal Advisory Committee (Countywide)
MS4	Municipal Separate Storm Sewer Systems
NOI	Notice of Intent
NOT	Notice of Termination (with IEPA)
NPDES	National Pollutant Discharge Elimination System
PPE	Personal Protection Equipment
QLP	Qualify Local Program
SE/SC	Soil Erosion and Sediment Control
SMC	Lake County Stormwater Management Commission
SWALCO	Solid Waste Agency of Lake County
SMPP	Stormwater Management Program Plan
TAC	Technical Advisory Committee
TRM	Technical Reference Manual
USEPA	United States Environmental Protection Agency
WDO	Lake County Watershed Development Ordinance
WDP	Watershed Development Permit
WMB	Watershed Management Board

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 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. 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 Village personnel onto private property shall conform to the Access to Premises Ordinance #92-7-15 (Chapter 14.08.100 of the Municipal Code).

Avoid confrontational situations with citizens and attempt to answer questions concisely and without being alarmist. 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 Public Works and Engineering Department.

In general the following additional Village 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 Village Standard Operating Procedures set forth by the Public Works 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. All Confined Space Entry shall comply with the most current Village of Mundelein SOP.

5.2 Storm Water Outfall Screening Equipment Checklist

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): <input type="checkbox"/> Industrial <input type="checkbox"/> Residential <input type="checkbox"/> Commercial <input type="checkbox"/> Open Space <input type="checkbox"/> Institutional Other: _____ Known Industries: _____		

Section 2: Outfall Description

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

Section 3: Physical Indicators

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

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

Section 4: Physical Indicators (Flowing Outfalls Only)

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Sulfide <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Other:	<input type="checkbox"/> 1-Faint	<input type="checkbox"/> 2 – Easily detected	<input type="checkbox"/> 3 – Noticeable from a distance
Color (color chart)	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1-Faint colors in sample bottle	<input type="checkbox"/> 2 – Clearly visible in sample bottle	<input type="checkbox"/> 3 – Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1-Slight cloudiness	<input type="checkbox"/> 2 – Cloudy	<input type="checkbox"/> 3 – Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Grease <input type="checkbox"/> Other:	<input type="checkbox"/> 1-Few/slight; origin not obvious	<input type="checkbox"/> 2 – Some; indications of origin	<input type="checkbox"/> 3 - Some; origin clear
Do physical indicators (flowing) suggest an illicit discharge is present (Y/N):					

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

PARAMETER	RESULT	ACCEPTABLE RANGE	WITHIN RANGE (Y/N)	EQUIPMENT
Temperature		NA	NA	Thermometer
pH		6 – 9		5-in-1 Test Strip
Ammonia		<3 mg/L April – Oct < 8 mg/L Nov - March		Test Strip
Free Chlorine		NA	NA	5-in-1 Test Strip
Total Chlorine		< 0.05 mg/L		5-in-1 Test Strip
Phenols		< 0.1mg/L		Test Kit
Detergents as Surfactants		> 0.25 mg/L residential > 5 mg/L non-residential		Test Kit
Copper		<0.025 mg/L		Test Strip
Alkalinity		NA	NA	5-in-1 Test Strip
Hardness		NA	NA	5-in-1 Test Strip

(Note NA values used for future tracing procedures)

Section 6: Data Collection for Lab Testing (see flow chart)

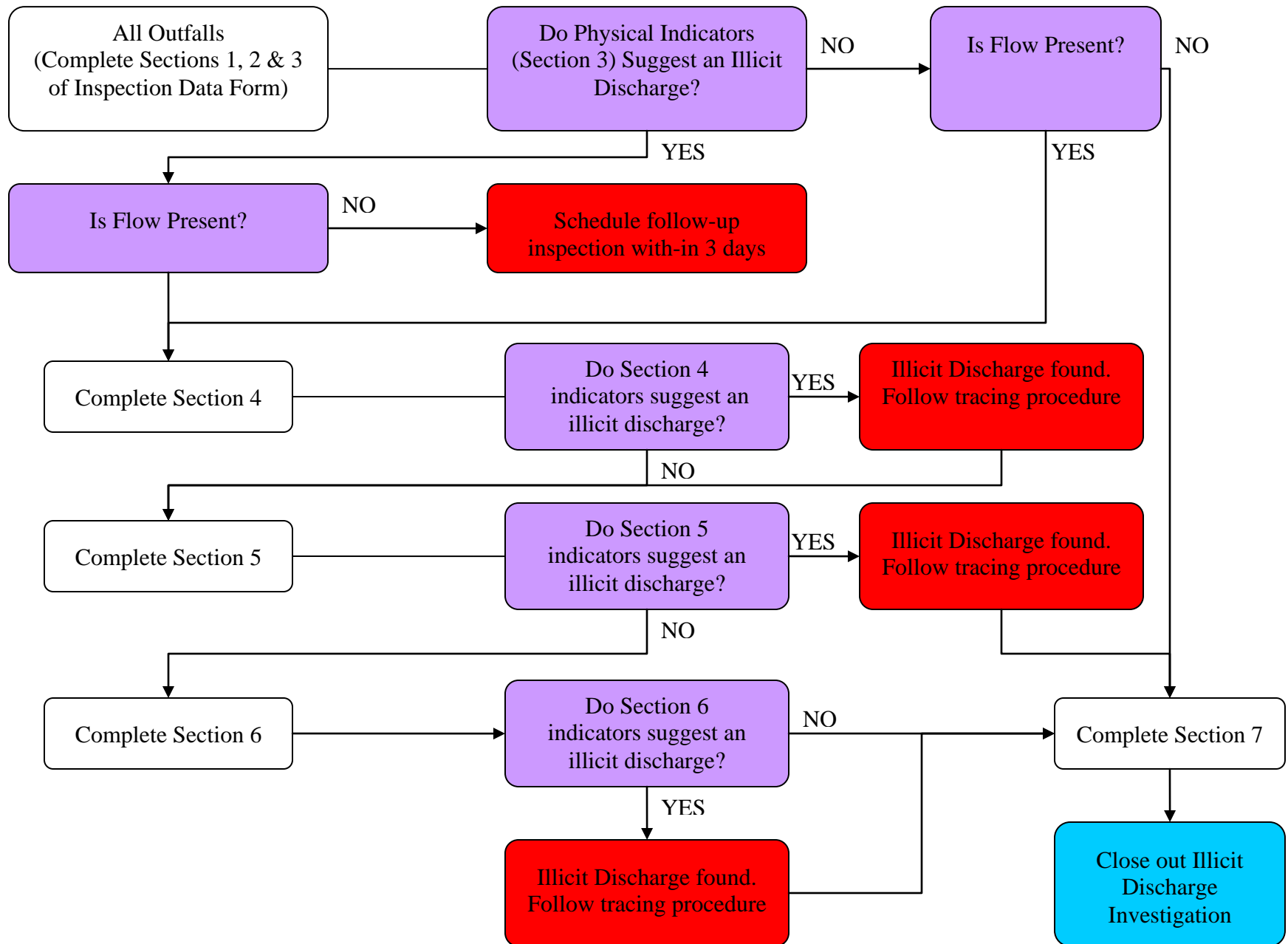
1. Sample for the lab?	<input type="checkbox"/> Yes <input type="checkbox"/> No
2. If yes, collected from:	<input type="checkbox"/> Flow <input type="checkbox"/> Pool

PARAMETER	RESULT (from lab)	ACCEPTABLE RANGE	WITHIN RANGE (Y/N)
Fecal Coliform		400 per 100 mL	
Fluoride		0.6 mg/l	
Potassium		Ammonium/Potassium ratio or > 20mg/l	

*note label sample with outfall number

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

Outfall Inspection Procedure Flow Chart



Instructions for completing the *Storm Water 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 *Storm Water 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 storm water outfall inventory to be entered here.

Outfall ID: Enter the outfall identification number from the storm water 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 table row to describe outfall characteristics.

Section 3: Physical Indicators

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

After inspecting the physical conditions of the outfall, the likelihood of an illicit discharge is assessed. Use this assessment in the supporting flow chart.

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.

If *No* is entered in the “Flow Present” block, then skip to Section 7.

If *Yes* is entered, then the remainder of the outfall screening data form is filled out.

Flow Description: A description of the quantity of the dry-weather flow is provided.

Sample 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 sample 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. Rinse the sample container with the discharge water prior to collection of sample for analysis.

If no dry weather flow was observed and no non-flowing physical indicators appear present the inspection can be closed, skip to Section 7 of the form. If no dry weather flow was observed but indicators appear present the outfall is placed back on the follow-up inspection log to ensure future inspections of the outfall, skip to Section 7. If dry weather flow was observed (regardless of the presence of non-flowing physical indicators), test the outfall discharge and complete the remainder of the form, continue to Section 4.

Section 4: Physical Indicators (Flowing Outfalls Only)

Complete table 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.

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.

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. Describe turbidity as;

- Clear,
- Cloudy (translucent), or
- Opaque.

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.

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.

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

On-site tests are performed for each of the categories. Testing is done by either a test strip or test kit as applicable (refer to the equipment column). The result are compared with the Acceptable Range and within or outside of range determination noted 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 can be used to determine the source of an illicit discharge during the tracing procedure.

After completing the on-site testing of the outfall discharge, the results of the within range column are reviewed. If any parameter is outside of the acceptable range then testing can be stopped, proceed to Section 7. If none of the parameters are outside of the acceptable range then a sample is taken for lab testing, proceed to Section 6.

Section 6: Data Collection for Lab Testing

If required, as determined by the supporting flow chart, a sample is collected for the lab. The location of the sample is noted. Additionally, the sample is labeled with the outfall ID number.

After the lab testing has been completed the results are entered onto the form. If any parameters are outside of the acceptable range then the tracing procedure is implemented. If none of the parameters are outside of the acceptable range then the investigation can be closed. Note if non flowing physical indicators were present, re-inspect the outfall as practical.

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

AGENDA
PRE-CONSTRUCTION MEETING

PROJECT: _____ CONFERENCE DATE: _____

CONTRACTOR: _____ Phone: _____

Project Manager: _____ FAX: _____

Site Superintendent: _____ Phone: _____

Cell/Pager: _____

ENGINEER: _____ Phone: _____

Project Manager: _____ FAX: _____

Field Representative: _____ Cell/Pager: _____

DECI: _____

Phone: _____ Fax: _____ Cell/Pager: _____

1. Welcome, Introductions, and Sign-in

2. Contract Dates

a. Start _____

b. Duration of Contract _____

c. Substantial Completion _____

d. Final Completion _____

3. Utilities

a. Water

b. Sewer

c. Electric (ComEd)

d. Comcast

e. Telephone (SBC)

f. Gas (Nicor/Northshore)

****Contact JULIE 1-800-892-0123**

4. Permits
 - a. Water
 - b. Sewer (IEPA)
 - c. Building
 - d. Mundelein Watershed Development
 - e. LCSMC Wetlands Development
 - f. IEPA / NPDES (Erosion Control)
 - g. LCDOT/IDOT
 - h. Easements
5. Contractors Insurance (Certificate of Insurance) Name Village of Mundelein, and Village Consultant, as additionally insured.
6. Performance Guarantee
7. Reference Points/Surveying/Staking
 - a. Who provides: _____
8. Construction Schedule / Sequencing
 - a. Preliminary for first 30 days by _____
 - b. Sequencing
9. List of Subcontractors/Suppliers
10. Special Structures needing Shop Drawings
11. As-builts required at completion of project.
12. Operation and Maintenance of Existing Facilities
 - Utilities
 - Driveways
 - Construction entrance and silt fence etc.

13. Defective Work will be brought to contractor and general contractor attention as soon as seen or determined.

14. Traffic Control

a. Traffic Control Subcontractor: _____

15. Soil Erosion / Sediment Control

- a. Floodplain/Floodway On/Adj. to Site (Y/N)
- b. WOUS or IWLC On/Adj to Site (Y/N)
- c. Initial SE/SC Inspection at PreCon (Y/N)
- d. Village to receive weekly DECI Inspection Reports (Y/N)
- f. Key Discussion Items/Areas of Focus

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

16. Temporary Facilities and Controls

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

17. Testing (by Whom?)

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

18. Chain of Command (contacts)

- a. Contractor
- b. Consultant
- c. Village of Mundelein

19. Safety – OSHA/IDOT

20. Fire Protection / Police Department

21. Rescue Access

22. Work By Others

23. Progress Meetings

Weekly/Bi-weekly beginning _____

24. Easement Requirements

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

25. Inspections

- a. Special inspections
- b. By consultant and/or Village
- c. By DECI
- d. Date of next inspection _____

26. Working Hours

- a. Contractor construction (by Village Ordinance)
Mon-Fri: 7:00AM-6:00PM, Saturday 8:00AM – 5:00PM, Sunday and Holidays – no work.
- b. Engineering Office
Mon-Fri 7:30AM-4:00PM

28. Comments, Q&A

5.5 Soil Erosion and Sediment Control Inspection Form

Village of Round Lake Heights

Soil Erosion and Sediment Control Inspection Form

WDO Permit #		USAGE Reference #	
Date/Time of Inspection		Observer/DECI	
Project Name			
Field Contact Information			
In Attendance			
Weather Conditions		Reason for Inspection	<input type="checkbox"/> monthly <input type="checkbox"/> rain <input type="checkbox"/> DECI follow-up <input type="checkbox"/> other
Disturbed Area		Stage of Construction	
Floodplain Impacted	<input type="checkbox"/> Yes <input type="checkbox"/> No	Floodway Impacted	<input type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Impacted	<input type="checkbox"/> Yes <input type="checkbox"/> No	Violation Observed	<input type="checkbox"/> Yes <input type="checkbox"/> No
Violation Correction Time	<input type="checkbox"/> 1 day <input type="checkbox"/> 5 day <input type="checkbox"/> 30 day	Violation Rating	<input type="checkbox"/> Moderate <input type="checkbox"/> Severe
Next Site Visit		Photos Taken	<div><input type="checkbox"/> Yes <input type="checkbox"/> No</div> <div>Copy To:</div>
Construction Entrance/Pavement	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory <input type="checkbox"/> N/A	Detention/Sediment Basin Condition	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory <input type="checkbox"/> N/A
Dewatering Facility	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory <input type="checkbox"/> N/A	Ditch Checks/Silt Dikes	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory <input type="checkbox"/> N/A
Dust Control	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory <input type="checkbox"/> N/A	Inlet Protection	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory <input type="checkbox"/> N/A
Native Vegetation	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory <input type="checkbox"/> N/A	Overland Flow/Offsite Drainage Paths	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory <input type="checkbox"/> N/A
Perforated Riser	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory <input type="checkbox"/> N/A	Perimeter SE/SC Controls	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory <input type="checkbox"/> N/A
Restrictor Plate/Structure	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory <input type="checkbox"/> N/A	Silt Fence	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory <input type="checkbox"/> N/A
Soil Stockpile Stabilized/Protected	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory <input type="checkbox"/> N/A	Stabilization Measures	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory <input type="checkbox"/> N/A
Stormwater System	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory <input type="checkbox"/> N/A	Wetlands/Waters Protection Measures	<input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory <input type="checkbox"/> N/A
<div>Detention Basin — Sediment Basin</div> <div>• Is the basin installed?</div> <div>• Is the basin adequately stabilized with evidence of sufficient coverage of native vegetation?</div> <div>• Is the emergency overflow constructed with the required materials?</div>	<div>Yes</div> <div>No</div> <div>N/A</div>	<div>Restrictor Plate — Restrictor Structure</div> <div>• Is the restrictor plate or restrictor structure installed?</div> <div>Silt Fence</div> <div>• Does the silt fence meet the AASHTO 288-00 Standard?</div> <div>• Is the silt fence trenched, backfilled and compacted in properly?</div> <div>• Is the silt fence maintained and in good condition?</div> <div>Site Stabilization</div> <div>• Have all disturbed areas been stabilized with temporary or permanent measures within 14 days of the end of active hydrologic disturbance?</div>	<div>Yes</div> <div>No</div> <div>N/A</div>
<div>Dewatering</div> <div>• Is dewatering directly entering a waterway or wetland?</div> <div>• Are dewatering activities conveying sediment laden water?</div> <div>• If a sediment bag is being used, is it capturing sediment effectively?</div>	<div>Yes</div> <div>No</div> <div>N/A</div>	<div>Soil Stockpile</div> <div>• Is the soil stockpile located in an approved location (ie. not in floodplain or wetland)?</div> <div>• Is the soil stockpile adequately stabilized and enclosed with silt fence?</div> <div>Stormwater Management System</div> <div>• Is the stormwater management system installed and functional, prior to building construction?</div> <div>• Are all points of concentrated discharge appropriately installed for energy dissipation?</div> <div>• Are all inlets and catch basins adequately protected from sediment conveyance into the system?</div> <div>• Is hydrocarbon removal technology in place, functional and maintained where needed?</div> <div>Temporary Construction Entrance</div> <div>• Are all ingress and egress points covered by a temporary construction entrance constructed properly?</div> <div>• Is the entrance adequately preventing tracking of dirt, mud, and sediment onto roadways?</div> <div>Triangular Silt Dike</div> <div>• Are triangular silt dikes installed properly in all locations shown on the permitted plan set?</div> <div>Wetlands and Waters Protection</div> <div>• Are all delineated wetlands on site protected by 4' IDOT Standard Construction Fencing?</div> <div>• Are all adjacent offsite wetlands protected from impact?</div> <div>• Are illicit discharges into wetlands protected from impact?</div> <div>• Are wetland buffers protected?</div>	<div>Yes</div> <div>No</div> <div>N/A</div>
<div>Dust Control - sweeping, vacuuming, spraying, etc.</div> <div>• Are dust control measures being used as needed?</div> <div>• Is dust observed moving offsite due to wind?</div>	<div>Yes</div> <div>No</div> <div>N/A</div>	<div>COMMENTS:</div>	
<div>Inlet Protection - Catch-All basket, filter, silt fence, silt dike, straw bales, gravel dam, etc.</div> <div>• Are all storm sewer inlets that are or will be functional during construction protected?</div> <div>• Is the inlet protection installed correctly to protect the entire inlet?</div> <div>• Is the inlet protection being maintained?</div>	<div>Yes</div> <div>No</div> <div>N/A</div>		
<div>Miscellaneous</div> <div>• Is there an adequately sized receptacle on site for deposition of construction material debris?</div> <div>• Is there a dedicated, protected area for concrete wash out activities?</div> <div>• Are the permitted plans available on site? The Stormwater Pollution Prevention Plan (SWPPP)?</div> <div>• If polymers are used, are they being used appropriately in an approved manner?</div> <div>• Have any SE/SC measures that are no longer needed been removed?</div>	<div>Yes</div> <div>No</div> <div>N/A</div>		
<div>Overland Flow — Offsite Drainage</div> <div>• Are all permitted overland flow routes constructed?</div> <div>• Are all permitted overland flow routes free from obstruction?</div> <div>• Are all permitted overland flow routes stabilized?</div> <div>• Are all points of offsite drainage (ie. water leaving the site) stabilized?</div>	<div>Yes</div> <div>No</div> <div>N/A</div>		
<div>Perforated Riser</div> <div>• Is the perforated riser installed properly at the outlet?</div> <div>• Is the perforated riser sized correctly (one pipe size smaller than the outlet pipe)?</div>	<div>Yes</div> <div>No</div> <div>N/A</div>		
<div>Perimeter SE/SC Controls</div> <div>• Are all perimeter soil erosion/sediment controls in place and maintained?</div> <div>• Are adjacent wetlands/waters/properties being impacted by SE/SC failures?</div>	<div>Yes</div> <div>No</div> <div>N/A</div>		
<div>Inspector's Signature _____ Date of Inspection _____</div>			

5.6 Violation Notification Procedure

Violation Notification Procedure

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 a Notice of Incidence report with IEPA for all sites that were required to obtain an NOI with IEPA. The **SE/SC Inspection Form** is found in **Appendix 5.5**, respectively. Step 1 can be initiated by observation of a violation during a routine inspection by the Village, or in response to a notice of non-compliance received from a DECI.

Step 1: Violation Is Observed

- The Village inspector completes the **SE/SC Inspection Form**.
- Photographs of the violation(s) should be taken and saved into the specific subdivision or building permit address folder on the 'T:' drive.
- The Violation shall be described to the construction site contact.
- Provide a copy of the **SE/SC Inspection Form** to the contractor and the developer. Indicate the remedial measures required and a maximum time frame for action.
- At the end of the indicated time frame the Village will perform a follow-up site inspection. The inspector will attempt to schedule the follow-up inspection with the construction site contact.

Step 2: 1st Follow-Up Site Inspection

The construction site contact shall be notified of the anticipated inspection time. The site is inspected including all items previously documented on the previous **SE/SC Inspection Form**. The inspector will determine if the remedial measures have all been satisfactorily addressed, substantially completed, or if significant non-compliance remains.

- If the remedial measures have been satisfactorily addressed then the **SE/SC Inspection Form** is filled out indicating compliance and provided to the contractor and developer.
- If the inspector determines that the remedial measures have been substantially completed, but not entirely resolved, the inspector shall follow Step 1 above.
- If the inspector determines that the remedial measures have not been substantially completed, the inspector shall follow Step 3 discussed below. Photographs of the violations should be taken and saved.

Step 3: 1st Notice of Violation

A formal **Notice of Violation** letter will be sent to the contractor and developer (see sample letter following). The letter will include the following information.

- Description of the violations (including ordinance provisions),
- Mandatory remedial measures, and

- Maximum time frame for resolution,

Step 4: 2nd Follow-Up Site Inspection

The inspector will determine if the remedial measures have all been satisfactorily addressed, substantially completed, or if significant non-compliance remains.

- If the remedial measures have been satisfactorily addressed then the **SE/SC Inspection Form** is filled out indicating compliance and provided to the contractor and developer.
- If the inspector determines that the remedial measures have been substantially completed, but not entirely resolved, the inspector shall follow Step 1 above.
- If the inspector determines that the remedial measures have not been substantially completed, the inspector shall follow Step 3 discussed below. Photographs of the violations should be taken and saved.

Step 5: 2nd Notice of Violation

A formal **Notice of Violation** letter will be sent, via certified mail, to the contractor and developer (see sample letter following). The letter will include the following information.

- Description of the violations (including ordinance provisions),
- Mandatory remedial measures, and
- Maximum time frame for resolution.

Step 6: 3rd Follow-Up Site Inspection:

The inspector will determine if the remedial measures have all been satisfactorily addressed, substantially completed, or if significant non-compliance remains.

- If the remedial measures have been satisfactorily addressed then the **SE/SC Inspection Form** is filled out indicating compliance and provided to the contractor and developer.
- If the inspector determines that the remedial measures have been substantially completed, but not entirely resolved, the inspector shall follow Step 1 above.
- If the inspector determines that the remedial measures have not been substantially completed, the inspector shall follow Step 3 discussed below. Photographs of the violations should be taken and saved.
- Conduct an internal meeting to discuss the violation and subsequent actions. These actions may include: meeting with the Village and developer/contractor; with-holding building or occupancy permits; draw from surety to enable Village to have the remedial measures corrected; seeking Village consul and pursuing injunctive or other legal relief.

Step 7: 3rd Notice of Violation

A formal **Notice of Violation** letter will be sent, via certified mail, to the contractor and developer (see sample letter following). The letter will include the following information.

- Description of the violations (including ordinance provisions),
- Mandatory remedial measures,
- Maximum time frame for resolution, and
- States additional penalties or measures that will be undertaken by the Village if the violation(s) persist, as agreed to between the Building and Engineering Departments.

Repeat Steps 6 & 7 until resolution

5.7 Detention Pond Inspection Form

Detention Pond Inspection Form 5.7

[illegible]

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
-

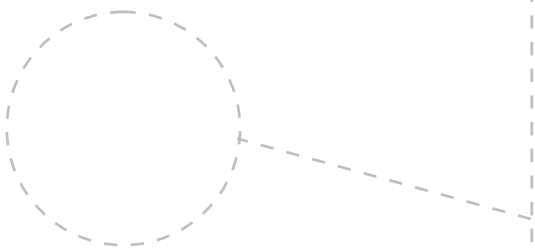


For more information or to report an illegal discharge of pollutants, please call:



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 Indirect Illicit Discharge Tracking

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 (<i>optional</i>):				
Incident Location (<i>complete one or more below</i>)				
Latitude and longitude:				
Stream address or outfall #:				
Closest street address:				
Nearby landmark:				
Primary Location Description		Secondary Location Description:		
<input type="checkbox"/> Stream corridor (<i>In or adjacent to stream</i>)	<input type="checkbox"/> Outfall	<input type="checkbox"/> In-stream flow	<input type="checkbox"/> Along banks	
<input type="checkbox"/> Upland area (<i>Land not adjacent to stream</i>)	<input type="checkbox"/> Near storm drain	<input type="checkbox"/> Near other water source (storm water pond, wetland, etc.):		
Narrative description of location:				
Upland Problem Indicator Description				
<input type="checkbox"/> Dumping	<input type="checkbox"/> Oil/solvents/chemicals	<input type="checkbox"/> Sewage		
<input type="checkbox"/> Wash water, suds, etc.	<input type="checkbox"/> Other: _____			
Stream Corridor Problem Indicator Description				
Odor	<input type="checkbox"/> None	<input type="checkbox"/> Sewage	<input type="checkbox"/> Rancid/Sour	<input type="checkbox"/> Petroleum (gas)
	<input type="checkbox"/> Sulfide (rotten eggs); natural gas	<input type="checkbox"/> Other: Describe in "Narrative" section		
Appearance	<input type="checkbox"/> "Normal"	<input type="checkbox"/> Oil sheen	<input type="checkbox"/> Cloudy	<input type="checkbox"/> Suds
	<input type="checkbox"/> Other: Describe in "Narrative" section			
Floatables	<input type="checkbox"/> None:	<input type="checkbox"/> Sewage (toilet paper, etc)	<input type="checkbox"/> Algae	<input type="checkbox"/> Dead fish
	<input type="checkbox"/> Other: Describe in "Narrative" section			
Narrative description of problem indicators:				
Suspected Violator (name, personal or vehicle description, license plate #, etc.):				

Investigation Notes	
Initial investigation date:	Investigators:
<input type="checkbox"/> No investigation made	Reason:
<input type="checkbox"/> Referred to different department/agency:	Department/Agency:
<input type="checkbox"/> Investigated: No action necessary	
<input type="checkbox"/> Investigated: Requires action	Description of actions:
Hours between call and investigation:	Hours to close incident:
Date case closed:	
Notes:	

5.10 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 LAKE, 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 Village 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-yr 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 Village 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, 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.

5.11 Yearly Tracking Forms

5.12 General Permit ILR40

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: March 31, 2014

Issue Date: February 20, 2009

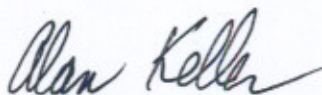
Effective Date: April 1, 2009

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, 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 an application as described in the permit conditions to the Illinois Environmental Protection Agency. Authorization, if granted, will be by letter and include a copy of this permit.



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

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PART I. COVERAGE UNDER THIS PERMIT**A. Permit Area**

This permit covers all areas of the State of Illinois.

B. Eligibility

1. This permit authorizes discharges of storm water from small municipal separate storm sewer systems (MS4s) as defined in 40 CFR 122.26(b)(16) as designated for permit authorization 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 I.B.2.
3. Storm water discharges to any receiving water specified under 35 Ill. Adm. Code 302.105(d)(6).

D. Obtaining Authorization

In order for storm water discharges from small municipal separate storm sewer systems 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) or the appropriate U.S. EPA NOI form.
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, submit an NOI in accordance with the requirements of this permit to be authorized to discharge storm water from small municipal separate storm sewer systems under the terms and conditions of this permit 30 days after the date that the NOI is received. 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 REQUIREMENTS

A. Deadlines for Notification

1. If you were 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 you have coverage under the previous general permit for storm water discharges from small MS4s, you must renew your permit coverage under this part. You must submit a 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.
3. If you are designated by IEPA under Section 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. You 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. IEPA 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 either the Illinois MS4 NOI form or the U.S. EPA MS4 NOI form. The Notice(s) of Intent shall be signed in accordance with Standard Condition 11 of this permit and shall include 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;
3. The name of the receiving water(s), their impairments from any approved 303(d) list and any appropriate TMDL or alternate water quality study; and
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 to the following email and office addresses:
epa.ms4noipermit@illinois.gov

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

D. Shared Responsibilities

You may partner with other MS4s to develop and implement your storm water management program. You may also jointly submit an NOI with one or more MS4s. Each MS4 must fill out the NOI form. The description of your 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. Your 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 total maximum daily load (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, you 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 Paragraphs 4 above through 7 until two continuous monitoring cycles show that the WLAs are being met or that WQ standards are being met.
- D. If this permit is not reissued or replaced prior to the expiration date, it will be administratively continued in accordance with the Administrative Procedures Act and remain in force and effect. Any permittee who was granted permit coverage prior to the expiration date will automatically remain covered by the continued permit until the earlier of:
1. Reissuance or replacement of this permit, at which time you must comply with the Notice of Intent conditions of the new permit to maintain authorization to discharge; or
 2. Your submittal of a Notice of Termination; or
 3. Issuance of an individual permit for your discharges; or
 4. A formal permit decision by the Agency not to reissue this general permit at which time you must seek coverage under an alternative general permit or an individual permit.
 5. The permittee shall submit a revised or updated NOI to the Agency no later than 180 days prior to the expiration date of this permit in order for permit coverage to be administratively continued.
- E. 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 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 NPDES permit application required by the Agency under this paragraph, then the applicability of this permit to the individual NPDES permittee is automatically terminated at the end of the day specified for application submittal.
- F. 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 or operator are adequate to support the request.
- G. 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.
- H. When an individual NPDES permit is denied to an owner or operator otherwise subject to this permit, or the owner or operator is denied coverage under an alternative NPDES general permit the applicability of this permit to the individual NPDES permittee is automatically terminated on the date of such denial, unless otherwise specified by the Agency.

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 your small municipal separate storm sewer system to the maximum extent practicable (MEP), 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. Your 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 a program by the date specified in your 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 your storm water management program are:

1. Public education and outreach on storm water impacts

The permittee must:

- a. implement a public education program to 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 permittee should incorporate into its education materials 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, evapotranspired or reused, discuss the benefits and costs of such strategies and provide guidance to the public on how to implement them; and
- 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.

2. Public Involvement/Participation

The permittee must:

- a. at a minimum, comply with State and local public notice requirements when implementing a public involvement/participation program; and
- 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 your storm water discharges to the maximum extent practicable.

3. Illicit discharge detection and elimination

The permittee must:

- a. develop, implement and enforce a program to detect and eliminate illicit discharges into your 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;
- c. to the extent allowable under state or local law, effectively prohibit, through ordinance, or other regulatory mechanism, non-storm water discharges into your 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, implement, and adequately fund a plan to detect and address non-storm water discharges, including illegal dumping, to your system;
- e. inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste and the requirement and mechanism 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 the fire fighting 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); and
- 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 (annual is recommended) inspections of the storm sewer outfalls for detection of non-storm water discharges and illegal dumping.

4. Construction site storm water runoff control

The permittee must:

- a. develop, implement, and enforce a program to reduce pollutants in any storm water runoff to your 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.

Your program must include the development and implementation of, at a minimum:

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- i. an ordinance or other regulatory mechanism to require erosion and sediment controls, as well as sanctions to ensure compliance, to the extent allowable under state or local law;
 - ii. requirements for construction site operators to implement appropriate erosion and sediment control best management practices, including green infrastructure storm water management techniques where appropriate and practicable;
 - iii. requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality;
 - 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, 2002, or as amended including green infrastructure techniques where appropriate and practicable;
 - v. procedures for site plan review which incorporate consideration of potential water quality impacts and review of individual pre-construction site plans to ensure consistency with local sediment and erosion control requirements;
 - vi. procedures for receipt and consideration of information submitted by the public; and
 - vii. procedures for site inspections and enforcement of control measures.
- 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.

5. Post-construction storm water management in new development and redevelopment

The permittee must:

- a. develop, implement, and enforce a program to address and minimize storm water runoff from new development and redevelopment projects that disturb greater than or equal to one acre, including 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 your small MS4 within the MS4 jurisdictional control. Your 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 should adopt strategies that incorporate storm water infiltration, reuse and evapotranspiration of storm water into the project to the maximum extent practicable;
- b. develop and implement strategies which include a combination of structural and/or non-structural BMPs appropriate for all projects within your community for all new development and redevelopment that will reduce the discharge of pollutants, the volume and velocity of storm water flow to the maximum extent practicable. When selecting BMPs to comply with requirements contained in this Part, the permittee should adopt one or more of the following general strategies, in order of preference. Proposal of a strategy should include a rationale for not selecting an approach from among those with a higher preference. When approving a plan for development, redevelopment, highway construction, maintenance, replacement or repair on existing developed sites or other land disturbing activity covered under this Part, the permittee should require the person responsible for that activity to adopt one or more of these strategies, in order of preference, or provide a rationale for selecting a more preferred strategy.
 - 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. 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. appropriate 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.
 - ii. appropriate 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.
 - d. 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 may contain the following elements:
 - i. source identification – establishment of 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. identify a relevant set of BMPs for all departments
 - C. evaluation of existing flood control techniques to determine the feasibility of pollution control retrofits
 - 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
 - G. street cleaning in targeted areas
 - e. use 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; and
 - f. require all regulated construction sites to have post-construction management plans that meets or exceeds the requirements of Section IV (D)(2)(b) 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, 2002;
 - g. ensure adequate long-term operation and maintenance of BMPs; and
 - h. 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.
6. Pollution prevention/good housekeeping for municipal operations
- The permittee must:
- a. develop and implement an operation and maintenance program that includes a training component and is designed to prevent and reduce the discharge of pollutants to the maximum extent practicable;
 - b. using training materials that are available from EPA, the state of Illinois, or other organizations, your program must include 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, new construction and land disturbances, and storm water system maintenance procedures for proper disposal of street cleaning debris and catch basin material, address ways that flood management projects impact water quality, non-point source pollution control, green infrastructure controls, and aquatic habitat; and
 - c. 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. Qualifying State, County, or Local Program

If an existing qualifying local program requires you to implement one or more of the minimum control measures of B. above, you may follow that qualifying program's requirements rather than the requirements of 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 Section B. Any qualifying local programs that you intend to follow shall be specified in your storm water management plan.

D. Sharing Responsibility

1. Implementation of one or more of the minimum measures may be shared with another entity, or the entity may fully take over the measure. You may rely on another entity only if:
 - a. the other entity, in fact, 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 the control measure on your behalf. Written acceptance of this obligation is expected. This obligation must be maintained as part of the description of your storm water management program. If the other entity agrees to report on the minimum measure, you must supply the other entity with the reporting requirements contained in Section V (C) of this permit. If the other entity fails to implement the control measure on your behalf, then you remain liable for any discharges due to that failure to implement.

E. Reviewing and Updating Storm Water Management Programs

1. Storm Water Management Program Review: You must do an annual review of your Storm Water Management Program in conjunction with preparation of the annual report required under Part V.(C).
2. Storm Water Management Program Update: You may change your Storm Water Management Program during the life of the permit in accordance with the following procedures:
 - a. changes 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; and
 - b. changes replacing an ineffective or unfeasible BMP specifically identified in the Storm Water Management Program with an alternate BMP may be requested at any time. Unless denied by the Agency, changes proposed in accordance with the criteria below shall be deemed approved and may be implemented 60 days from submittal of the request. If request is denied, the Agency will send you a written response giving a reason for the decision. Your 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. changes replacing or modifying any ordinances relative to the storm water management program;
 - d. change 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. The Agency may require changes to the Storm Water Management Program as needed to:
 - a. address impacts on receiving water quality caused, or contributed to, by discharges from the municipal separate storm sewer system;
 - b. include more stringent requirements necessary to comply with new federal 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.

- d. changes requested by the Agency must be made in writing, set forth the time schedule for you to develop the changes, and offer you the opportunity to propose alternative program changes to meet the objective of the requested modification. All changes 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.

PART V. MONITORING, RECORDKEEPING AND REPORTING

A. Monitoring

The permittee must evaluate program compliance, the appropriateness of your identified best management practices, and progress towards achieving your identified measurable goals, which must include reducing the discharge of pollutants to the maximum extent practicable (MEP). Monitoring shall include at least annual monitoring of receiving waters upstream and downstream of the MS4 discharges, use of indicators to gauge the effects of storm water discharges on the physical/habitat-related aspects of the receiving waters, and/or monitoring of the effectiveness of BMPs.

B. Recordkeeping

The permittee must keep records required by this permit for the duration of this permit. 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, you must submit your records to the Agency only when specifically asked to do so. You must post your notice of intent (NOI), your storm water management plan and your annual reports on your website. You must make your records, including your notice of intent (NOI) and your storm water management plan, available to the public at reasonable times during regular business hours within 10 working days of its approval by the permitting authority. (You may assess a reasonable charge for copying. You may require a member of the public to provide advance notice, not to exceed seven working days.) 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. Your report must include:

1. The status of compliance with permit conditions, an assessment of the appropriateness of your identified best management practices and progress towards achieving the statutory goal of reducing the discharge of pollutants to the MEP, and your identified measurable goals for each of the minimum control measures;
2. Results of information collected and analyzed, including monitoring data, if any, during the reporting period;
3. A summary of the storm water activities you plan to undertake during the next reporting cycle (including an implementation schedule);
4. A change in any identified best management practices or measurable goals that apply to the program elements; and
5. Notice that you are relying on another government entity to satisfy some of your permit obligations (if applicable).
6. The annual reports shall be submitted to the following email and office addresses: epa.ms4annualinsp@illinois.gov.

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

PART VI. DEFINITIONS AND ACRONYMS (SEE ALSO SPECIAL CONDITIONS)

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, but 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.

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 and 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.

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.).

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**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, 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 requirement.

(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. 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, 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. This period may be extended by request of the Agency 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

(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.

(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.

(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) **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.

(d) **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.

(e) **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) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Agency in the permit to be reported within 24 hours.

The Agency may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

(f) **Other noncompliance.** The permittee shall report all instances of noncompliance not reported under paragraphs (12)(c), (d), or (e), at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph (12)(e).

(g) **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) Transfer of permits. A permit may be automatically transferred to a new permittee if:

(a) The current permittee notifies the Agency at least 30 days in advance of the proposed transfer date:

(b) The notice includes a written agreement between the existing and new permittees containing a specific date for transfer of permit responsibility, coverage and liability between the current and new permittees; and

(c) 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.

(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.

(14) 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.

(15) 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.

(16) 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.

(17) 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.

(18) 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.

(19) 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.

(20) 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 \$10,000 per day of such violation. Any person who willfully or negligently violates permit conditions implementing Sections 301, 302, 306, 307, or 308 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.

(21) 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 permit 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.

- (22) 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 shall, 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.
- (23) 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.
- (24) In case of conflict between these standard conditions and any other condition(s) included in this permit, the other condition(s) shall govern.
- (25) 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.
- (26) 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.

5.13 Bibliography and References

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Lake County Illicit Discharge Detection and Elimination (IDDE) Guidance Manual, Lake County Stormwater Management Commission, November 2006.